JAIPUR

The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 131, NO 1 MAY 4, 1946

S M S Medical College Jaipur
Acc No 6479
Date 26/9/29
COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

# PENICILLIN ALONE IN NEUROSYPHILIS

JOHN H STOKES M D
and
HOWARD P STEIGER
Passed Assistant Surgeon (R) United States Public Health Service
with the collaboration of
GEORGE D GAMMON, M D WILLARD H STEELE M D,
HERMAN BEERMAN M D NORMAN R INGRAHAM Jr, M D,
PAUL GYORGY, M D ELIZABETH ROSE M D,
and
JOHN W LENTZ M D
with the technical assistance of
VERNA MAYER STEIN and EMILY STANNARD
Philadelphia

The Penicillin-Syphilis Group at the University of Pennsylvania has treated 746 patients with penicillin since Nov 11, 1943 Of these, 283 had neurosyphilis The average period of observation is 357 days, the longest period of observation being 719 days One hundred and nineteen had been observed from 120 to 364 days, 55 for 365 to 599 days and 23 for 600 days and over Thanks to the follow-up workers of the Institute for the Control of Syphilis, 97 7 per cent of these patients have been kept track of and returned for periodic observation and treatment The material is classified by diagnosis and initial spinal fluid findings in table 1 The patients with negative spinal fluids at the outset showed symptoms against which response could be measured

## POINTS DESERVING EMPHASIS IN THIS MATERIAL

In order to be considered for penicillin treatment, the patient must have presented some symptom, sign or serologic finding that would serve as a measuring stick for improvement or failure Treatment was confined to penicillin, no adjuvants, supplements or adjuncts were employed if penicillin results did not meet expectations except, through error, in 1 case of juvenile dementia paralytica Treatment of various kinds before penicillin had, however, been employed in 128 cases but none after penicillin was once begun Moreover, no patient had had fever within a year preceding the use of penicillin, but a number of patients had been receiving routine nonintensive treatment with arsenicals and bismuth up to within one month of their first penicillin course

We have had the advantage, indispensable, we believe, to effective work in neurosyphilis, of uniformity of serologic technic and evaluation [1] Laboratory and technical disparities when reports come from differing sources, or changing technicians, are a leading difficulty in therapeutic as in diagnostic interpretation The neurosyphilis material has also had the advantage on the clinical side of group and specialist evaluation of progress and status

## SOME DEFECTS OF THE MATERIAL

The lack of a preplanned dosage system was not made good until after the second deadline report [2] in October 1944 Of 113 cases now managed by preplanned systems, only 61 have been observed for 120 days or more and will therefore be subsequently reported on

A more or less unavoidable defect when the patient's recovery is at stake in the treatment experiment is the tendency to prolong treatment and increase the individual course and total dosage in patients who are refractory or respond slowly This obscures the effect of lower dosage and of prolongation of treatment as such Lack of a clearly defined and consistent terminology makes the problem of quantitative appraisal of both serologic and clinical improvement difficult To conserve space certain of the diagnostic and treatment progress codes developed are here omitted but will be available to inquirers on request

## DRUG AND METHODS OF USE

Sodium penicillin from different manufacturers was used throughout When possible but not invariably, each patient received the product of a single manufacturer Since March 1944 all schedules have been three hour interval, round-the-clock intramuscular injection, using isotonic solution of sodium chloride, usually 20,000 units per cubic centimeter We emphasize skilled handling and injection technic, and no local anesthetic is necessary We have no significant local reactions Penicillin solutions were not kept longer than twenty-four hours in the icebox, were protected from air and light and were administered ice cold to the patient

## DECISIONS ON RETREATMENT

Decisions as to retreatment are based on 1 Failure of the spinal fluid to become normal The Dattner-Thomas type of residual abnormality was subjected to retreatment to try to secure a completely negative formula

The investigation was assisted by contributions from the Gar Wood Research Fund and the Kirby McCarthy Fund

The work described in this paper was done under a contract recommended by the Committee on Medical Research between the Office of Scientific Research and Development and the University of Pennsylvania

From the Institute for the Control of Syphilis University of Pennsylvania and United States Public Health Service cooperating and the Penicillin Syphilis Panel of the University Hospital The Institute the Departments of Neurology Ophthalmology Dermatology and Syphilology and Pediatrics and the Division of Venereal Disease Control Philadelphia City Department of Public Health and the Philadelphia General Pennsylvania and Children s hospitals are represented in the authorship

1 The technical head of the laboratory Mrs Verna Mayer Stein, who has held the post for seventeen years and who has performed and read all tests has passed successfully all state and national evaluation tests of her work We have come to recognize and trust her results down to decimals so to speak The tremendous advantage of such a setup cannot be overemphasized

2 Stokes J H Beerman H Ingraham N R Jr Lentz J W Morgan H G Gammon G D Steele W H Rose E K and Gyorgy Paul Penicillin in Late Syphilis Am J Syph Gonor & Ven Dis. 29 313 333 (May) 1945

Normal and "near normal" formulas are defined in table 2. 2 Relapse in the spinal fluid formula of any degree 3 Failure of symptoms to respond completely (does not include ordinarily unresponsive objective signs) 4 Relapse of symptoms Some patients who became worse when the change was regarded as "progression" rather than secondary degeneration, were treated further with penicillin for good measure Some patients who obtained negative spinal fluids and especially 'near normal' were retreated to "hold the result"

TABLE 1.—*Classification of 197 Cases of Neurosyphilis Observed over 120 Days*

| | Abnormal Cerebrospinal Fluid | Negative Cerebrospinal Fluid |
|---|---|---|
| Dementia paralytica | 16 | 1 |
| Dementia paralytica with tabes | 20 | 2 |
| Tabes dorsalis * | 31 | 12 |
| Meningovascular neurosyphilis | 33 | 1 |
| Congenital neurosyphilis | 10 | 5 |
| Other neurosyphilis * | 9 | 1 |
| Asymptomatic neurosyphilis | 30 | 0 |

* One diagnosed as primary optic atrophy occurred in the tabetic series

The typing of spinal fluid formulas (types 1, 2 and 3) now standard in the literature [3] was employed in the nomenclature In connection with the concept of "normal versus near normal" (table 2) we have adopted a term indicative of very slight abnormality so slight as to be ordinarily within common conceptions of the negative, in order to express the idea that the fluid has been abnormal and may ultimately have meaning for relapse or progression or the need for fluid reexamination in cases in which the spinal fluids are known to have been definitely abnormal

### SPINAL FLUID RESPONSE TO PENICILLIN

The to us most convincing portrayal in our material of the effectiveness of penicillin in dealing with spinal fluid abnormality in neurosyphilis, is given in chart 1 It seems clear that in the 39 cases of our original series the trend toward improvement under penicillin has been consistent, prolonged and progressive and occurs in an increasing proportion of the cases over the time period involved In our report [4] of May 1944 2 6 per cent (1 in 39 cases) had reached normal In October 1944, five months later, 26 per cent or one fourth had reached normal or 'near normal' 'Striking improvement" (grades 3 and 4) stands at 56 per cent 33 per cent and 18 per cent at the successive evaluation dates, the gain in negative fluids being made by conversion of striking improvement into normality In November 1945, thirteen months later, 62 per cent had become normal or near normal While some of this good effect is doubtless the result of cumulative dosage, time and repeated courses, there is much here and elsewhere in this study to suggest that progress after penicillin is continuous and cumulative after a single course, as after fever therapy The best effects cannot be seen short of months

TABLE 2.—*Cerebrospinal Fluid Improvement Code*

| | |
|---|---|
| | Grade 00—Worse in one or more items of cerebrospinal fluid examination |
| | Grade 0—No change |
| Slight improvement | Grade 1—Drop in cells or protein |
| | Grade 2—Drop in both cells and protein |
| Striking improvement | Grade 3—Drop in cells protein quantitative Wassermann reaction or colloidal mastic curve |
| | Grade 4—Drop in all four items of fluid examination |
| | Near normal—Cells 5-10 protein 30-40 mg. 1111000000 colloidal mastic curve |
| | Normal—Cells 4 or less protein 10-30 mg. 1110000000 colloidal mastic curve |
| | DT (Dattner Thomas inactive formula)—Cells 4 or less protein 0 mg. or less regardless of Wassermann reaction and colloidal curve persisting six months or more |

Our study of spinal fluid response to penicillin in 175 cases with initially normal fluids (table omitted) shows that 63 of 175 cases or 36 per cent, achieved normal or near normal spinal fluids, and 129 of 175, or 74 per cent, made striking improvement By way of contrast in our first evaluation in May 1944, of 107 cases from various sources 1, or 0 9 per cent, had achieved normal fluid and only 35, or 33 6 per cent, made definite improvement It seems a not unreasonable conclusion that, the longer patients are treated and observed, the better the results

Studied by diagnostic categories our 175 cases show for dementia paralytica 10 out of 16, or 62 per cent, definitely improved (includes grades 3 and 4 improvement and normal plus near normal spinal fluids), for dementia paralytica and dementia paralytica with tabes combined 21, or 58 per cent, were definitely improved and 14 became normal or near normal (39 per cent) Of 51 tabetic patients 44, or 86 per cent, definitely improved and 29 or 57 per cent, became normal or near normal, and of 30 asymptomatic neurosyphilitic patients 21, or 70 per cent, definitely improved and 18 or 60 per cent, became normal or near normal Of 33 meningovascular patients 24 or 72 7 per cent, achieved definite improvement, and the spinal fluids of 15 or 45 per cent, became normal or near normal Of 16 patients with congenital neurosyphilis 13, or 81 per cent, achieved definite improvement and 10, or 63 per cent became normal or near normal

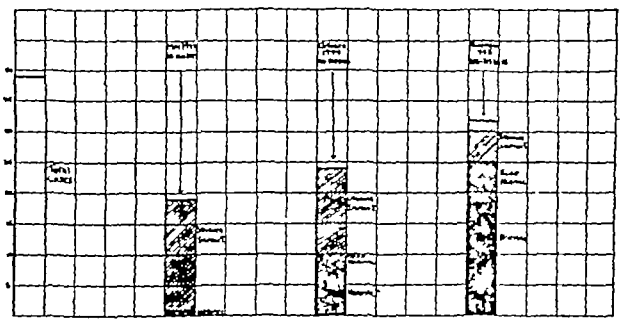


Chart 1.—Progress of the original 39 cases of neurosyphilis toward spinal fluid normality regardless of type of neurosyphilis dose of penicillin or number of courses

The good spinal fluid results in tabes and congenital neurosyphilis as well as in dementia paralytica deserve special note Only 6 fluids in the entire series (3 3 per cent) became worse

### *CLINICAL RESPONSE TO PENICILLIN* [5]

Our results are summarized for 119 cases with improvable symptoms (table omitted)

Striking improvement was obtained (including normal and near normal spinal fluids) at 120 to 364 days

[3] Stokes J H Beerman H and Ingraham N R Jr Modern Clinical Syphilology ed 3 Philadelphia W B Saunders Company 1944 [4] Stokes J H Sternberg T Schwartz W H Mahoney J F Moore J E and Wood W B Jr The Action of Penicillin in Late Syphilis J A M A **126** 737-9 (Sept 9) 1944

[5] A more detailed report on individual symptomatology is being prepared with Gammon as spokesman

in 35 cases, or 69 per cent on low and in 37 cases, or 71 per cent on high dosage At 365 to 599 days striking improvement stood at 84 per cent (21 cases) for low and 67 per cent (14 cases) for high dosage, and for the longest observed cases 600 days and over

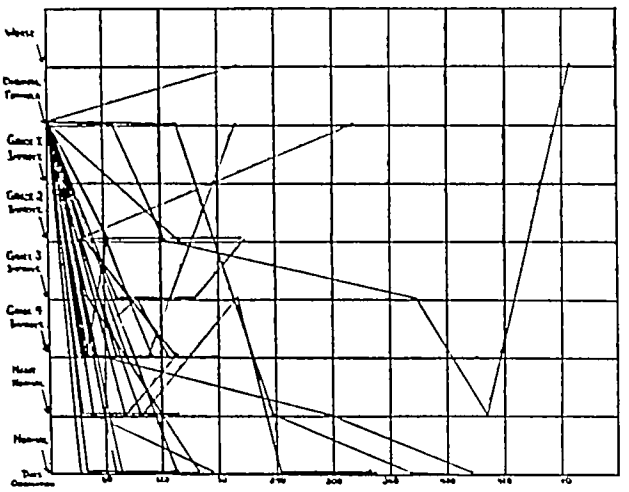


Chart 2.—Behavior of the spinal fluid in asymptomatic neurosyphilis following one course of penicillin regardless of dose (type 3 fluid formula)

it stood at 84 per cent (10 cases) for low and 90 per cent (9 cases) for high dosage

Summarizing with apologies for the graphic use of "per cent" terminology symptomatic neurosyphilis showed overall a symptomatic improvement of some degree in 77 cases, or 65 per cent Definite or striking improvement occurred in 28 cases, or 24 per cent Slight improvement occurred in 49 cases or 41 per cent, there was no change in 31, or 26 per cent, and 11, or 9 per cent were worse Five of these 11 patients had dementia paralytica Of 20 patients with dementia paralytica 6, or 30 per cent showed definite improvement, 7, or 35 per cent, showed slight improvement 2 or 10 per cent, no change and 5, or 29 per cent, were worse Of 23 patients having dementia paralytica with

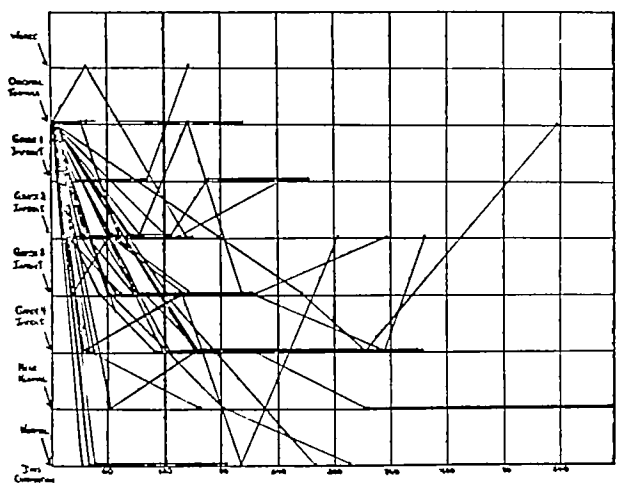


Chart 3.—Behavior of spinal fluid in clinical dementia paralytica and dementia paralytica with tabes (type 3 fluid formula)

tabes 3, or 13 per cent, were decidedly improved, 9, or 39 per cent, were slightly improved, 9, or 39 per cent, showed no change, and 2, or 9 per cent, were worse Of 42 patients with tabes 13, or 31 per cent, showed definite improvement, 18, or 43 per cent, slight improvement, 9, or 21 per cent, no change and 2, or 5 per cent, were worse Of 34 patients with meningovascular neurosyphilis 6, or 17 per cent, were definitely improved, 15 or 44 per cent, slightly improved, 11, or 32 per cent, showed no change, and 2, or 7 per cent, were worse.

The response of symptoms in neurosyphilis is, then, good for the types named, in view of the duration of observation The good record in tabes dorsalis seems to be especially due to the effect of penicillin in lightening pain In Charcot joints (not included in this series) no improvement occurred in 4 cases, and in 5 cases of gastric crises 2 improved

### SPINAL FLUID RESPONSE IN RELATION TO DOSAGE OF PENICILLIN AND PERIOD OF OBSERVATION

The volume of material and variety of dosage employed permitted only a division into high and low dosage as in the earlier reports[6] We give the results (table omitted) in 175 cases (for code used see table 2) for a range of 1.2 to less than 4.8 million units in one or two courses ("low dosage") as compared with 4.8 to 10 million units in one to four courses ("high dosage") observed for three time periods, 120 to 364, 365 to 599 and 600 or more days

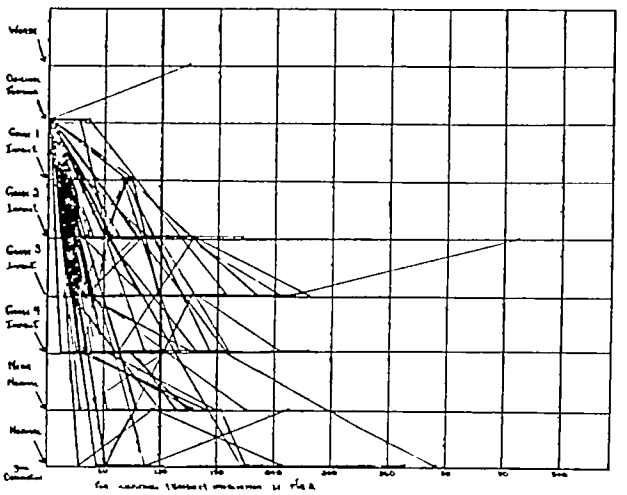


Chart 4.—Behavior of the spinal fluid in tabes dorsalis following one course of penicillin regardless of dose (type 3 fluid formula)

Within the limitations imposed by some small numerical groups in the higher brackets, it would seem that there is really surprisingly little difference between the effect on the spinal fluid of lower as compared with higher dosage This confirms a suggestion contained in our first report[4] There is a slight but definite upward trend of good results with longer observation and more treatment, perhaps, but there is still such a trend in the lower as compared with the higher dosage bracket This suggests to us first that, if penicillin will be effective at all in a given case, lesser amounts may suffice and an early response will be noted It will be "utilized" in other words If less is not effective large amounts are at least not greatly superior In other words a part of the excess penicillin may be "thrown away" But the occasional individual case result with late improvement after large dosage inspires or tempts one to the use of larger amounts

The prolongation of the effect of penicillin beyond the time of administration or even beyond the 120 days subsequent thereto (charts 2, 3 and 4) well into months

6 Gammon, G. D Stokes J H Beerman, H Ingraham N R Jr Lentz, J W Morgan H G Steele, W H and Rose, E L Penicillin in Neurosyphilis J A M A 128 653 654 (June 30) 1945

and perhaps even a year or more after treatment as in malarial therapy, for example, is also suggested

It is conceivable too that, if commercial penicillin contains a factor of special efficiency in syphilis in small or varying amounts, large total dosage will tend to deliver more of it ultimately than small The figures here do not seem particularly to support such a hypothesis

### SPINAL FLUID RESPONSE IN RELATION TO NUMBER OF COURSES OF PENICILLIN

The examination of this question (table omitted) is, of course, complicated by the influence of increasing dosage and a selection factor involving the more prolonged treatment of the refractory case Thus a patient failing to respond either clinically or serologically in 120 days to one course was more likely to receive two or three courses Nonetheless, examination of the striking improvement group (grades 3 and 4, and normal, and near normal spinal fluids) among 119 cases classified in the same observation period groups as with dosage response discloses a similar upward or favorable trend Combining the three observation periods, in 81 one course cases 80 per cent, in 75 two course cases 67 per cent and in 16 three course cases 81 per cent showed striking improvement With apologies for the use of percentage terminology again, a rise ranging from 78 to 100 per cent in the three time periods with a single course seems perhaps a little better than a rise from 60 to 82 per cent with two courses There is no clearcut demonstration here of the value of repeated courses as such, rather a suggestion of the striking effect of a single course It seems clear that in both single and repeated courses prolonged observation reveals more and more good effect.

### EFFECTS OF PENICILLIN ON THE SPINAL FLUID IN RELATION TO TIME ELAPSED AFTER ADMINISTRATION

This series of three graphs (charts 2, 3 and 4) includes cases which presented type 3 spinal fluid formulas at the start, observed a minimum of 20 days after a single course of penicillin, regardless of dose Type 2 fluids which have a better prognosis, generally speaking, were not separately tabulated because of small numbers The graphs have been statistically checked by Dr Harold Austin and show significant differences by the chi square test, in the response of symptomatic and asymptomatic neurosyphilis

All three graphs confirm the observation in a previously published paper [6] that a striking downward trend of the abnormal fluid formula toward normal occurs in the first 120 days and that most of the effect of one course is manifest within this time Certain differences between the symptomatic and asymptomatic groups appear

In asymptomatic neurosyphilis, even with type 3 (less favorable) spinal fluid formulas, the trend from definite improvement toward normal or near normal is more pronounced than in symptomatic dementia paralytica and dementia paralytica with tabes or tabes dorsalis The response of the spinal fluid in clinical dementia paralytica and dementia paralytica with tabes is more delayed than in asymptomatic neurosyphilis The downward trend toward normal in tabes with type 3 fluid is more rapid and achieved in shorter time than in dementia paralytica and dementia paralytica with tabes

There is more tendency to relapse to the original formula in dementia paralytica than in asymptomatic neurosyphilis (type 3 fluid) or tabes (type 3 fluid) A relatively larger proportion of spinal fluids in asymptomatic neurosyphilis achieves normal or near normal spinal fluids than in dementia paralytica and dementia paralytica with tabes, i e, improvement in more advanced forms of neurosyphilis tends to stop short of normal or near normal as compared with asymptomatic neurosyphilis

In this respect penicillin conforms to the expectancy of other forms of treatment for neurosyphilis

While all three graphs support the observation previously made [6] that maximum improvement secured by one course takes place most frequently within the first 120 days, more prolonged observation has led to the identification of more and more cases which level off and approach normal or near normal categories after a single course Relatively few cases sustain outright relapse to original formula or worse after a single course, within the period of our observation If courses are to be repeated, *it would seem that the logical time* for repetition of the penicillin course would, as indicated in the previous study referred to, be 120 days after the first course of penicillin

With reference to the relapse phenomenon (return to the original formula or worse), it may be said that negative fluids can relapse to varying degrees, although frank return from negative to the original degree of abnormality is rare

*An initially inferior fluid response (within 120 days* after the first course) does not necessarily foreshadow unfavorable subsequent response, for approximately as many patients who ultimately achieved a good result did less well at the start as the reverse The trend after 120 days still continues downward toward improvement and negative spinal fluid in asymptomatic neurosyphilis and tabes and even in dementia paralytica and dementia paralytica with tabes In the last mentioned, however, the tendency to level off short of normal is more pronounced

### RESPONSE OF THE BLOOD SEROLOGIC TESTS TO PENICILLIN IN NEUROSYPHILIS

The code for the grading of blood serologic improvement is omitted There is no concomitance recognizable between blood and spinal fluid improvement Of 115 cases with initially seropositive bloods showing definite spinal fluid improvement, only 36 cases, or 31 per cent, showed definite improvement in the blood In 30 cases the blood titer rose and in the same number (23 per cent) it remained unchanged Of 82 cases with initially positive bloods, achieving normal or near normal fluids, 25 cases, or 30 per cent, showed definite improvement in blood titer, 44, or 54 per cent, were worse or showed no change Thus the proportion of (perhaps temporary?) blood serologic failure despite definite spinal fluid improvement is 46 per cent

It would almost seem as if a different mechanism is involved in blood response as compared with spinal fluid It can at least be said that the effect of penicillin on the spinal fluid is much more definite, almost tropic one might say, as compared with the effect on the blood, and that, within the period of observation of this study, blood findings have little significance for a symptomatic or spinal fluid result

### MISCELLANEOUS CONSIDERATIONS

*Meningeal Reaction in Relation to Penicillin Response* (spinal fluid cell count as indicator).—Of 96 cases showing higher cell counts (10 or over)

57 per cent reached normal or near normal and 81 per cent were strikingly improved Of 17 with lower cell counts, 36 per cent reached normal or near normal and 55 per cent were strikingly improved The conclusion that meningeal reaction (elevated cell count) is favorable to penicillin effect is vitiated here by the fact that an unknown proportion of low cell counts may have been the result of previous treatment of high cell count cases by other methods

*Effect of Previous Nonpenicillin Therapy, Including Fever, on Penicillin Results*—On this we are unable to make a clear statement because of small numbers of cases and the question as to whether the results are not "stacked" by the undoubted fact that resistant cases unresponsive to ordinary methods tend to drift to a new method thus weighting the figures against the previously treated cases

Our own figures show a trend toward better penicillin response in previously untreated or minimally treated cases A strikingly more favorable response in tabes and in meningovascular and asymptomatic neurosyphilis that has not received fever therapy may be an affair of weighting and selection but should be watched

*Primary Optic Atrophy*—The evaluation of this material comprising 60 cases, 19 observed over 365 days and 27 over 300 days, was conducted by Dr Willard H Steele, representing the Department of Ophthalmology in the Penicillin-Syphilis Group, and will be published in detail separately Briefly it may be summarized in part as follows In all evaluation of primary optic atrophy results, time and certain subjective elements in the current tests are critical considerations As yet the objective and controlled evaluation of these elements is not fully accomplished Hence it is impossible to offer here any conclusive statements about penicillin responses in primary optic atrophy It may be said that improvement in spinal fluid formula and reduction to normal in better than 75 per cent occur in patients with primary optic atrophy despite failure of improvement or even unfavorable progression in the eyes Far advanced cases are least favorably affected and may progress in spite of penicillin therapy, while early cases in which advice has had to be sought because of failing visual acuity rather than field shrinkage (which attracts attention later) will do better It cannot be said that "no cases treated with penicillin get worse," for advanced ones may progress Of 19 patients treated and observed for one year, 2 were blind but showed improvement in cerebrospinal fluid Two showed early or questionable atrophy, with improvement of cerebrospinal fluid Of 4 cases presumably arrested prior to penicillin therapy but with abnormal fluids, 4 showed no change in fields, including 1 that showed diminution of visual acuity, yet the spinal fluids of all 4 improved and 3 became normal Of 9 that were presumably progressing prior to treatment (one with a normal spinal fluid) 4 showed further field contraction and 4 showed no change The 8 abnormal fluids all improved, and 7 of them became normal One of the 9 patients became "blind" Of 3 congenital syphilitic patients 1 was blind, 1 showed no change in fields but improvement in spinal fluid and 1, presumably progressing, showed no change but the fluid became normal It seems clear that the striking effect of penicillin on the spinal fluid is not necessarily reflected in ocular response

Accordingly, as other investigators have concluded also, the essence of securing response is in early diagnosis and early treatment rather than in treatment after degenerative change is established Why if, as Breutsch[7] contends, the pathology of primary optic atrophy is vascular-inflammatory in character, like that of dementia paralytica, are not the symptomatic results in primary optic atrophy under penicillin equally good as compared with dementia paralytica? Partly at least, let us hypothesize, because each neuron lost in the optic tract represents a specialized and irreplaceable functional unit The optic nerve and its neurons have no functional margin The brain, on the other hand, has a large functional margin of less specialized neurons, and many neurons may be lost before the limits of improvement or restoration of function are reached

Since lost ground is not recovered so far as the optic nerve is concerned, until data are conclusive, patients with primary optic atrophy should be treated with maximum total dosage of penicillin by the longest of the available time schedules

TABLE 3—*Comparison of Reported Cooperative Clinical Group Results with University of Pennsylvania Penicillin Results*

| | Spinal Fluid Reduced to Normal (Results in Percentages) | | | | |
|---|---|---|---|---|---|
| | Tabes | Dementia Paralytica with Tabes | Dementia Paralytica | Meningo vascular | Asympto matic |
| Routine | 29 | 17 | 11 | 43 | 36 (1 yr) |
| Swift Ellis | 49 | 28 | 18 | 59 | 39 2 (1 yr) |
| Tryparsamide | 40 | 46 | 17 | 47 | 16 (1 yr) |
| Malaria | 22 | 12 | 9 | 0* | 1 2 (1 yr) |
| Penicillin † | | | | | |
| Normal | 33 | 30 | 0 | 30 | 53 |
| Near normal | 24 | 15 | 31 | 16 | 7 |
| Total | 57 | 45 | 31 | 45 | 60 |

| | Clinical Improvement ‡ (Results in Percentages) | | | |
|---|---|---|---|---|
| | Tabes | Dementia Paralytica with Tabes | Dementia Paralytica | Meningo-vascular |
| Routine | 15 4 | 13 6 | 16 | 38 |
| Swift Ellis | 24 8 | 24 4 | 42.2 | 47 |
| Tryparsamide | 24.3 | 21 2 | 36.6 | 43 |
| Malaria | 21 7 | 33 9 | 42 7 | 46 |
| Penicillin | 31 | 13 | 35 | 18 |

* Less than 20 cases
† Fifty-eight per cent of these cases observed 1 year or less 29 per cent up to 600 days
‡ Definite improvement in the penicillin series comprises grades 3 and 4 Slight improvement (1 and 2) is not included The CCG figures are given as definite improvement

## A COMPARISON OF OLDER TREATMENT METHODS WITH PENICILLIN THERAPY OF NEUROSYPHILIS, USING COOPERATIVE CLINICAL GROUP RESULTS

This ambitious undertaking involves many uncertainties based on differences in terminology, method of approach and ambiguities on both sides Nonetheless it is attempted to utilize a straw to show which way the wind blows The Cooperative Clinical Group results are those cited in the third edition of Modern Clinical Syphilology[8] and were prepared from the graphs of figure 8 in Kierland, O'Leary and Vandoren's paper[8] and the additional information in O'Leary and his associates[9] on asymptomatic neurosyphilis Since no figures are given in the text of the first paper, figure 8 was chosen because the results stated are com-

7 Breutsch W L Syphilitic Optic Atrophy J A M A. **130** 14 (Jan 5) 1946
8 Kierland R R O Leary P A and Vandoren E Symptomatic Neurosyphilis Ven Dis Inform **23** 360-377 (Oct) 1942
9 O'Leary P A Cole, H N Moore J E Stokes J H Wile U J Parran T, Vonderlehr R A and Usilton Lida J Asymptomatic Neurosyphilis Ven. Dis Inform **18**: 45-65 (March) 1937

plicated by no more than one method of treatment in addition to routine therapy and thus seemed most nearly comparable to ours which included a number of previously treated cases The results of this comparison are given in table 3 An unknown amount of allowance must be made for differences in the meaning of terms i e 'taboparesis" and "marked improvement" used by the various investigators It should be recalled that the Cooperative Clinical Group material covered a much longer period of observation, in which the trend to normal with time was clearly evident Penicillin comparisons should therefore really be made not now but ten years from now

It will be seen that if their normal spinal fluids are as strictly normal as we have defined them Cooperative Clinical Group results are a little better on the spinal fluid in some categories than are penicillin results but, in the main penicillin outclasses malaria alone or as the successor of routine treatment If normal and near normal categories are combined penicillin surpasses the older methods In asymptomatic neurosyphilis it ranks far above other methods as a reducer of spinal fluid formulas to normal

In the field of clinical improvement malaria outranks penicillin but since malarial results are notably slow of achievement in the aggregate and a ten year material will bring out the best in malarial therapy, penicillin with a two year record as a symptomatic therapeutic agent cannot yet be properly judged

## CONCLUSIONS

1 The effects of penicillin alone in neurosyphilis, in single or repeated courses in a dosage range of 1 2 million to 10 million units and over, were observed

2 Penicillin sodium in saline solution in a round-the-clock three hour intramuscular administration technic is effective to greater or less degree in the treatment of all aspects of neurosyphilis studied

3 An adequate mechanism for spinal fluid examination and testing is sine qua non to the work Effective follow-up was secured in over 97 per cent of our cases

4 The most striking effects of penicillin are exerted on the spinal fluid formula, the most sensitive and dependable of our indexes

5 There is no apparent concomitance between spinal fluid response and serologic response in the blood The spinal fluid responses suggest almost a tropic selectivity of penicillin for the nervous system

6 There is a steady and definite increase in the proportion of normal and near normal spinal fluids (not mere improvement') obtained in our original group of patients under penicillin from 2 6 per cent at the start to 62 per cent after eighteen months prolongation of observation and appropriate retreatment

7 Definite improvement in spinal fluid occurred in 74 per cent, and normal and near normal spinal fluids were achieved in 36 per cent of our total series of neurosyphilitic patients without regard to diagnostic category

8 Dementia paralytica showed 62 per cent definite improvement but no negative fluids Normal and near normal fluids were, however obtained in 39 per cent of dementia paralytica and dementia paralytica with tabes combined, 57 per cent of the tabetic, 60 per cent of the asymptomatic neurosyphilitic, 45 per cent of meningovascular cases and 63 per cent of the congenitally neurosyphilitic Only 6 fluids in the entire series (3 5 per cent) became worse

9 Overall clinical improvement of some degree occurred in 65 per cent of symptomatic neurosyphilis, 24 per cent improved strikingly, 41 per cent slightly, 9 per cent were worse. Thirty per cent of those with dementia paralytica improved definitely, 31 per cent of the tabetic, 17 per cent of meningovascular patients

10 As between 1 2 and less than 4 8 million units (low dosage) and 4 8 to 10 million units and over (high dosage), surprisingly little difference in therapeutic effect is observable There is a slight trend toward superiority in the higher dosage bracket

11 There is *no conspicuous good effect demonstrable* from mere repetition of courses, so far The striking thing is the prolongation of the good effect of one course This does not invalidate the statement (paragraph 13) that most of the improvement obtained is in the first 120 days Further study of this problem is in progress

12 The good effect of penicillin on the spinal fluid is continued over weeks and months after administration

13 The maximum effect is usually secured in the first 120 days, but improvement and final normality may follow even an unsatisfactory or atypical early trend

14 Asymptomatic neurosyphilis conforms best, and dementia paralytica least, *to the 120 day rule*

15 Relapse may occur in fluids that have become negative, but relapse to original formula or severity rarely occurs

16 It is suggested, but not proved, that more definite meningeal reaction (higher cell counts) favors a good penicillin response

17 The results in primary optic atrophy are as yet inconclusive Treatment should be begun early with large doses Charcot joints have not thus far responded to penicillin intramuscularly, but 2 of 5 cases of gastric crises improved Lightning pains improved, raising *the proportion of good symptomatic results in tabes*

18 A comparison between Cooperative Clinical Group results using older methods including chemotherapy and fever, and our penicillin results suggests that, particularly as the observation of penicillin effects lengthens, it will be be found to equal or exceed the efficiency of malaria alone or after routine chemotherapy

19 Penicillin is outranked by malaria as yet in clinical improvement, probably because of the short observation period of penicillin

20 In asymptomatic neurosyphilis, penicillin ranks far above other methods as a reducer of the spinal fluid to or toward normal

21 A single course of not less than 4 8 million units in not less than 7 5 days round the clock, using penicillin sodium in saline solution intramuscularly, would seem in our experience to make the best start and often an adequate total therapy for the majority of cases of neurosyphilis Observation should be carried over at least a year in the absence of convincing evidence of progression before the effects are evaluated and further measures adopted

22 The results which have been (or are to be) presented in this paper must be interpreted in light of the fact that from June 1943, the date of inception of the

study, to the present commercial penicillin has been a changing mixture of various substances The content of "impurities" has gradually decreased as potency, in terms of units per milligram, has increased The relative amounts of the several identified penicillin fractions G, F, X and K have likewise varied from time to time Those two changes, and perhaps others, suggest that therapeutic efficacy may not have remained constant and that it may be significantly different today from what it was originally It is not now possible to assess the extent to which these changes may have affected the results here reported

## FOLIC ACID THERAPY IN THE ANEMIAS OF INFANCY AND CHILDHOOD

WOLF W ZUELZER M D
Detroit

In a previous report [1] it was shown that anemias with a megaloblastic type of blood formation in the bone marrow are common in white infants under the age of 18 months and constitute a syndrome which is specifically influenced by folic acid The effect of folic acid in the various macrocytic anemias of adults in which the bone marrow is of the megaloblastic type has recently been demonstrated by Spies and his associates [2] The results reported by this group and those obtained independently in our laboratory are identical and leave no doubt that folic acid is a specific antianemic substance the lack of which results in megaloblastic dysplasia of the bone marrow elements and anemia the latter usually of macrocytic type The hematologic criteria for the recognition of the anemic syndrome in infants in which folic acid is effective have been given in detail in our previous communication Briefly summarized they consist in the following features

1 The presence of severe normochromic anemia, usually but not invariably macrocytic as determined by mean corpuscular constants, characterized by a wide spread in the corpuscular diameters as seen in a study of Price-Jones curves

2 A tendency toward leukopenia and neutropenia associated with the presence of giant metamyelocytes and so-called "macropolycytes" and hypersegmented neutrophils in the peripheral blood

3 A diminution of platelets, sometimes of severe degree and often associated with an increased bleeding tendency

4 An atypical bone marrow pattern as seen in fixed and stained smears of aspirated femoral or sternal marrow, resembling or in some cases identical with the pattern seen in addisonian pernicious anemia in relapse Erythropoiesis is frankly megaloblastic in the advanced stages of the syndrome but may present a pattern intermediate between normoblastic and megaloblastic in earlier phases The prevalence of abnormal young granulocytes of the type encountered in addisonian pernicious anemia is a constant early finding of considerable diagnostic value

The clinical picture is variable Splenomegaly is a common but not a constant finding Evidence of infection is usually present The nutritional history is usually poor but may be entirely satisfactory as judged by present day standards Histamine refractory achlorhydria is frequently demonstrable but does not persist after the anemia is cured

Up to the present time a total of 29 patients with this syndrome for which the designation megaloblastic anemia of infancy was proposed have been studied in our laboratory [2a] Twelve of these were treated with folic acid [3] in synthetic form or by oral administration of concentrates rich in "Lactobacillus casei factor" The dosage varied from 5 to 20 mg per day, the period of treatment from eight days to three weeks In each case the requirements of Minot and Castle [4] for the evaluation of the reticulocyte response were met Three of the patients died of severe infections before the effect of folic acid could be evaluated In the remaining 9 patients an unequivocal response was obtained This response was characterized by a decided rise in the reticulocyte counts within a few days after the beginning of treatment, as shown in the chart This was preceded by a return of the bone marrow pattern to a normal type of erythropoiesis and followed by a consistent rise in the hemoglobin values and the red cell counts without further antianemic treatment The effect of folic acid was indistinguishable from that of commercial purified or crude liver extracts given to other patients with megaloblastic anemia In follow-up studies up to ten months no relapses were observed in either group

*Pertinent Laboratory Data on Day After Admission of Patient P O*

| | |
|---|---|
| Hemoglobin | 5 7 Gm per 100 cc |
| Red blood cell count | 1 600 000 |
| Color index | 1.2 |
| Platelet count (Fonio method) | 72 000 |
| White blood cell count | 4 500 |
| Differential | |
| Polymorphonuclears | 11 |
| Lymphocytes | 87 |
| Monocytes | 2 |
| Reticulocytes | 1 7% |
| Bone marrow pattern | Megaloblastic |
| Bleeding time | 5 minutes |
| Venous clotting time | 90 seconds |
| Prothrombin time | 35 seconds |
| Gastric acidity | |
| Before histamine | Free 0 Total 8 |
| After histamine | Free 0 Total 10 |
| Icterus index | 10.2 units |
| Serum protein | 5 47 Gm per 100 cc |
| Mazzini test | Negative |

The present report is intended to give a brief account of studies on the effect of folic acid in a variety of anemic conditions observed in infants and children, other than megaloblastic anemia In view of the specific character of the folic acid effect, it was predicted that this substance would not be effective in any of those types of anemia in which the formation of blood by the bone marrow remains normoblastic This prediction has been substantiated by our completely negative results with folic acid therapy in children with anemia of prematurity (18 cases), hypochromic microcytic

From the Anemia Clinic of the Children's Hospital of Michigan and the Department of Pediatrics Wayne University College of Medicine

1 Zuelzer W W, and Ogden Farth N Megaloblastic Anemia in Infancy A Common Syndrome Responding Specifically to Folic Acid Therapy Am J Dis Child 71 211 (March) 1946

2 Spies T D Vilter C F Koch, Mary B and Caldwell Margaret H Observations of the Antianemic Properties of Synthetic Folic Acid South M J 38: 707 709 (Nov ) 1945 Spies T D Garcia López G Menendez José A Minnich Virginia and Koch Mary B The Effect of Folic Acid on Sprue ibid 39: 30-32 (Jan ) 1946 Spies

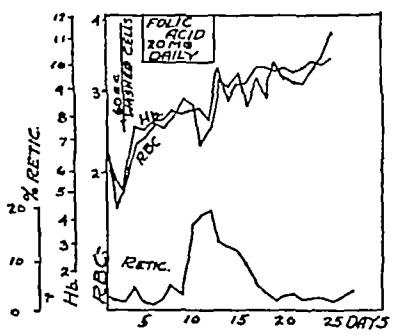
2a Dr James L Wilson of the University of Michigan gave permission to study 2 cases from the University Hospital Ann Arbor which are included in this report

3 The folic acid was supplied through the courtesy of Lederle Laboratories

4 Minot G R and Castle W B The Interpretation of Reticulocyte Reactions Lancet 2: 319 330 (Aug. 10) 1935

anemia (5 cases), Mediterranean anemia (1 case), chronic hypoplastic anemia (2 cases), aplastic anemia (1 case), subacute myelogenous leukemia (1 case), acute lymphatic leukemia (1 case) and sickle cell anemia (1 case) In none of the patients with these conditions was a reticulocyte response obtained, nor did improvement of the anemia result even when relatively large amounts (up to daily doses of 50 mg of synthetic folic acid given parenterally) were used The prophylactic use of folic acid from birth on over a period of months in premature infants did not prevent the development of anemia comparable to that observed in control patients Combining folic acid with iron therapy did not increase or accelerate the effect of the latter in cases in which iron was indicated It is therefore unnecessary to discuss in detail any of the cases in this control group The findings are again in accord with those recently reported by Spies and his group [5] The studies of folic acid therapy in anemia thus show a complete agreement of results obtained in infants with those in adults

The intensive study of bone marrow patterns and the adoption of criteria long generally accepted in anemias of adult life but hitherto neglected in the studies of anemia of infancy have made it possible to establish morphologic criteria for the presence of a deficiency in folic acid and to define the syndrome associated with such a deficiency as megaloblastic anemia of infancy The recognition of this entity opens a new era in the understanding of mechanisms involved in the production of anemias of early life and clarifies to a large extent the confused classification of the anemias in this age group




Typical response to folic acid in megaloblastic anemia of P O a white girl aged 7 months

Further studies are in progress in order to elucidate the etiologic factors which can bring about a folic acid deficiency in infants and to reevaluate Castle's hypothesis in relation to folic acid Spies has pointed out that the effect of liver extracts or brewers' yeast in macrocytic anemias of adults is out of proportion to the amount of folic acid contained in these substances, and it remains to be seen whether factors other than folic acid can have a specific effect on megaloblastic anemias

## CONCLUSIONS

Folic acid is an antianemic factor specifically effective in anemias of infancy with megaloblastic bone marrow and ineffective in any of the other anemias of infancy and childhood investigated thus far The characteristic abnormal bone marrow pattern constitutes the essential criterion in the diagnosis of megaloblastic anemia of infancy, which is a common syndrome arising on the basis of a folic acid deficiency There is a complete parallelism regarding the response to folic acid between the anemias of infancy and those of adult life

5224 St Antoine Street

5 Spies T D Effect of Folic Acid on Persons with Macrocytic Anemia in Relapse J A M A **130** 474-477 (Feb 23) 1946

# FILARIASIS IN THE SERVICEMAN RETROSPECT AND PROSPECT

CAPTAIN L. T COGGESHALL (MC) U.S N R

Many physicians throughout the United States will be faced with the problem of filariasis for the first time as several thousand servicemen have contracted the infection during the war and are now being demobilized Not only will the individual seek treatment and counsel but the community will likewise wish to know the facts concerning possible danger of secondary transmission It is my purpose in this paper to acquaint the doctor with some of the more salient points observed in Marines with filariasis at Klamath Falls, Oregon, where 2,595 were collected and observed during a seventeen months period

Filariasis is an infection produced by a nematode which is transmitted only by an intermediate host There are four varieties carried by insect vectors (mosquitoes) and one by an aquatic crustacean The most common filarial organism and the one under discussion is known as Wuchereria bancrofti It is prevalent in many islands in the Pacific, particularly in the Samoan group, and also in Africa Surveys in these hyperendemic areas reveal that approximately 60 to 70 per cent of the population are infected The complication of elephantiasis is common, although there can be filariasis without elephantiasis—a sign of low endemicity At one time filariasis was frequently encountered in the United States, having been imported with the slaves from West Africa It made its appearance in several states, Alabama, Indiana, Pennsylvania, Virginia and particularly South Carolina, where transmission factors were the most favorable However, the disease was unable to perpetuate itself after the slave trade was interrupted and disappeared spontaneously about 1925 This coincides with a similar episode in Australia, where the same disease was introduced through the medium of infected laborers from some Central Pacific islands At one time 10 per cent of all persons hospitalized in Brisbane had the disease Here as in the United States filariasis disappeared without specific control measures The importance of the two incidents can readily be seen, as they furnish evidence that the lightly infected serviceman should present no danger as a source of spread in this country

## LIFE HISTORY OF FILARIAL PARASITE (WUCHERERIA BANCROFTI)

When the proper mosquito vector, of which there are several species, obtains blood from an infected person, the circulating larvae (microfilariae) are drawn into the stomach, begin their development, penetrate the walls and enter the body cavity As the infected mosquito bites, she deposits a small drop of salivary fluid on the skin containing a few larvae, which penetrate as the fluid evaporates Or the larvae may be introduced directly through the fissure made by the bite

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the U S Navy The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the Navy Department

This study was made possible by the joint efforts of Comdr Meyer A Zeligs (MC) U S N R Lieut Comdr Robert J Hasterlik (MC), U S N R Lieut Comdr James W Haviland (MC) U S N R Lieut Comdr Atlee B Hendricks (MC) U S N Lieut Comdr Jackson Norwood (MC) U S N R Lieut Comdr Robert J Parsons (MC) U S N R Lieut Harve J Carlson H V(S) U S N R Lieut. Wilbur V Charter H V(S), U S N R Lieut. Leonard P Eliel (MC), U S N R, Lieut Robert G Heskett (MC) U S N R Lieut Samuel Spector (MC) U S N R and Lieut. O K. Scott U S N R.

No further trace of the larva is possible until it is recognized as an adult worm in a lymphatic channel or node The most favored sites are the larger lymphatic trunks of the aorta, but the sites easiest recognized are the more superficial ones in the groins, axillas and spermatic cords Here the adult worms become sexually mature, fertilization occurs by direct contact of the sexes, and the gravid female exudes microfilariae, which can be found in chylous urine or lymph in dilated vessels They ultimately can be found in the general circulation, where they are available for transfer to the mosquito, although they may disappear and severe infection can exist without the existence of microfilariae in the blood As far as the practitioner is concerned there are two important points of consideration in the life history of filariasis First, the microfilariae are nonpathogenic and can be transferred directly to an uninfected individual without danger of setting up an infection These larval forms must go through a proper mosquito before they are pathogenic for man Secondly, the adult worms cannot reproduce themselves in the human host, so that there is no possibility of accumulating more filariae than were originally injected through the bite of the infected mosquito

## EPIDEMIOLOGY

Filariasis (Wuchereria bancrofti) is commonly encountered throughout the tropical belt but is especially prevalent in Africa and the Samoan area of the Pacific There are numerous mosquito vectors In some areas it is transmitted by day as well as by night biting mosquitoes In general the biting habits of the vectors coincide with the appearance of the maximum numbers of circulating microfilariae The disease is primarily an urban one and the flight range of most vectors is short, rarely exceeding 300 yards in seeking their blood meal

When the Marines went into the Samoan area early in 1942 there was the extreme military necessity of getting under cover rapidly, and the most accessible spots were the native villages Here the infection was most intense because the close community life of the natives resulted in constant reinfection Naturally the available servicemen were likewise the recipients of an overwhelming number of infected bites The possibility that these men might become infected was taken lightly, because this region had been occupied for a number of years without evidence of filariasis in the white man However, previous residents had lived in more protected screened areas, and some cases now have been diagnosed in retrospect in view of the present experience Actually many believed that the white man was not susceptible, although in addition to other reports it had been shown early in 1915 in this country by Johnson [1] and in Australia by Croll [2] that this was not true During this war there was no doubt that the white man was susceptible, as thousands developed the disease As nearly as can be ascertained 38,300 men were exposed, and a filariasis registry showed a total of 10,421 diagnosed cases in the Marine Corps and United States Navy as of Dec 1, 1945 (table 1) There were many cases the diagnosis of which was not entered into the health record On the other hand, many were erroneously diagnosed merely on their history or by a positive skin reaction There was considerable difficulty in establishing the diagnosis in the early cases because most medical officers, including those who had spent considerable time in the area, were not familiar with the disease, especially with the early manifestations However within three to six months, as a result of lymph node biopsies and detection of the adult worm, it was apparent that the disease was filariasis A directive was then issued for the removal of all men from the area, and patients diagnosed as having the disease were returned to the United States Another point of interest in the epidemiology of the disease was the high rate of infection in the Samoan area, yet practically no cases were acquired in similar areas where the incidence of infection in the natives was just as high This is explained by the quartering of troops in immediate contact with the natives on Samoa, while on Guadalcanal, for example, they were more isolated Also in Samoa vectors were day biting

1 Johnson F B Filarial Infection South M J 8 630 1915
2 Croll D G Filariasis Among Australian Troops Brit M J 1:28 1919

## SIGNS AND SYMPTOMS

Little of the recorded literature on filariasis deals with the acute manifestations of the infection as seen in the serviceman It is concerned primarily with the later stages as observed in natives who have been reinfected over a period of years The first signs and symptoms after exposure appeared over a wide period, 0 6 per cent had a symptom free period of less than one month and 9 per cent had an incubation period of over eighteen months, while the greatest number, 24 per cent, had their first symptoms between the tenth and the twelfth month

TABLE 1—*Cases Diagnosed*

| | Enlisted Men | Officers |
|---|---|---|
| Marines | 8,548 | 326 |
| Sea Bees | 893 | 4 |
| Medical Department, Navy | 359 | 61 |
| Other | 214 | 16 |
| Total | 10 014 | 407 |

TABLE 2—*Location of Initial Anatomic Involvement in 2,288 Men*

| Site | Number | Per Cent |
|---|---|---|
| Neck | 80 | 2 |
| Upper extremities | 1 084 | 31 |
| Lower extremities | 314 | 9 |
| Genitalia | 1 155 | 33 |
| Lymph nodes | 855 | 25 |
| Total | 3 488 | 100 |

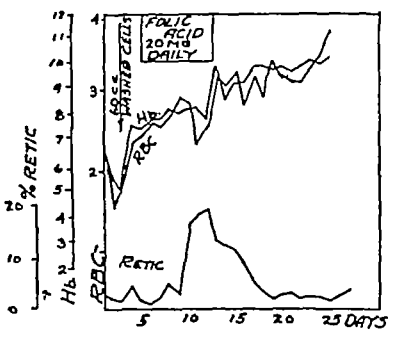
A history of the initial signs of filariasis noted that they were confined to the lymphatic system and expressed themselves as lymphangitis, lymphedema and lymphadenopathy These acute cardinal signs usually appeared after exercise and responded to rest within three to five days

The anatomic location of these involvements as compiled from health records and testimony is shown in table 2 It was found but not shown in the table that the right upper extremity was involved in 24 per cent more instances than the left, while the left cord and testis showed up in 20 per cent more cases than the right Systemic manifestations were extremely mild and at most consisted of a mild leukocytosis and a low grade fever of 100 to 102 F with malaise None were ever very toxic, although a few complained of mild chills

Lymphangitis occurred principally along the course of the great vessels of the extremities and in the spermatic cords In the extremities there was *modera-*

anemia (5 cases), Mediterranean anemia (1 case), chronic hypoplastic anemia (2 cases), aplastic anemia (1 case), subacute myelogenous leukemia (1 case), acute lymphatic leukemia (1 case) and sickle cell anemia (1 case) In none of the patients with these conditions was a reticulocyte response obtained, nor did improvement of the anemia result even when relatively large amounts (up to daily doses of 50 mg of synthetic folic acid given parenterally) were used The prophylactic use of folic acid from birth on over a period of months in premature infants did not prevent the development of anemia comparable to that observed in control patients Combining folic acid with iron therapy did not increase or accelerate the effect of the latter in cases in which iron was indicated It is therefore unnecessary to discuss in detail any of the cases in this control group The findings are again in accord with those recently reported by Spies and his group [5] The studies of folic acid therapy in anemia thus show a complete agreement of results obtained in infants with those in adults

The intensive study of bone marrow patterns and the adoption of criteria long generally accepted in anemias of adult life but hitherto neglected in the studies of anemia of infancy have made it possible to establish morphologic criteria for the presence of a deficiency in folic acid and to define the syndrome associated with such a deficiency as megaloblastic anemia of infancy The recognition of this entity opens a new era in the understanding of mechanisms involved in the production of anemias of early life and clarifies to a large extent the confused classification of the anemias in this age group




Typical response to folic acid in megaloblastic anemia of P O a white girl aged 7 months

Further studies are in progress in order to elucidate the etiologic factors which can bring about a folic acid deficiency in infants and to reevaluate Castle's hypothesis in relation to folic acid Spies has pointed out that the effect of liver extracts or brewers' yeast in macrocytic anemias of adults is out of proportion to the amount of folic acid contained in these substances, and it remains to be seen whether factors other than folic acid can have a specific effect on megaloblastic anemias

## CONCLUSIONS

Folic acid is an antianemic factor specifically effective in anemias of infancy with megaloblastic bone marrow and ineffective in any of the other anemias of infancy and childhood investigated thus far The characteristic abnormal bone marrow pattern constitutes the essential criterion in the diagnosis of megaloblastic anemia of infancy, which is a common syndrome arising on the basis of a folic acid deficiency There is a complete parallelism regarding the response to folic acid between the anemias of infancy and those of adult life

5224 St Antoine Street

5 Spies T D Effect of Folic Acid on Persons with Macrocytic Anemia in Relapse J A M A **130** 474-477 (Feb 23) 1946

# FILARIASIS IN THE SERVICEMAN RETROSPECT AND PROSPECT

CAPTAIN L T COGGESHALL (MC) U S N R

Many physicians throughout the United States will be faced with the problem of filariasis for the first time as several thousand servicemen have contracted the infection during the war and are now being demobilized Not only will the individual seek treatment and counsel but the community will likewise wish to know the facts concerning possible danger of secondary transmission It is my purpose in this paper to acquaint the doctor with some of the more salient points observed in Marines with filariasis at Klamath Falls, Oregon, where 2,595 were collected and observed during a seventeen months period

Filariasis is an infection produced by a nematode which is transmitted only by an intermediate host There are four varieties carried by insect vectors (mosquitoes) and one by an aquatic crustacean The most common filarial organism and the one under discussion is known as Wuchereria bancrofti It is prevalent in many islands in the Pacific, particularly in the Samoan group, and also in Africa Surveys in these hyperendemic areas reveal that approximately 60 to 70 per cent of the population are infected The complication of elephantiasis is common, although there can be filariasis without elephantiasis—a sign of low endemicity At one time filariasis was frequently encountered in the United States, having been imported with the slaves from West Africa It made its appearance in several states, Alabama, Indiana, Pennsylvania, Virginia and particularly South Carolina, where transmission factors were the most favorable However, the disease was unable to perpetuate itself after the slave trade was interrupted and disappeared spontaneously about 1925 This coincides with a similar episode in Australia, where the same disease was introduced through the medium of infected laborers from some Central Pacific islands At one time 10 per cent of all persons hospitalized in Brisbane had the disease Here as in the United States filariasis disappeared without specific control measures The importance of the two incidents can readily be seen, as they furnish evidence that the lightly infected serviceman should present no danger as a source of spread in this country

## LIFE HISTORY OF FILARIAL PARASITE (WUCHERERIA BANCROFTI)

When the proper mosquito vector, of which there are several species, obtains blood from an infected person, the circulating larvae (microfilariae) are drawn into the stomach, begin their development, penetrate the walls and enter the body cavity As the infected mosquito bites, she deposits a small drop of salivary fluid on the skin containing a few larvae, which penetrate as the fluid evaporates Or the larvae may be introduced directly through the fissure made by the bite

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the U S Navy The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the Navy Department

This study was made possible by the joint efforts of Comdr Meyer A Zeligs (MC) U S N R Lieut. Comdr Robert J Hasterlik (MC) U S N R Lieut Comdr James W Haviland (MC) U S N R Lieut Comdr Atlee B Hendricks (MC) U S N Lieut Comdr Jackson Norwood (MC) U S N R. Lieut Comdr Robert J Parsons (MC) U S N R Lieut Harve J Carlson H V(S) U S N R Lieut. Wilbur V Charter H V(S), U S N R Lieut Leonard P Ehel (MC) U S N R. Lieut Robert G Heskett (MC) U S N R Lieut Samuel Spector (MC) U S N R and Lieut O K Scott U S N R

No further trace of the larva is possible until it is recognized as an adult worm in a lymphatic channel or node The most favored sites are the larger lymphatic trunks of the aorta, but the sites easiest recognized are the more superficial ones in the groins, axillas and spermatic cords Here the adult worms become sexually mature, fertilization occurs by direct contact of the sexes, and the gravid female exudes microfilariae, which can be found in chylous urine or lymph in dilated vessels They ultimately can be found in the general circulation, where they are available for transfer to the mosquito, although they may disappear and severe infection can exist without the existence of microfilariae in the blood As far as the practitioner is concerned there are two important points of consideration in the life history of filariasis First, the microfilariae are nonpathogenic and can be transferred directly to an uninfected individual without danger of setting up an infection These larval forms must go through a proper mosquito before they are pathogenic for man Secondly, the adult worms cannot reproduce themselves in the human host, so that there is no possibility of accumulating more filariae than were originally injected through the bite of the infected mosquito

## EPIDEMIOLOGY

Filariasis (Wuchereria bancrofti) is commonly encountered throughout the tropical belt but is especially prevalent in Africa and the Samoan area of the Pacific There are numerous mosquito vectors In some areas it is transmitted by day as well as by night biting mosquitoes In general the biting habits of the vectors coincide with the appearance of the maximum numbers of circulating microfilariae The disease is primarily an urban one and the flight range of most vectors is short, rarely exceeding 300 yards in seeking their blood meal

When the Marines went into the Samoan area early in 1942 there was the extreme military necessity of getting under cover rapidly, and the most accessible spots were the native villages Here the infection was most intense because the close community life of the natives resulted in constant reinfection Naturally the available servicemen were likewise the recipients of an overwhelming number of infected bites The possibility that these men might become infected was taken lightly, because this region had been occupied for a number of years without evidence of filariasis in the white man However, previous residents had lived in more protected screened areas, and some cases now have been diagnosed in retrospect in view of the present experience Actually many believed that the white man was not susceptible, although in addition to other reports it had been shown early in 1915 in this country by Johnson [1] and in Australia by Croll [2] that this was not true During this war there was no doubt that the white man was susceptible, as thousands developed the disease As nearly as can be ascertained 38,300 men were exposed, and a filariasis registry showed a total of 10,421 diagnosed cases in the Marine Corps and United States Navy as of Dec 1, 1945 (table 1) There were many cases the diagnosis of which was not entered into the health record On the other hand, many were erroneously diagnosed merely on their history or by a positive skin reaction There was considerable difficulty in establishing the diagnosis in the early cases because most medical officers, including those who had spent considerable time in the area, were not familiar with the disease, especially with the early manifestations However within three to six months as a result of lymph node biopsies and detection of the adult worm, it was apparent that the disease was filariasis A directive was then issued for the removal of all men from the area, and patients diagnosed as having the disease were returned to the United States Another point of interest in the epidemiology of the disease was the high rate of infection in the Samoan area, yet practically no cases were acquired in similar areas where the incidence of infection in the natives was just as high This is explained by the quartering of troops in immediate contact with the natives on Samoa, while on Guadalcanal, for example, they were more isolated Also in Samoa vectors were day biting

## SIGNS AND SYMPTOMS

Little of the recorded literature on filariasis deals with the acute manifestations of the infection as seen in the serviceman It is concerned primarily with the later stages as observed in natives who have been reinfected over a period of years The first signs and symptoms after exposure appeared over a wide period, 0 6 per cent had a symptom free period of less than one month and 9 per cent had an incubation period of over eighteen months, while the greatest number, 24 per cent, had their first symptoms between the tenth and the twelfth month

TABLE 1—*Cases Diagnosed*

| | Enlisted Men | Officers |
|---|---|---|
| Marines | 8 548 | 326 |
| Sea Bees | 893 | 4 |
| Medical Department Navy | 359 | 61 |
| Other | 214 | 16 |
| Total | 10 014 | 407 |

TABLE 2—*Location of Initial Anatomic Involvement in 2,288 Men*

| Site | Number | Per Cent |
|---|---|---|
| Neck | 80 | 2 |
| Upper extremities | 1,084 | 31 |
| Lower extremities | 314 | 9 |
| Genitalia | 1 155 | 33 |
| Lymph nodes | 855 | 25 |
| Total | 3 488 | 100 |

A history of the initial signs of filariasis noted that they were confined to the lymphatic system and expressed themselves as lymphangitis, lymphedema and lymphadenopathy These acute cardinal signs usually appeared after exercise and responded to rest within three to five days

The anatomic location of these involvements as compiled from health records and testimony is shown in table 2 It was found but not shown in the table that the right upper extremity was involved in 24 per cent more instances than the left, while the left cord and testis showed up in 20 per cent more cases than the right Systemic manifestations were extremely mild and at most consisted of a mild leukocytosis and a low grade fever of 100 to 102 F with malaise None were ever very toxic, although a few complained of mild chills

Lymphangitis occurred principally along the course of the great vessels of the extremities and in the spermatic cords In the extremities there was moderate

1 Johnson, F B Filarial Infection South M J 8 630 1915
2 Croll D G Filariasis Among Australian Troops, Brit M J 1 28 1919

edema and tenderness but, unlike the more commonly seen streptococcic lymphangitis, it was always retrograde and there were diffuse patches of subcutaneous edema with overlying redness and heat There was usually a more clearly defined central red streak that extended from a few centimeters to the length of the extremity After the subsidence of the acute stages a firm cord could be palpated

Lymphadenitis was noted particularly in the axillas, groins and epitrochlear regions The nodes may be discrete or matted and moderately tender They do not undergo suppuration

Lymphedema was the least frequent finding and occurred at various sites over the body surface Occasionally it was observed about the eyes, over the scapular or deltoid regions and especially around the cubital fossae Frequently it was noted as a cold puffiness 2 to 6 inches in diameter with an elevation of ½ to 1 inch

The spermatic cords were frequently thickened and tender and often there was considerable swelling of the scrotal tissues It was not felt that the testicular tissues were enlarged

Complaints of subjective symptoms were far more numerous than objective findings They consisted primarily of cramplike pains radiating from the scrotum into the abdomen generalized aches and pains, numbness malaise and fatigue In general it was found that

TABLE 3.—*Number of Palpable Nodes in Filariasis, Malaria and Controls*

| | Filariasis | Malaria | Controls |
|---|---|---|---|
| Inguinal | 2 4 | 2 3 | 1 9 |
| Femoral | 1 7 | 1 4 | 1 3 |
| Axillary | 1 1 | 0 8 | 0 8 |
| Epitrochlear | 0 4 | 0 3 | 0 2 |

men assigned to tasks they enjoyed seldom reported to the sick bay and those who sought to better their position reported regularly For example, men on the football and basketball teams did not experience any difficulty, while men on guard duty and police details would complain bitterly

Records of the 2,595 cases observed over seventeen months showed that only 22 per cent ever showed any objective findings of acute filariasis if the presence of "shotty" lymph nodes is discounted and only 18 men, or 0 07 per cent had to be hospitalized for their flare-ups The majority were able to perform full or modified duty at all times

## PSYCHOLOGIC ASPECTS OF FILARIASIS

Along with a more thorough appreciation of the somatic symptomatology and clinical course of filariasis has come an understanding of the psychologic effects of this disease Recognition of the existence of the psychiatric components has clarified many misconceptions which arose in regard to this disease Especially prominent were unfounded fears of sexual sterility and impotence and fear of development of elephantiasis of the limbs and the scrotum There soon supervened a realization that their anxiety was not justified Only in cases of previously psychoneurotic or psychologically inadequate persons were fears concerning this disease retained Even in areas of high endemicity there is no interference of the reproductive function in the natives The phobic states concerning elephantiasis derived mainly from identification with native Samoans in areas where the disease was first encountered and from the lack of existing medical knowledge at that time concerning the probable course of the disease This state of apprehension was almost universally seen among Marines with early signs of filariasis and was ably described by Rome[3] Subsequent proof that the fears of sexual sterility and impotence were unfounded was obtained from the finding that 107 of 504 marriages after six months had already resulted in pregnancy and the incidence of disturbed sexuality of psychogenic origin was well within the range of normality

## DIAGNOSIS

The absolute diagnosis of filariasis depends on the detection of the adult worm in biopsy or the circulating microfilariae in concentrated blood samples The latter finding was never made in the men examined at this post, although the search was repeated several times on many A final survey of 250 men who had been infected almost four years was completely negative Therefore this procedure is not considered sufficiently valuable for practical purposes Other reports indicate that the occasions on which the microfilariae have been found were less than twenty in the several thousand cases The adult worm has been found only on rare occasions

The blood picture was of little assistance except for a slight increase in eosinophils Also this finding was just as prominent and frequent in men who had been in tropical areas but had not acquired filariasis

Use of various antigens for skin reactions showed that approximately 85 per cent were positive About 15 per cent of normal persons gave false positive reactions

The physical examination reveals little except adenopathy, the significance of which is doubtful

In order to establish the diagnostic significance of the palpable lymph node, 200 men with accepted diagnoses of filariasis were examined carefully and compared with 271 cases of malaria in overseas men and 98 men of a comparable age group who had never been overseas The proportion of demonstrable adenopathy in these men was filariasis 60 per cent, malaria 57 per cent and controls 50 per cent There was a correlation between the presence of an active fungous infection and enlarged nodes, especially noted in the overseas groups but there was no significant difference between the size or number of nodes in the men with filariasis and malaria (table 3) Therefore, it is held that except for the rare case the presence of palpable nodes has no diagnostic significance in filariasis

Another frequent complaint is pain and swelling of the arm or leg after heavy exertion There is no accurate way to evaluate the degree of pain in different persons, and it was the medical officers' impression that many men ascribed various aches, pains and soreness to filariasis and were seriously concerned while the nonfilarial patients on questioning would testify to an equal number of these symptoms after exertion but were totally indifferent to them In order to determine whether there was swelling associated with filariasis, 10 men with the disease and 10 without were subjected to weight lifting to the point of exhaustion Before and after measurements showed no significant difference in the two groups In summary, other than a past history of exposure and symptoms of acute filariasis there are now no practical diagnostic procedures and no clinical findings which can be relied on to establish the diagnosis in this group of men

3 Rome Howard P and Vogel R H The Psychosomatic Manifestations of Filariasis J A M A **123** 944 (Dec 11) 1943

### PATHOLOGY

Since early filariasis is a nonfatal disease, relatively little information is available on its pathology Practically all published reports to date have been limited to a study of superficial lymphatics or peripheral nodes Michael[4] has reported that a presumptive diagnosis can be made from the appearance of the tissues even in the absence of the adult worm On this station an unusual opportunity presented itself to examine the lymphatic system in detail in the case of an accidental death of a man with an unquestionable diagnosis of filariasis No adult worms were found and there was only slight evidence of lymphatic obstruction especially in the axillary region Otherwise there was nothing remarkable In 10 other instances superficial nodes were removed which showed appearance of a reactive gland, enlarged follicles hyperplasia of the lymphoid and reticuloendothelial elements and some scattered eosinophilia The reaction of lymphangitis overlaid by red blotchy areas probably is allergic in nature Permanent lymphatic obstruction with appearance of filarial elephantiasis was not observed and forms no part of this discussion

### TREATMENT

No specific therapy was employed because none of the men were ever very ill and findings were so transitory that no base line for accurate evaluation could be obtained From the time of first observation until the present there was a progressive improvement in the overall picture so that any compound employed might have given the impression of being beneficial The most valuable part of the therapeutic program was suggestion Full explanation of the cause of present difficulties with assurance of future improvement and ultimate complete recovery was used to good advantage This was demonstrated by a planned gradually increasing program of physical exertion along with activities devised to stimulate mental ease Much of the early apprehension by the men had its genesis from the fact that the returned patients attracted much attention because of the diagnosis and were repeatedly questioned and examined They in turn interpreted the interest in their condition as an indication of seriousness By repeated reassurance fears were allayed and a general improvement was apparent

Nonspecific measures as application of heat cold or x-rays to affected parts were not found to be beneficial Heat actually seemed detrimental in that it increased the pain

Necessary surgery was not found to be contraindicated because of a diagnosis of filariasis

### PROGNOSIS

Although time will be the deciding factor in determining the prognosis of filariasis the uninterrupted improvement in the general picture leaves little to be concerned about even if the occasional individual still has a filarial flare-up There are several reasons why a good prognosis can be expected In the first place the removal of the patient from the source of infection precludes the possibility that the adult worms will continue to accumulate, since they cannot reproduce themselves in the human body As stated they must pass through an appropriate vector and be reintroduced Secondly, repeated biopsy examinations have confirmed the existence of calcified or disintegrated adult worms indicative of an active curative mechanism which should in time eliminate the source of difficulty Finally the meager number of times microfilariae have been found in multitudinous searches testifies to the lightness of the infection Even in the absence of a proved specific remedy there is little doubt that the infection is self limited and that a favorable prognosis will be a certainty

### ELEPHANTIASIS

Elephantiasis due to the filarial organism results from a blocking of certain lymphatic channels and is undoubtedly produced by repeated assaults to the tissues over a period of years when exposed to numerous infected mosquito bites It is a complication that rarely involves 10 per cent of the natives in the most heavily endemic areas It is now almost four years since the first servicemen were infected and not a single case of elephantiasis has been seen in the 2 595 men at this station A word of warning to the physician in this connection is necessary as enlargement of the genitalia or extremity in a patient with the diagnosis of filariasis is not necessarily the result of that disease Two examples of this occurrence are known to me The first was a man with a grossly enlarged left testicle with a history of onset coincident with his filariasis However on biopsy the tissue examination revealed a highly malignant epithelioma The other case was a permanent elephantiasis of the left leg which was not due to filariasis but was Milroy's disease Two other members of the family had the same condition but had never been exposed to filariasis There are several nonfilarial causes for elephantiasis, such as scarring metastatic cancer thrombophlebitic disorders, hemangiomas, lymphangiomas, Milroy's disease and lipodystrophy

### THREAT OF FILARIASIS (WUCHERERIA BANCROFTI) TO THE UNITED STATES

There seems little reason to fear the establishment of filariasis in the United States as an aftermath of the returning veteran Napier[5] states that a climate favorable for the development of the larvae in the mosquito requires a mean temperature of 80 F and a humidity above 60 per cent If this is true, only a relatively small area of the United States those states bordering on the Gulf of Mexico, Georgia and South Carolina is suitable Filariasis was once prevalent in a part of that region as a result of the introduction of heavily infected slaves yet it was unable to maintain itself and died out spontaneously Also he states that it has been found that it requires approximately 15 microfilariae per drop of blood to maintain transmission This being true, the servicemen cannot be responsible for secondary transmission, since there are less than 20 recorded cases in which microfilariae have been found, and the concentration was far below the figure given by Napier Finally, there is no danger of spreading the disease by contact Actually blood from an infected donor can be used for transfusion purposes without danger, as the larvae are noninfective for man unless they have partially matured in a mosquito and been introduced by biting These and other reasons, such as better screening and mosquito control, would seem definitely to assure us that filariasis will not spread in this country and that the released serviceman cannot be a source of danger to his associates

### SUMMARY AND CONCLUSIONS

1 Filariasis (Wuchereria bancrofti) is an infection carried by certain mosquitoes and was acquired by 10,431 Navy personnel in the South Pacific area, mostly

4 Michael Paul Filariasis Among Navy and Marine Personnel U S Nav M Bull **42** 1059 (May) 1944

5 Napier L Everard Filariasis Due to Wuchereria Bancrofti Medicine **23** 149 1944

in the Army prepared a brief, in 1942. Copies of this memorandum [illegible] were observed in the following:

1. It was pointed out that the only type commonly [illegible] lymphangitis, lymphedema, lymphedematous and fibrous [illegible] and by scleroderma of the major lymphatic areas.

2. Elephantiasis, a complete stasis of filarial obstruction, [illegible] and only after prolonged exposure, has not made its appearance in servicemen. Because they are no longer exposed, it is not expected that it will occur.

3. The course of the disease has been one of gradually decreasing severity, so that now it is only the exceptional individual that shows any difficulty even after heavy infection.

4. There are no proved specific therapeutic agents that can as yet be recommended for use in these mild cases of servicemen. Nonspecific remedies, as cold, heat, local [illegible] to affected parts and protein injections, do not influence the course of infection. It is not unexpected that reactivations will be seen and, if encountered, bed rest for a few days is in itself considered adequate treatment.

5. There is no evidence to support that filariasis will be able to spread from servicemen to the community regardless of their mode of living. This plus the belief that the infection will have no permanent disabling effects justifies the decision to release men with filaria as from military service.

## CORONARY OCCLUSION IN NEGROES

WILLIAM A. BUTTLE, M.D.
Louisville, Ky.

I am unable to find in the literature a description of the clinical picture of myocardial infarction in the Negro. The diagnosis is rarely made clinically. Hence it is my purpose to describe the clinical characteristics of myocardial infarction in the Negro, to indicate that the disease is as common in the Negro as it is in white persons of comparable age groups and to emphasize that the diagnosis is obscured in the Negro only because dyspnea, the chief complaint and pain is absent.

[illegible] I can find no evidence to support the belief that the Negro does not feel pain as well as the white person. I offer as an explanation for the absence of angina in the Negro the fact that he develops hypertension much earlier than the white person and probably thereby obtains [illegible] collateral circulation.

Reports from certain hospitals in Atlanta, Ga., [illegible] state that the [illegible] Negro was [illegible] average [illegible] period [illegible] Negroes [illegible] to [illegible] Negro [illegible] to [illegible] Negro [illegible] to [illegible] Negro

Burch and Voorhies,[3] writing from the same hospital, report that antemortem diagnosis of coronary occlusion in the Negro was made only twice in five years

Hypertension was much more common and much more severe among the Negroes than among the white patients The Negroes' hearts were larger on chest x-ray and heavier at autopsy (table 4)

I was unable to determine the duration of hypertension among the cases, but it seems likely that the Negroes had had hypertension ten or fifteen years longer on the average than the white patients This I infer from statistics based on 53,563 admissions to the Tennessee Coal Iron and Railway Hospital in Fairfield, Ala, which shows the incidence of hypertension to be much higher in young Negroes than in young white persons [10] Other writers have come to similar conclusions [11]

The myocardial infarctions in all the cases included in my series resulted from occlusion of arteriosclerotic coronary arteries Syphilitic aortitis was present in 4 of the Negroes but did not involve the coronary ostia

I am interested in explaining the absence of pain during coronary occlusion in the Negro The rarity of angina in the Negro is well known and is commonly ascribed to lack of stress or to inability of the Negro to feel or to express pain [12] Libman found that 70 per cent of white persons but only 10 per cent of American

TABLE 1—*Age Distribution*

| Age | White | Negro |
|---|---|---|
| 30 39 | 0 | 3 |
| 40 49 | 4 | 5 |
| 50 59 | 5 | 3 |
| 60 69 | 9 | 5 |
| 70 80 | 8 | 0 |
| Total | 26 | 16 |
| Youngest patient | 42 | 31 |
| Oldest patient | 76 | 68 |
| Females | 35% | 37 5% |

Indians were sensitive to styloid pressure He inferred that racial differences in pain sensitivity exist and this might explain the absence of angina in the Negro [13] His articles did not record any use of the test on Negroes I used the test on 100 random patients in white wards and 100 random patients in Negro wards and found 66 of the white patients and 67 of the Negroes sensitive

The only comparison of pain thresholds in Negroes and white persons in the medical literature is the work of Chapman and Jones [14] They conclude that the Negroes "had a lower pain perception threshold and reacted more readily than northern Europeans to the pain stimulus" [15]

10 Unpublished data by the author

11 Weiss M M and Prusmack J J Essential Hypertension in the Negro Am J M Sc **195** 510-516 (April) 1938 Orenstein L L Hypertension in Young Negroes War Med **4**: 422 424 (Oct.) 1943 Kesilman [10]

12 Wood, J E Jones T D and Kimbrough R D The Etiology of Heart Disease A Clinical Study of 623 Cases with Certain Observations on Race and Climate, Am J M Sc **172**: 185 199 (Aug) 1926 Stone C T and Vanzant F R Heart Disease as Seen in a Southern Clinic A Clinical and Pathologic Survey J A M A **89** 1473 1480 (Oct 29) 1927 Laws C L Etiology of Heart Disease in Whites and Negroes in Tennessee Am Heart J **8** 608-617 1932 1933 Weiss M M The Problem of Angina Pectoris in the Negro ibid **17**: 711 715 (June) 1939 Davison and Thoroughman [1] Schwab and Schulze [7] Roberts[17] Libman Studies in Pain [13]

13 Libman Emanuel Studies in Pain Tr A Am Physicians **44** 52 63 1929 Methods of Physical Examination with Special Reference to Painful Diseases of Thorax and Abdomen Proc Internat. Assemb Inter State Post Grad M A North America 1926 pp 60-66 1927

14 Wolff Harold G Personal communication to the author

15 Chapman William P and Jones Chester M Variations in Cutaneous and Visceral Pain Sensitivity in Normal Subjects J Clin Investigation **22** 81 93 (Jan) 1944

COMMENT

The incidence of myocardial infarction as a cause of death among Negroes as I have estimated it (1 6 per cent) is somewhat lower than that estimated by the United States Department of Census (2 6 per cent) [10] My estimate is probably low because, first, I chose only

TABLE 2—*Presenting Symptoms* *

| Symptom | Negroes | White Persons |
|---|---|---|
| Pain | 0 | 54% |
| Dyspnea | 100% | 40% |
| Ankle edema | 100% | 19% |
| Acute psychoses | 25% | 16% |
| Cerebral hemorrhage | 2o% | 15% |

* Records incomplete in 1 Negro and 1 white patient

TABLE 3—*Antemortem Diagnoses in Cases of Coronary Occlusion Proved at Autopsy*

| | Coronary Occlusion | Decompensated Hypertensive Cardiovascular Disease | Cerebrovascular Accident | Acute Psychoses | Sudden Death (Diagnosis Suspected) |
|---|---|---|---|---|---|
| White | 69% | 16% | 8% | 8% | 12% |
| Negro | 0 | 75% | 6% | 6% | 12% |

those cases in which the diagnosis at autopsy was incontrovertible and, second, because in income groups higher than those included in my series the occurrence of coronary occlusion is probably more common It seems likely that between 2,800 and 4,600 Negroes in the United States are killed every year by myocardial infarction and that many more are disabled by the condition It is appropriate then that the literature should contain a description of this condition and that, with the clinical picture known, it should be diagnosed with greater accuracy

The condition is not diagnosed because of the absence of pain In the Negro every sudden exacerbation of decompensation with severe dyspnea should raise the

TABLE 4—*Heart Size and Heart Weight*

| | White | Negro |
|---|---|---|
| Percentage hypertensive | 66% | 83% |
| Average blood pressure | | |
| Before admission | 138/8o | 172/125 |
| At admission | 139/88 | 172/116 |
| Average heart-chest ratio | 58% | 64% |
| Average heart weight at autopsy | 500 Gm (60% overweight) | 595 Gm (08% overweight) |

TABLE 5—*Ratio of Incidence of Hypertension in Comparable Numbers of Whites and Negroes*

| | Weiss (2 187 Cases) White-Negro | Kesilman (3 996 Cases) White-Negro | Author (53,563 Cases) White-Negro |
|---|---|---|---|
| Under 40 | 1 to 5 7 | 1 to 5 9 | 1 to 7.6 |
| All ages | 1 to 2 | 1 to 3.1 | 1 to 2 8 |

suspicion of myocardial infarction This observation has permitted me to make the diagnosis recently in a number of nonfatal cases

I believe that the absence of angina in the Negro cannot be explained by an inability to feel or to express pain [15] Likewise there is little evidence to support the contention that the Negro does not have angina because

16 Murray, Florence The Negro Handbook 1944 New York [illegible] Reference Publications p 178

in the Samoan group of islands, in 1942 Over a period of seventeen months 2,595 were observed at this station

2 It was manifested in its early stages primarily by lymphangitis, lymphedema, lymphadenitis and funiculitis and by aches and pains of the major lymphatic areas

3 Elephantiasis, a complication of filariasis observed in natives and only after prolonged exposure, has not made its appearance in servicemen Because they are no longer exposed it is not expected that it will occur

4 The course of the disease has been one of gradually decreasing severity, so that now it is only the exceptional individual that shows any difficulty even after heavy exertion

5 There are no proved specific therapeutic agents that can as yet be recommended for use in these mild cases of servicemen Nonspecific remedies, as cold, heat, local x-ray to affected parts and protein injections, do not influence the course of infection It is not unexpected that reactivations will be seen and, if encountered, bed rest for a few days is in itself considered adequate treatment

6 There is no evidence to suggest that filariasis will be able to spread from servicemen to the community regardless of their mode of living This plus the belief that the infection will have no permanent disabling effects justifies the decision to release men with filariasis from military service

## CORONARY OCCLUSION IN NEGROES

WILLIAM S HUNTER, M D
Louisville Ky

I am unable to find in the literature a description of the clinical picture of myocardial infarction in the Negro The diagnosis is rarely made clinically Hence it is my purpose to describe the clinical characteristics of myocardial infarction in the Negro, to indicate that the disease is as common in the Negro as it is in white persons of comparable age groups and to emphasize that the diagnosis is obscured in the Negro only because dyspnea is the chief complaint and pain is absent

Because I can find no evidence to support the belief that the Negro does not feel pain as well as the white person, I offer as an explanation for the absence of angina in the Negro the fact that he develops hypertension much earlier than the white person and probably thereby dilates his coronary collateral circulation

Reports from Grady Hospital in Atlanta, Ga, indicate that the diagnosis of coronary occlusion in the Negro was not made clinically during an eighteen month period [1] Only 1 case was diagnosed before death in Washington, D C, in a year [2] At Charity Hospital in New Orleans the diagnosis was made ante mortem only four times in ten years [3] These authors concluded that coronary occlusion was rare in the Negro

However, authors who base their conclusions on combined clinical and autopsy records believe that coronary occlusion in the Negro is not an uncommon condition Thus the ratio of coronary occlusion in white persons and Negroes was found to be 4 to 1 in Charleston, S C,[4] and 3½ to 1 in New Orleans [5]

Studies based solely on autopsy reports show but little difference in incidence in the two races Writers in three cities found the ratio to be 2 to 1,[5] 1½ to 1 [6] and 1½ to 1 [7] It has been suggested [7] that even this slight preponderance in white persons results from the longer life expectancy (ten years) [8] in the white race

### DATA

I have reviewed 1,000 consecutive autopsies on Negroes and 1,000 consecutive autopsies on white patients of the Louisville General Hospital during the past ten years From these I have chosen to study only those cases in which coronary occlusion was the immediate cause of death These patients were taken from all services of the hospital and include all age groups I believe that these findings accurately mirror the incidence of coronary occlusion as a cause of death in the indigent I found 16 Negro and 26 white cases All 16 of the Negro and 18 of the white patients were under 70, a ratio of 1 to 1 1 in the two races

Dyspnea was the outstanding presenting picture in all the Negroes The almost invariable picture was an exacerbation, usually sudden, of decompensation of several years' duration Dyspnea was evident in every case and ankle edema was present in all cases, though to a varying degree No patient had chest pain None was diagnosed clinically

In contrast, over half of the white patients had pain, and with few exceptions these were the only patients in whom the diagnosis was made

In approximately 25 per cent of Negro and 15 per cent of white patients the diagnosis was obscured by the prominence of cerebrovascular accidents or acute psychoses (tables 2 and 3)

I could find no significant difference in the other clinical signs of myocardial infarction in the two racial groups Electrocardiograms were made on 12 of the white and 9 of the Negro patients Of these, 6 of the white patients showed changes definitely diagnostic of myocardial infarction Only 2 of the Negroes showed such diagnostic electrocardiograms, but 6 of the Negroes had tracings suggestive of myocardial infarction Serial electrocardiograms, which might have proved the diagnosis, were not made in these Negroes because they did not appear clinically to have myocardial infarction I have recently seen an electrocardiogram from a Negro which revealed evidence of both anterior and posterior myocardial infarction, auriculoventricular and bundle branch block and pulmonary infarction, all proved at autopsy, so I have no reason to doubt that the electrocardiogram is of potential value in diagnosing myocardial infarction in the Negro

The only article I have found dealing with electrocardiograms in Negroes is a study of 325 Negro and 322 white patients [9] The author concludes that coronary occlusion is nine times as prevalent in white persons I believe, however, that this low incidence of coronary occlusion in Negro electrocardiograms is a reflection of the rarity with which the diagnosis is suspected clinically

From the Departments of Internal Medicine and Pathology the University of Louisville Medical School

1 Davison H M, and Thoroughman J C A Study of Heart Disease in the Negro Race South M J **21** 464-469 (June) 1928

2 Hedley A F A Study of 450 Fatal Cases of Heart Disease Occurring in Washington (D C) Hospitals During 1932 with Special Reference to Etiology Race and Sex Pub Health Rep **50** 1127 1153 (Aug 23) 1935

3 Burch G E and Voorhies N W A Study of the Incidence of Coronary Occlusion and Angina Pectoris in the White and Negro Races Am J M Sc **198** 685 690 (Nov) 1939

4 Peery T M, and Langsam S M Study of Cardiovascular Disease in Charleston S C Based on Necropsy Statistics Am Heart J **19** 424 433 (April) 1940

5 Johnston Christopher Racial Differences in the Incidence of Coronary Sclerosis Am Heart J **12** 162 167 (Aug) 1936

6 Weiss M M Coronary Occlusion in the Negro Internat Clin **4** 201 206 (Dec) 1940

7 Schwab E H and Schulze V E. Heart Disease in the American Negro of the South, Am Heart J **7** 710 717 (Aug) 1932

8 The Statistical Abstract of the United States 1943, U S Government Printing Office p 83

9 Ashmen R An Electrocardiographic Study of Caucasians and Negroes Tri State M J **13** 2686 2688 (Feb) 1941

Burch and Voorhies,[9] writing from the same hospital, report that antemortem diagnosis of coronary occlusion in the Negro was made only twice in five years

Hypertension was much more common and much more severe among the Negroes than among the white patients The Negroes' hearts were larger on chest x-ray and heavier at autopsy (table 4)

I was unable to determine the duration of hypertension among the cases, but it seems likely that the Negroes had had hypertension ten or fifteen years longer on the average than the white patients This I infer from statistics based on 53,563 admissions to the Tennessee Coal, Iron and Railway Hospital in Fairfield, Ala., which shows the incidence of hypertension to be much higher in young Negroes than in young white persons [10] Other writers have come to similar conclusions [11]

The myocardial infarctions in all the cases included in my series resulted from occlusion of arteriosclerotic coronary arteries Syphilitic aortitis was present in 4 of the Negroes but did not involve the coronary ostia

I am interested in explaining the absence of pain during coronary occlusion in the Negro The rarity of angina in the Negro is well known and is commonly ascribed to lack of stress or to inability of the Negro to feel or to express pain [12] Libman found that 70 per cent of white persons but only 10 per cent of American

TABLE 1—*Age Distribution*

| Age | White | Negro |
|---|---|---|
| 30-39 | 0 | 3 |
| 40-49 | 4 | 5 |
| 50-59 | 5 | 3 |
| 60-69 | 9 | 5 |
| 70-80 | 8 | 0 |
| Total | 26 | 16 |
| Youngest patient | 4° | 31 |
| Oldest patient | 70 | 68 |
| Females | 35% | 37.5% |

Indians were sensitive to styloid pressure He inferred that racial differences in pain sensitivity exist and this might explain the absence of angina in the Negro [13] His articles did not record any use of the test on Negroes I used the test on 100 random patients in white wards and 100 random patients in Negro wards and found 66 of the white patients and 67 of the Negroes sensitive

The only comparison of pain thresholds in Negroes and white persons in the medical literature is the work of Chapman and Jones [14] They conclude that the Negroes "had a lower pain perception threshold and reacted more readily than northern Europeans to the pain stimulus" [15]

COMMENT

The incidence of myocardial infarction as a cause of death among Negroes as I have estimated it (1.6 per cent) is somewhat lower than that estimated by the United States Department of Census (2.6 per cent) [16] My estimate is probably low because, first, I chose only

TABLE 2—*Presenting Symptoms* *

| Symptom | Negroes | White Persons |
|---|---|---|
| Pain | 0 | 54% |
| Dyspnea | 100% | 40% |
| Ankle edema | 100% | 19% |
| Acute psychoses | 25% | 15% |
| Cerebral hemorrhage | 25% | 15% |

Records incomplete in 1 Negro and 1 white patient

TABLE 3—*Antemortem Diagnoses in Cases of Coronary Occlusion Proved at Autopsy*

| | Coronary Occlusion | Decompensated Hypertensive Cardiovascular Disease | Cerebrovascular Accident | Acute Psychoses | Sudden Death (Diagnosis Suspected) |
|---|---|---|---|---|---|
| White | 65% | 16% | 8% | 8% | 12% |
| Negro | 0 | 75% | 6% | 6% | 12% |

those cases in which the diagnosis at autopsy was incontrovertible and, second, because in income groups higher than those included in my series the occurrence of coronary occlusion is probably more common It seems likely that between 2,800 and 4,600 Negroes in the United States are killed every year by myocardial infarction and that many more are disabled by the condition It is appropriate then that the literature should contain a description of this condition and that, with the clinical picture known, it should be diagnosed with greater accuracy

The condition is not diagnosed because of the absence of pain In the Negro every sudden exacerbation of decompensation with severe dyspnea should raise the

TABLE 4—*Heart Size and Heart Weight*

| | White | Negro |
|---|---|---|
| Percentage hypertensive | 56% | 83% |
| Average blood pressure | | |
| Before admission | 138/85 | 172/125 |
| At admission | 120/88 | 172/116 |
| Average heart-chest ratio | 53% | 64% |
| Average heart weight at autopsy | 500 Gm (60% overweight) | 595 Gm (98% overweight) |

TABLE 5—*Ratio of Incidence of Hypertension in Comparable Numbers of Whites and Negroes*

| | Weiss (2,187 Cases) White-Negro | Kesilman (3,986 Cases) White-Negro | Author (53,563 Cases) White-Negro |
|---|---|---|---|
| Under 40 | 1 to 5.7 | 1 to 5.9 | 1 to 7.0 |
| All ages | 1 to 3 | 1 to 3.1 | 1 to 2.3 |

suspicion of myocardial infarction This observation has permitted me to make the diagnosis recently in a number of nonfatal cases

I believe that the absence of angina in the Negro cannot be explained by an inability to feel or to express pain [16] Likewise there is little evidence to support the contention that the Negro does not have angina because

10 Unpublished data by the author

11 Weiss M M and Prusmack J J Essential Hypertension in the Negro Am J M Sc **195** 510-516 (April) 1938 Orenstein, L L. Hypertension in Young Negroes War Med **4** 422-424 (Oct.) 1943 Kesilman [18]

12 Wood, J E., Jones T D and Kimbrough R D The Etiology of Heart Disease A Clinical Study of 623 Cases with Certain Observations on Race and Climate, Am J M Sc **172** 185-199 (Aug.) 1926 Stone C T and Vanzant F R Heart Disease as Seen in a Southern Clinic A Clinical and Pathologic Survey J A M A **89**: 1473-1480 (Oct. 29) 1927 Laws C L. Etiology of Heart Disease in Whites and Negroes in Tennessee Am Heart J **8** 608-617 1932-1933 Weiss, M M The Problem of Angina Pectoris in the Negro ibid **17**: 711-715 (June) 1939 Davison and Thoroughman [1] Schwab and Schulze [7] Roberts[17] Libman Studies in Pain [13]

13 Libman Emanuel Studies in Pain Tr A Am Physicians **44**: 52-63 1929 Methods of Physical Examination with Special Reference to Painful Diseases of Thorax and Abdomen Proc Internat Assemb Inter State Post Grad M A North America 1926 pp 60-66 1927

14 Wolff, Harold G Personal communication to the author

15 Chapman, William P, and Jones, Chester M Variations in Cutaneous and Visceral Pain Sensitivity in Normal Subjects, J Clin Investigation **22** 81-93 (Jan.) 1944

16 Murray, Florence The Negro Handbook 1944 New York Current Reference Publications p 178

he lacks mental stress [17] On the contrary, mental stress is the common explanation for the high incidence of hypertension in the Negro [18] Careful studies indicate a higher incidence of mental disease in the Negro than in white persons in the United States [19]

It is not known why Negroes do not have angina In seeking an explanation one can hardly overlook the striking difference in the sizes of the heart of Negroes and the heart of the white patients dying of coronary occlusion This difference as far as I know has not been mentioned previously The apparent explanation for this discrepancy in heart size is the greater severity and longer duration of the hypertension in the Negro dying of coronary occlusion High blood pressure definitely will increase coronary flow [20] Increasing the diastolic blood pressure from 85 (the average of the white patients whom I have observed) to 125 (the average of the Negro patients) might be expected to increase the flow through the coronary vessels by as much as a liter per minute [21] Such an increase in coronary flow cannot but increase the volume of the collateral vessels

It is possible too that the coronary vasodilatation accompanying peripheral sympathetic nerve vasoconstriction may increase coronary flow In experimental animals sympathetic stimulation alone has tripled coronary flow The more forceful contractions of the heart may, however offset this increase in flow [21]

I do not believe that the anemia found in the Negroes of this series (average red blood count Negro, 3,910,000, white, 4,230,000) is sufficiently severe to have materially increased coronary flow [22]

In concluding his painstaking injections of the coronary arteries in patients dying of coronary occlusion, Blumgart [23] states that adequate collateral coronary circulation is the explanation of "silent" coronary occlusions

### CONCLUSIONS

1 Coronary occlusion is rarely diagnosed before death in the Negro

2 Below the ages of 70, coronary occlusion seems to be as common in the indigent Negro as in the indigent white person

3 Negroes with coronary occlusion rarely have pain but have dyspnea as their outstanding symptom

4 Careful clinical and electrocardiographic examination of Negroes with acute left ventricular failure will reveal many diagnoses of coronary occlusion

5 The long duration of hypertension in the Negro may dilate coronary collateral circulation and account for the fact that Negroes have "silent' coronaries (Blumgart)

17 Roberts S R Nervous and Mental Influences in Angina Pectoris Am Heart J 21 35 (Oct) 1931

18 Kesilman Morris The Incidence of Essential Hypertension of White and Negro Males M Rec 154 16-19 (July 2) 1941 Schwab and Schulze

19 Karlan S C A Comparative Study of Psychoses Among Negroes and Whites in New York State Prisons Psychiat Quart 13 160 164 (Jan) 1939 Wagner P S A Comparative Study of Negro and White Admissions to the Psychiatric Pavilion of the Cincinnati General Hospital Am J Psychiat 95 167 183 (July) 1938

20 Wiggers Carl J Personal communication to the author

21 Anrep G V Lane Medical Lectures Studies in Cardiovascular Regulation Stanford University Calif, Stanford University Press 1936 pp 245 288

22 Gremels H and Starling E H On the Influence of Hydrogen Ion Concentration and of Anoxemia on the Heart Volume J Physiol 61: 297 325 1926

23 Blumgart H L Schlesinger M J, and Davis David Studies on Relation of Clinical Manifestations of Angina Pectoris Coronary Thrombosis and Myocardial Infarction to Pathologic Findings with Particular Reference to Significance of Collateral Circulation Am Heart J 19 191 (Jan) 1940

### ADDENDUM

Since writing this paper I have seen a Negress with a severe attack of precordial pain radiating down the left arm She had serial electrocardiograms typical of myocardial infarction with $ST_1$ take-off a centimeter above the base line On admission there was no evidence that she had ever had hypertension or decompensation The attack was not fatal

Louisville General Hospital

---

## ATABRINE AS A CAUSE OF FATAL EXFOLIATIVE DERMATITIS AND HEPATITIS

CAPTAIN CLARENCE M AGRESS
Medical Corps Army of the United States

It is generally believed that, aside from toxic psychosis, atabrine causes almost no serious reactions In May 1941 Bispham [1] reported 49,681 cases of atabrine-treated malaria many of these representing cases in which suppressive therapy was given with long periods of administration Out of these only 38 with toxic reactions were found, consisting of severe headache, abdominal pain, gastrointestinal disturbances, mental depression a few psychoses and a questionable case of blackwater fever Textbooks of tropical diseases minimize the toxicity of atabrine Manson-Bahr and Stitt make little or no mention of possible serious visceral damage and Napier says "We have treated many hundreds of patients with atabrine during the past ten years and in none of them have any serious effects occurred"

In the face of this prevailing opinion at a time when atabrine is being used so extensively it is felt important to present evidence that in a small percentage of cases atabrine is capable of causing serious and even fatal reactions It is emphasized that these are sensitivity reactions, being similar to reactions produced by many other drugs, such as the arsenicals and quinine in an idiosyncratic or sensitized person It is not suggested that atabrine is necessarily a dangerous drug because the cases presented here represent less than a twentieth of 1 per cent of the atabrine-treated malaria in this group

### REPORTED CASE OF SENSITIVITY

No cases of hepatitis and only 1 case of exfoliative dermatitis following atabrine have been found in the literature Noojin and Callaway [2] reported a case in 1942

A white woman aged 45 on her own initiative took 0 1 Gm of atabrine three times daily for five days for chills and fever On the sixth day because of joint pains, headache and weaknesss (but no fever) she consulted a physician, who discovered diabetes gave her insulin and discharged her a week later The following week fever recurred, malarial parasites were discovered in the blood and a second course of atabrine dihydrochloride 0 3 Gm daily for six days (3 3 Gm total) was given A "few days' later she developed pruritus, thickening of the skin, edema and oliguria Her white blood cell count was 18 650, with an eosinophilia of 60 per cent Although no mention of liver damage is made, the total proteins were 3 7 Gm, albumin 1 6 Gm and globulin 2 1 Gm, with a ratio of 0 76 In the course of the disease the patient had a stormy course with generalized oozing and exfoliation Patch tests

1 Bispham W H Am J Trop Med 21 455-459 (May) 1941

2 Noojin R O and Callaway J L North Carolina M J 3 239 240 (May) 1942

to atabrine were positive at the time of the reaction and four months later when the patient had completely recovered, while control tests with insulin, phenobarbital and other drugs were negative

No instances of exfoliative dermatitis due to malaria are on record

### STORAGE AND EXCRETION OF ATABRINE

Many studies on the storage and excretion of atabrine have been made since its introduction Much of the most recent work has not been published All investigators agree that atabrine is excreted in small amounts over a long period Dearborn and his associates [3] showed that the average daily excretion in the urine and feces of dogs over four weeks of daily administration reached a level of less than 4 per cent of the daily dose Maximum concentrations in most tissues were reached in two weeks, and higher tissue levels were attained only with larger doses They concluded that, since after the second week neither elimination nor storage was increased, 96 per cent must be converted to other substances Scudi and his associates [4] in experiments on rats and dogs found the highest concentrations of atabrine in the liver When administration was stopped, decreased concentrations were found in the liver about the eighth day but appreciable amounts were still present two weeks later even after a single dose of the drug Intermediate concentrations were found in the spleen and kidney, from which excretion was even slower All other tissues but bone marrow and the wall of the small intestine showed low concentrations of the drug Since urinary excretion never reaches a high level, elimination is slow It was pointed out that the total urinary output per day did not reflect the size of the dose administered In the bowel, on the other hand, large amounts were excreted and for long periods after the drug was stopped Blood concentrations, like urinary concentrations, after oral or intravenous administration showed no constant relationship to the dose administered and never exceeded 1 mg per hundred cubic centimeters even after large multiple doses When administration of atabrine is stopped, the blood concentrations are maintained for days and the authors suggest that it is slowly liberated from its deposits in the tissues It can be seen that further work is needed to clarify the fate of atabrine in the body, especially with respect to its degradation products

### REPORT OF CASES

Five cases of atabrine toxicity with exfoliative dermatitis and some degree of hepatitis in all, are presented here Only 2 of the patients survived All were followed in hospitals in the India-Burma Theater The last case was studied at a general hospital where careful laboratory studies could be done This case was the last in the series and because of the knowledge gained in the earlier cases and a preceding history of atabrine sensitivity it was regarded as a test case and so managed It will be noted that all the patients were Chinese This may be on the basis of racial idiosyncrasy, because of the indiscriminate and unsupervised, repeated and generous use of this drug so commonly encountered among Chinese soldiers or because of their poor nutrition, which may have lowered their hepatic tolerance None of these reactions occurred during a time when infectious hepatitis was present in other patients Autopsies were performed in all fatal cases by Capt Leon J Tragerman, M C, A U S He also supplied the histologic descriptions

CASE 1.—A man aged 27, Chinese, admitted Sept 28, 1943 gave a history of fever, headache and backache for three days and the smear was positive for Plasmodium falciparum Except for fever of 101.6 F, physical examination was entirely negative Treatment was begun promptly on the day of entry and he was given quinine 10 grains (0.65 Gm) three times a day for two days After two days quinine was stopped and atabrine started 0.1 Gm three times a day He also received phenobarbital Through a nursing error atabrine was stopped after 0.4 Gm was given quinine being used instead His temperature continued elevated at 100-101.6 F On the sixth day with no temperature change there was onset of a scarlatiniform rash beginning on the face and spreading over the body in a few hours The throat while not sore, was injected and there was a fine punctate enanthem on the soft palate Some follicular exudate was present on the tonsils and the posterior cervical nodes were slightly enlarged The spleen and liver were down about 2 cm below the costal margin and were tender A fine furfuraceous scaling was just visible on the forehead By the eighth day the fever rose to 103 F without rigor By this time the rash had become severe and the patient's face was definitely desquamating The face and hands were puffy, and there was a faint icteric tinge to the sclerae The patient had become mentally sluggish and slightly disoriented Urinalysis at this time revealed 3 plus albumin and 2 to 3 granular casts per high power field and a trace of bile but no urobilinogen The white blood cell count was 15,300 with 42 per cent polymorphonuclears 34 per cent lymphocytes and 24 per cent eosinophils Exfoliative dermatitis due to quinine was suspected, and quinine was stopped Atabrine 0.1 Gm three times a day was again started the patient receiving 0.3 Gm more, making 0.7 Gm total dosage He had also received 2.25 grams (15 Gm) of quinine On the ninth day his icterus index was 105 units desquamation was more advanced on the face and beginning on the trunk and he was semistuporous All drugs were stopped fluids were forced and liver extract was given intramuscularly The temperature was only 99 F at this time, and the blood smear was negative for malaria

Two weeks from the date of entry the patient was mentally clear and the urine showed only a trace of bile and urobilinogen, but the icterus index was 90 units The liver was enlarged to 3 cm and the spleen 1.5 cm below the costal margin and both were tender The skin showed generalized fine desquamation even to the palms and soles Therapy consisted in a high carbohydrate, high vitamin diet with added vitamins and daily intramuscular injection of liver extract By the twenty-fifth day, although his temperature remained elevated at 101-102 F the patient had begun to eat and was alert and his icterus index was only 20 units Urobilinogen was now present in the urine in increased amounts up to 1-40 dilution A purulent cough had developed and there was considerable exfoliation, large flakes of skin being shed from the whole body The patient had lost weight, and small lymph nodes were generally palpable through the leathery thickened skin The tongue was slick, and several nosebleeds occurred The liver was now just palpable and only slightly tender The patient continued febrile until the thirty-seventh day, when a frank bilateral basal bronchopneumonia developed and sulfathiazole was given, 4 Gm as a first dose and 1 Gm at four hour intervals At this time also the patient had several bedsores and although the danger of any further drug therapy was recognized the pneumonia was too severe to go untreated Sulfathiazole was stopped on the forty sixth day, the patient having made considerable progress Desquamation was much less, the bedsores were healing, and the patient became fever free and began to gain weight

Three months after entry he was well enough to determine specific drug sensitivity Skin tests with quinine were negative (patch and scratch) but the phenobarbital patch test was positive 0.1 Gm given orally caused in twenty-four hours a rise in temperature to 101.6 F, conjunctivitis, itching and diffuse

3 Dearborn E H Kelsey F E Oldham F K and Geiling E M K J Pharmacol & Exper Therap **78** 120-126 (June) 1943
4 Scudi John V and Hamlin, M T Proc Soc Exper Biol & Med **54**: 127-131 (Oct) 1943 Scudi J V and Jelinek Viola C J Biol Chem **152** 27 (Jan) 1944 Scudi J V and Hamlin M T J Pharmacol & Exper Therap **80**: 150-159 (Feb) 1944

erythema of the skin Three days later the patient recovered except for slight flaking around the neck Quinine 0 3 Gm was given two weeks later without ill effect. Because of the lack of reported toxic effects of atabrine and the demonstrated sensitivity to phenobarbital, atabrine was not suspected, the hepatitis being questionably attributed to malaria After further convalescence the patient was discharged four and one-half months after entry

Three months later May 14, 1944, the patient again entered the hospital Ten days previously he had taken one atabrine tablet as prophylaxis against malaria No other medication had been taken since discharge. Within twelve hours after ingestion of the atabrine he noted fever and a generalized rash which he described as resembling measles His skin began to desquamate a few days later Examination showed mild conjunctivitis and generalized mild exfoliation His blood and urine were normal, and convalescence was uneventful Patch tests to acetylsalicylic acid, phenobarbital and sulfathiazole were negative, suggesting that the previous positive test to phenobarbital was a nonspecific response of a hyperreactive skin, but atabrine produced a localized papular eruption beneath the patch. He was discharged after being warned of the danger of future ingestion of atabrine. Several months later it was learned that the patient was well but could not be released from duty for further study

Case 2—A man aged 24, Chinese, was admitted on April 4, 1944 for shrapnel wounds of the arm, groin and back An abscess of the back was drained and he did well until June 17, when he began having epileptiform seizures for which he was given phenobarbital 0 1 Gm three times a day On July 9 a blood smear during a chill revealed malaria, type undetermined and he was started on atabrine. July 11 a generalized maculopapular rash appeared, beginning on the face. The rash was blotchy, faded on pressure and was more apparent over the extensor surfaces and over the proximal rather than the distal extremities The palms were erythematous, the conjunctivas and soft palate were injected and the tongue had a moderate "strawberry" appearance Atabrine and phenobarbital were stopped and after a negative quinine scratch test (as described by Dawson and Garbade) malarial therapy was completed with quinine.

By July 17 the patient's temperature was still 102-104 6 F and the rash had become confluent, involving the flexor surfaces last, and was papulovesicular on the face, with a fine branny scale on the forehead. The tongue had peeled' and was very red, and there was conjunctivitis The nodes were generally enlarged and slightly tender A purulent productive cough had developed, with fine rales in both bases indicative of an early bronchopneumonia Five days later the skin had become leathery and thickened and was exfoliating The patient had become dull and apathetic, with puffy face and eczematoid weeping around the eyes, lips and ears The liver became palpable 2 cm below the costal margin and was tender The basal bronchopneumonia failed to respond to three days' full doses of sulfathiazole which was discontinued Liver extract and vitamin C were given daily parenterally, along with intravenous plasma and fluids Patch tests were difficult to carry out, but atabrine was again positive At the same time negative results were obtained for acetophenetidin, phenobarbital and sulfathiazole

Several leukocyte counts from July 12 to 25 showed a rise from 12 950 to 41,000 per cubic millimeter, with a progressive fall in the polymorphonuclear count from 80 to 39 per cent as a result of a rise of eosinophils from 1 to 44 per cent the monocytes remaining unchanged The urine showed only a trace of albumin

By August 1, twenty two days after the administration of 1 3 Gm of atabrine the patient became icteric and began to bleed from the rectum and fissures about the mouth bile was passed in the urine, and he died after being comatose for several hours

Autopsy showed extensive generalized exfoliation The cardiovascular and gastrointestinal systems were normal The respiratory system showed an old right chronic pleuritis and local bronchiectasis of the right lower lobe The spleen was firm, was three times normal size and had the mahogany color of chronic malaria The kidneys exhibited rather severe parenchymatous degeneration The liver weighed 2,000 Gm and was smooth and a mottled yellow-brown The cut surfaces were soft and of similar color, with bright yellow blotches obscuring the markings in many areas Postmortem urine tested with amyl alcohol for atabrine was positive (Bile, however, may give a false positive reaction)

Microscopic study of the liver showed severe fatty changes, disorganization of architecture, severe hepatocellular degeneration and, in the areas, apparent necrosis Mild lymphocytic and plasma cell periportal infiltration was noted, and no regenerative changes or connective tissue proliferation occurred The skin sections showed varying mixtures of inflammatory and degenerative changes with desquamation No other pertinent histologic changes were noted The cause of death was listed as severe acute hepatitis, generalized, exfoliative dermatitis and acute pulmonary edema

Case 3—A soldier aged 25, Chinese, was admitted as a casualty on June 8, 1944, two days after suffering a rifle wound on the left leg Examination showed a compound fracture of the left tibia No other disease was present. The wound was debrided, a cast applied and the patient started on sulfathiazole 4 Gm initially and 1 Gm every four hours and continued on this dosage until June 23 He was also given the usual suppressive atabrine treatment of 0 1 Gm daily He had a secondary hemorrhage on June 17 necessitating exploration and arterial ligation After the cast was reapplied his temperature began to range between 101 and 102 F, and despite negative malarial smears and the suppressive atabrine he was begun on therapeutic doses of atabrine, receiving a full course and then continued on 0 1 Gm daily On June 27, on application of a new cast, a local sequestrum was noted. By July 7 the fever had changed to a definitely septic type and at this time a medical consultant noticed jaundice and exfoliative dermatitis, which had already been present several days, and atabrine was stopped after a total dose of 3 9 Gm The patient was pale, very weak but rational and had jaundice, especially of the scleras and palms Slight conjunctivitis and a slick atrophied tongue were present, and there were crepitant rales in the left base. The spleen was not felt, but the liver was enlarged 2 cm below the costal margin but not tender There was generalized shotty lymphadenopathy and the skin was strikingly thickened, leathery and desquamating

Laboratory study showed a red blood cell count of 2,500,000 per cubic millimeter and a white blood cell count of 11 400 per cubic millimeter with a normal differential The urine contained bile but no increased urobilinogen on three tests The icterus index was 100 units Widal and Weil-Felix agglutination tests were negative, as was an x-ray of the chest. Stool specimens showed only Ascaris ova Blood cultures on July 7 and 18 were positive for Staphylococcus aureus but the coagulase test was negative, indicating doubtful significance Because of slight stiffness of the neck a spinal puncture was performed but the fluid was normal except for the presence of 25 lymphocytes per cubic millimeter

The patient also received large doses of parenteral vitamins and liver and plasma without effect He became more jaundiced and soon developed bronchopneumonia for which sulfathiazole was ineffectual His skin was thought too irritated to attempt patch testing, although subsequent work suggests that it may be done even in this stage By July 19 he was delirious and died on the following day, forty one days after entry

Autopsy revealed an entirely normal cardiovascular system and a gastrointestinal system which showed only ascariasis The spleen was normal in size and appearance, but the lymph nodes were generally slightly enlarged and bile stained There was fairly extensive bronchopneumonia in the lower lobe of the left lung The liver weighed 1,040 Gm. and was two-thirds normal size Its capsule was wrinkled and the cut surface softer than normal presenting a diffuse rich yellow to bright tan color with many pin point red zones and complete loss of normal markings The spleen weighed 140 Gm. and showed normal markings The kidneys were slightly enlarged and showed cloudy swelling and bile staining The musculoskeletal

system was not examined and the skin was leathery and desquamating There was no evidence in the viscera of septicopyemia

Microscopic sections of the liver showed severe hepatocellular degeneration, with areas of necrosis No inflammatory or regenerative changes were noted The skin sections showed atrophy and desquamation, with little inflammatory change No striking or significant changes were noted in sections of other organs

The cause of death was assigned to severe acute hepatitis and exfoliative dermatitis, with chronic sepsis from compound fracture and osteomyelitis of the tibia as contributory cause

CASE 4—A man aged 36, Chinese, entered the hospital on July 15 for bilateral extensive shrapnel wounds debrided earlier the same day at a forward hospital He was in shock but responded to plasma and was given tetanus antitoxin and sulfadiazine He improved slowly and was afebrile by July 23 A delayed primary suture and skin grafting were done July 26 He did well until August 10, when he began to have an irregular fever His white blood cell count was 4,500 per cubic millimeter, but a blood smear showed no malarial parasites However, he was given atabrine from August 10 to 19 (2 8 Gm) without response There were no complaints beyond a mild cough

A medical consultant saw the patient on August 19 and found slight generalized lymphadenopathy, slight enlargement of the spleen and fever The following day a maculopapular rash appeared on the trunk and proximal extremities and the diagnosis of scrub typhus was suggested although there was no bite and the patient had been in the hospital for a month The Weil-Felix test was negative, however The white blood cell count at this time was 15,050 per cubic millimeter, with 36 per cent lymphocytes

The rash faded in four days, the fever subsided and a follow up Weil-Felix test was again negative On September 3 the patient again had a rise in temperature and this time the malarial smear was found positive, the type undetermined Because the rash followed atabrine, it was thought safer to treat the patient with quinine, of which he received 2 Gm daily

The following day it was noted that the patient looked slightly jaundiced, and he complained of generalized itching His skin appeared dry, with prominence of follicles resembling keratosis follicularis The spleen but not the liver was palpable and tender

He continued to have fever every other day, and since he stated that he had never taken quinine before and the quinine scratch test was negative, the drug was continued By September 6 he was deeply jaundiced, the keratotic follicles now contained a thin milky fluid, and there was early desquamation over the face. Because of the preceding experience, atabrine was suspected and inquiry revealed that the patient had been receiving, irregularly since entry as a part of a preventive malarial policy, 0 1 Gm of atabrine daily No other drugs had been given. It was roughly estimated that the patient had received 4 Gm in addition to the course of atabrine administered, making a total of 6 8 Gm The drug was stopped and supportive therapy given in the form of intravenous fluids and plasma, parenteral liver extract and vitamin C Laboratory study showed that the urine contained bile, urobilinogen up to a 1 100 dilution and albumin The white blood cell count was 7,700 per cubic millimeter, with 70 per cent polymorphonuclears The red blood cell count was 3,500,000 per cubic millimeter, the icterus index 200 units, serum protein total 5 Gm per hundred cubic centimeters, albumin 2 6, globulin 2 4 Two patch tests with atabrine were found positive in twenty-four hours, manifested by itching, scaling and a papular eruption Controls done with phenobarbital and sulfathiazole were negative. The patient went downhill rapidly, the exfoliation increasing He died in coma on September 15

Autopsy was performed the following day Aside from early left bronchopneumonia and chronic malarial hyperplasia of the spleen, which was three times normal size, the skin and liver were the only organs showing remarkable changes The kidneys were somewhat swollen and deeply bile stained and the axillary and periportal nodes were moderately enlarged and soft. The skin was darkened and showed widespread fine exfoliation without large sloughs The areas of the old atabrine patch tests were both plainly visible, the first one marked by a crust, and the one done twenty-four hours before death showed an actual slough, the control area with sulfathiazole showing no reaction The liver was less than two-thirds normal size and weighed 900 Gm The capsule was wrinkled and the cut surface flabby and of a striking mottled pink to red, entirely obscuring the markings The biliary tract was normal throughout The duodenal mucosa was edematous

Microscopic study of the liver revealed severe diffuse necrosis without evidence of regeneration In addition, interlobular portal radicles are increased in number in some areas, and many of the vessels contained poorly stained ova morphologically compatible with schistosoma japonicum No cirrhotic changes were present Section of the spleen showed changes compatible with chronic malaria Section of the duodenal wall showed numerous ova similar to those seen in the liver mostly in the submucosa and associated with mild inflammatory changes

The cause of death was listed as acute hepatic necrosis and exfoliative dermatitis with chronic malaria, schistosomal infestation of liver and duodenum, and bronchopneumonia as contributory causes

CASE 5—A man aged 31, Chinese, admitted March 5, 1945, had entered the Chinese army as a private in 1930 He fought in over a hundred battles including the battle of Changsha, and was wounded four times He came to India, landing in Dinjan in August 1943, whence he went to Ramgarh and stayed until March 1944, training infantry troops and attaining the rank of captain In April he took part in the battle of Myitkyina On May 26, 1944 he was wounded by a machine gun bullet, which entered the base of the neck on the left side, traversed the soft tissues, pierced the spinous process of the third thoracic vertebra and emerged at the angle of the right scapula Both legs were paralyzed, and he lost sensation from the nipple level down A moderate pleural effusion developed on the left On May 29 a suprapubic cystostomy with insertion of a Pezzar catheter was performed preceding a laminectomy on June 8 for pressure on the spinal cord at the third thoracic vertebra He was febrile for two weeks postoperatively but gradually recovered some ability to move his feet and flex his knees He was transferred to the 14th Evacuation Hospital from the 20th General Hospital and on admission there his general physical condition except for the cord damage was good, and no other abnormality was noted The cystostomy with indwelling catheter was functioning satisfactorily The patient remembered no serious illness in the past He had gonorrhea at the age of 19 and although he had noted no primary lesion he received twenty arm injections of a yellow liquid called 914, without reaction In 1931 in China he had malaria treated with quinine He had had no malaria in Burma or India There was no history of any drug sensitivities and the family history was irrelevant

The patient first began prophylactic atabrine in April 1944, at which time he took a 0 1 gram tablet daily for three weeks (approximately 2 Gm) There was no reaction of any kind at this time From May 1 to 18 he took none but again resumed atabrine daily for the next ten days (1 Gm) At this time he was wounded and he had no further atabrine until his transfer to the 14th Evacuation Hospital after surgical treatment at the 20th General Hospital, when on October 2 it was again given in 0 1 gram daily doses until November 21 (5 1 Gm) Following ingestion of the first tablet he had unexplained fever to 101 F for two days but no further reaction until November 20, when it again rose to 101 4 F and the following day atabrine was stopped With the fever there was a general cutaneous reaction described as a punctate maculopapular rash, confluent over the forearms, upper sternum and sacrolumbar area, involving all parts of the body, including the palms and soles The rash faded on pressure except over the sacral region, where it was hemorrhagic. There was conjunctival injection, fine desquamation around the lips and a barely palpable splenomegaly, but no enlargement of the liver was noted He had an irregular spiking temperature from 104-105 F, beginning to decline after a week, then to 102 F for four days, then 103 6 F for four days and a final drop by crisis to normal on the fourteenth day The patient was severely ill during the first seven days of fever, with generalized aching and sore throat. The dermatitis became more severe,

erythema of the skin Three days later the patient recovered except for slight flaking around the neck. Quinine 0 3 Gm was given two weeks later without ill effect. Because of the lack of reported toxic effects of atabrine and the demonstrated sensitivity to phenobarbital, atabrine was not suspected, the hepatitis being questionably attributed to malaria After further convalescence the patient was discharged four and one-half months after entry

Three months later May 14 1944, the patient again entered the hospital Ten days previously he had taken one atabrine tablet as prophylaxis against malaria No other medication had been taken since discharge Within twelve hours after ingestion of the atabrine he noted fever and a generalized rash which he described as resembling measles His skin began to desquamate a few days later Examination showed mild conjunctivitis and generalized mild exfoliation His blood and urine were normal and convalescence was uneventful Patch tests to acetylsalicylic acid, phenobarbital and sulfathiazole were negative, suggesting that the previous positive test to phenobarbital was a nonspecific response of a hyperreactive skin, but atabrine produced a localized papular eruption beneath the patch He was discharged after being warned of the danger of future ingestion of atabrine Several months later it was learned that the patient was well but could not be released from duty for further study

Case 2—A man aged 24 Chinese, was admitted on April 4, 1944 for shrapnel wounds of the arm, groin and back An abscess of the back was drained and he did well until June 17, when he began having epileptiform seizures for which he was given phenobarbital 0 1 Gm three times a day On July 9 a blood smear during a chill revealed malaria type undetermined, and he was started on atabrine. July 11 a generalized maculopapular rash appeared, beginning on the face The rash was blotchy, faded on pressure and was more apparent over the extensor surfaces and over the proximal rather than the distal extremities The palms were erythematous, the conjunctivas and soft palate were injected and the tongue had a moderate "strawberry" appearance Atabrine and phenobarbital were stopped, and after a negative quinine scratch test (as described by Dawson and Garbade) malarial therapy was completed with quinine

By July 17 the patient's temperature was still 102 104 6 F and the rash had become confluent, involving the flexor surfaces last and was papulovesicular on the face with a fine branny scale on the forehead The tongue had 'peeled' and was very red, and there was conjunctivitis The nodes were generally enlarged and slightly tender A purulent productive cough had developed, with fine rales in both bases indicative of an early bronchopneumonia Five days later the skin had become leathery and thickened and was exfoliating The patient had become dull and apathetic, with puffy face and eczematoid weeping around the eyes, lips and ears The liver became palpable 2 cm below the costal margin and was tender The basal bronchopneumonia failed to respond to three days' full doses of sulfathiazole which was discontinued Liver extract and vitamin C were given daily parenterally, along with intravenous plasma and fluids Patch tests were difficult to carry out, but atabrine was again positive At the same time negative results were obtained for acetophenetidin, phenobarbital and sulfathiazole

Several leukocyte counts from July 12 to 25 showed a rise from 12 950 to 41,000 per cubic millimeter, with a progressive fall in the polymorphonuclear count from 80 to 39 per cent as a result of a rise of eosinophils from 1 to 44 per cent, the monocytes remaining unchanged The urine showed only a trace of albumin

By August 1 twenty two days after the administration of 1 3 Gm of atabrine, the patient became icteric and began to bleed from the rectum and fissures about the mouth bile was passed in the urine and he died after being comatose for several hours

Autopsy showed extensive generalized exfoliation The cardiovascular and gastrointestinal systems were normal The respiratory system showed an old right chronic pleuritis and local bronchiectasis of the right lower lobe The spleen was firm, was three times normal size and had the mahogany color of chronic malaria The kidneys exhibited rather severe parenchymatous degeneration The liver weighed 2,000 Gm and was smooth and a mottled yellow-brown The cut surfaces were soft and of similar color, with bright yellow blotches obscuring the markings in many areas Postmortem urine tested with amyl alcohol for atabrine was positive (Bile, however, may give a false positive reaction)

Microscopic study of the liver showed severe fatty changes, disorganization of architecture, severe hepatocellular degeneration and, in the areas, apparent necrosis Mild lymphocytic and plasma cell periportal infiltration was noted, and no regenerative changes or connective tissue proliferation occurred The skin sections showed varying mixtures of inflammatory and degenerative changes with desquamation No other pertinent histologic changes were noted The cause of death was listed as severe acute hepatitis, generalized, exfoliative dermatitis and acute pulmonary edema

Case 3—A soldier aged 25, Chinese, was admitted as a casualty on June 8, 1944, two days after suffering a rifle wound on the left leg Examination showed a compound fracture of the left tibia No other disease was present The wound was debrided, a cast applied and the patient started on sulfathiazole 4 Gm initially and 1 Gm every four hours and continued on this dosage until June 23 He was also given the usual suppressive atabrine treatment of 0 1 Gm daily He had a secondary hemorrhage on June 17 necessitating exploration and arterial ligation After the cast was reapplied his temperature began to range between 101 and 102 F, and despite negative malarial smears and the suppressive atabrine he was begun on therapeutic doses of atabrine, receiving a full course and then continued on 0 1 Gm daily On June 27, on application of a new cast, a local sequestrum was noted. By July 7 the fever had changed to a definitely septic type and at this time a medical consultant noticed jaundice and exfoliative dermatitis, which had already been present several days, and atabrine was stopped after a total dose of 3 9 Gm The patient was pale, very weak, but rational, and had jaundice, especially of the scleras and palms Slight conjunctivitis and a slick atrophied tongue were present, and there were crepitant rales in the left base. The spleen was not felt, but the liver was enlarged 2 cm below the costal margin but not tender There was generalized shotty lymphadenopathy and the skin was strikingly thickened, leathery and desquamating

Laboratory study showed a red blood cell count of 2,500,000 per cubic millimeter and a white blood cell count of 11,400 per cubic millimeter with a normal differential The urine contained bile but no increased urobilinogen on three tests The icterus index was 100 units Widal and Weil-Felix agglutination tests were negative, as was an x ray of the chest. Stool specimens showed only Ascaris ova Blood cultures on July 7 and 18 were positive for Staphylococcus aureus but the coagulase test was negative, indicating doubtful significance Because of slight stiffness of the neck a spinal puncture was performed but the fluid was normal except for the presence of 25 lymphocytes per cubic millimeter

The patient also received large doses of parenteral vitamins and liver and plasma without effect He became more jaundiced and soon developed bronchopneumonia for which sulfathiazole was ineffectual His skin was thought too irritated to attempt patch testing, although subsequent work suggests that it may be done even in this stage By July 19 he was delirious and died on the following day, forty-one days after entry

Autopsy revealed an entirely normal cardiovascular system and a gastrointestinal system which showed only ascariasis The spleen was normal in size and appearance, but the lymph nodes were generally slightly enlarged and bile stained There was fairly extensive bronchopneumonia in the lower lobe of the left lung The liver weighed 1,040 Gm and was two-thirds normal size Its capsule was wrinkled and the cut surface softer than normal, presenting a diffuse rich yellow to bright tan color with many pin point red zones and complete loss of normal markings The spleen weighed 140 Gm and showed normal markings The kidneys were slightly enlarged and showed cloudy swelling and bile staining The musculoskeletal

system was not examined and the skin was leathery and desquamating There was no evidence in the viscera of septicopyemia

Microscopic sections of the liver showed severe hepatocellular degeneration, with areas of necrosis No inflammatory or regenerative changes were noted The skin sections showed atrophy and desquamation, with little inflammatory change No striking or significant changes were noted in sections of other organs

The cause of death was assigned to severe acute hepatitis and exfoliative dermatitis, with chronic sepsis from compound fracture and osteomyelitis of the tibia as contributory cause.

CASE 4.—A man aged 36, Chinese, entered the hospital on July 15 for bilateral extensive shrapnel wounds debrided earlier the same day at a forward hospital He was in shock but responded to plasma and was given tetanus antitoxin and sulfadiazine He improved slowly and was afebrile by July 23 A delayed primary suture and skin grafting were done July 26 He did well until August 10 when he began to have an irregular fever His white blood cell count was 4,500 per cubic millimeter, but a blood smear showed no malarial parasites However, he was given atabrine from August 10 to 19 (2 8 Gm) without response There were no complaints beyond a mild cough

A medical consultant saw the patient on August 19 and found slight generalized lymphadenopathy, slight enlargement of the spleen and fever The following day a maculopapular rash appeared on the trunk and proximal extremities and the diagnosis of scrub typhus was suggested, although there was no bite and the patient had been in the hospital for a month The Weil-Felix test was negative however The white blood cell count at this time was 15,050 per cubic millimeter, with 36 per cent lymphocytes

The rash faded in four days, the fever subsided and a follow-up Weil-Felix test was again negative On September 3 the patient again had a rise in temperature and this time the malarial smear was found positive, the type undetermined Because the rash followed atabrine, it was thought safer to treat the patient with quinine, of which he received 2 Gm daily

The following day it was noted that the patient looked slightly jaundiced, and he complained of generalized itching His skin appeared dry, with prominence of follicles resembling keratosis follicularis The spleen but not the liver was palpable and tender

He continued to have fever every other day, and since he stated that he had never taken quinine before and the quinine scratch test was negative, the drug was continued. By September 6 he was deeply jaundiced, the keratotic follicles now contained a thin milky fluid, and there was early desquamation over the face. Because of the preceding experience, atabrine was suspected and inquiry revealed that the patient had been receiving, irregularly since entry as a part of a preventive malarial policy, 0 1 Gm of atabrine daily No other drugs had been given. It was roughly estimated that the patient had received 4 Gm in addition to the course of atabrine administered, making a total of 6 8 Gm The drug was stopped and supportive therapy given in the form of intravenous fluids and plasma, parenteral liver extract and vitamin C Laboratory study showed that the urine contained bile, urobilinogen up to a 1 100 dilution and albumin The white blood cell count was 7,700 per cubic millimeter, with 70 per cent polymorphonuclears The red blood cell count was 3,500 000 per cubic millimeter, the icterus index 200 units, serum protein total 5 Gm. per hundred cubic centimeters, albumin 2 6, globulin 2 4 Two patch tests with atabrine were found positive in twenty-four hours manifested by itching scaling and a papular eruption Controls done with phenobarbital and sulfathiazole were negative. The patient went downhill rapidly, the exfoliation increasing He died in coma on September 15

Autopsy was performed the following day Aside from early left bronchopneumonia and chronic malarial hyperplasia of the spleen, which was three times normal size the skin and liver were the only organs showing remarkable changes The kidneys were somewhat swollen and deeply bile stained, and the axillary and periportal nodes were moderately enlarged and soft The skin was darkened and showed widespread fine exfoliation without large sloughs The areas of the old atabrine patch tests were both plainly visible, the first one marked by a crust, and the one done twenty-four hours before death showed an actual slough, the control area with sulfathiazole showing no reaction The liver was less than two-thirds normal size and weighed 900 Gm The capsule was wrinkled and the cut surface flabby and of a striking mottled pink to red, entirely obscuring the markings The biliary tract was normal throughout The duodenal mucosa was edematous

Microscopic study of the liver revealed severe diffuse necrosis without evidence of regeneration In addition, interlobular portal radicles are increased in number in some areas, and many of the vessels contained poorly stained ova morphologically compatible with schistosoma japonicum. No cirrhotic changes were present Section of the spleen showed changes compatible with chronic malaria Section of the duodenal wall showed numerous ova similar to those seen in the liver mostly in the submucosa and associated with mild inflammatory changes

The cause of death was listed as acute hepatic necrosis and exfoliative dermatitis with chronic malaria, schistosomal infestation of liver and duodenum, and bronchopneumonia as contributory causes

CASE 5.—A man aged 31, Chinese, admitted March 5, 1945 had entered the Chinese army as a private in 1930 He fought in over a hundred battles, including the battle of Changsha, and was wounded four times He came to India, landing in Dinjan in August 1943 whence he went to Ramgarh and stayed until March 1944, training infantry troops and attaining the rank of captain In April he took part in the battle of Myitkyina On May 26, 1944 he was wounded by a machine gun bullet which entered the base of the neck on the left side traversed the soft tissues, pierced the spinous process of the third thoracic vertebra and emerged at the angle of the right scapula Both legs were paralyzed, and he lost sensation from the nipple level down A moderate pleural effusion developed on the left On May 29 a suprapubic cystostomy with insertion of a Pezzar catheter was performed preceding a laminectomy on June 8 for pressure on the spinal cord at the third thoracic vertebra He was febrile for two weeks postoperatively but gradually recovered some ability to move his feet and flex his knees He was transferred to the 14th Evacuation Hospital from the 20th General Hospital and on admission there his general physical condition except for the cord damage was good and no other abnormality was noted The cystostomy with indwelling catheter was functioning satisfactorily The patient remembered no serious illness in the past He had gonorrhea at the age of 19 and although he had noted no primary lesion he received twenty arm injections of a yellow liquid called 914, without reaction In 1931 in China he had malaria treated with quinine He had had no malaria in Burma or India There was no history of any drug sensitivities and the family history was irrelevant.

The patient first began prophylactic atabrine in April 1944 at which time he took a 0 1 gram tablet daily for three weeks (approximately 2 Gm) There was no reaction of any kind at this time From May 1 to 18 he took none but again resumed atabrine daily for the next ten days (1 Gm) At this time he was wounded and he had no further atabrine until his transfer to the 14th Evacuation Hospital after surgical treatment at the 20th General Hospital when on October 2 it was again given in 0 1 gram daily doses until November 21 (5 1 Gm) Following ingestion of the first tablet he had unexplained fever to 101 F for two days but no further reaction until November 20, when it again rose to 101 4 F and the following day atabrine was stopped With the fever there was a general cutaneous reaction described as a punctate maculopapular rash, confluent over the forearms, upper sternum and sacrolumbar area, involving all parts of the body, including the palms and soles The rash faded on pressure except over the sacral region, where it was hemorrhagic. There was conjunctival injection fine desquamation around the lips and a barely palpable splenomegaly, but no enlargement of the liver was noted He had an irregular spiking temperature from 104-105 F beginning to decline after a week, then to 102 F for four days, then 103 6 F for four days and a final drop by crisis to normal on the fourteenth day The patient was severely ill during the first seven days of fever with generalized aching and sore throat. The dermatitis became more severe,

involving the buccal mucosa, becoming confluent over the trunk and assuming a violaceous hue. Serous exudation and crusting appeared about the ears and nasolabial folds, and a large flaky desquamation appeared over the scalp, forehead and face. Finer scaling was noted over the sternal and sacral areas, while other regions still showed a macular violaceous eruption. Unfortunately no photographs were taken. The palms and soles lost the original eruptive pattern and exhibited a diffuse pink blush. The weeping and crusting dried up and peeled by December 28. The exfoliative phase terminated after a period of fine desquamation, leaving the skin very shiny, thin and with a silky texture. Pruritus was moderate throughout. There were no general abnormalities other than enlargement of the liver 5 cm. below the costal margin by the ninth day of fever (November 28) and also well below the inner costal margin to the midepigastric level. It was not tender. The spleen became just palpable.

*Laboratory work during this phase was as follows:*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Nov. 23 | RBC 3,900,000 | Hgb 75% | WBC 6,900 | P-53 | L-27 | M 7 | E 13 | |
| Nov. 25 | | | WBC 43,600 | P-50 | L-38 | M 10 | E 7 | Schilling to left |
| Nov. 27 | | | WBC 11,000 | P-46 | L-39 | M-8 | E 7 | |
| Nov. 28 | RBC 2,000,000 | Hgb 60% | WBC 13,000 | P-48 | L-11 | M 16 | E 25 | Platelets normal |

The count gradually dropped to normal through December, the last being:

Dec. 19 WBC 5,000 P 69 L-27 M 3 E-0 B 1

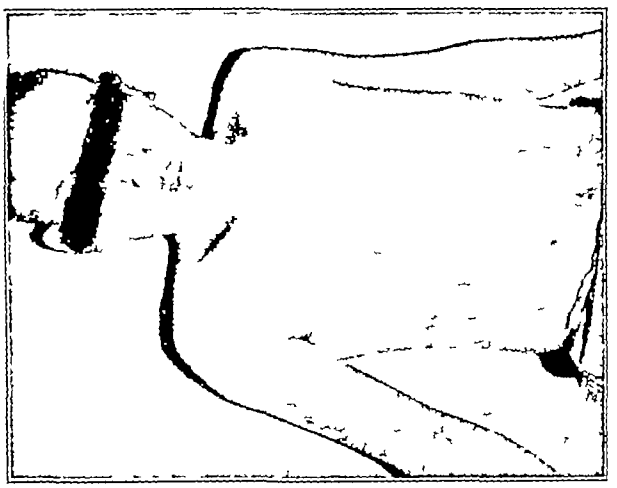


Fig. 1 (case 5).—Appearance of body before atabrine was administered.

The urine on several occasions showed a trace of albumin and a few pus cells but no bile. The icterus index was 10, but the atabrine level could not be done. Therapy consisted of intravenous fluids, high sugar intake, cod liver oil and vitamin C 75 mg. three times a day and the prohibition of all other medications. The patient remained afebrile except for occasional rises in temperature to 100.6 F. for a day or two. By December 28 he was considered recovered and was allowed out in the sun in a wheel chair several hours during the day with no subsequent flare due to light exposure.

On December 30 suppressive atabrine was ordered for all patients, and this patient received 0.1 Gm. on two successive days (0.2 Gm.). There was no febrile reaction, but forty-eight hours later a weeping eczematous eruption appeared over the entire body requiring about eight days to clear. No laboratory studies were done except urinalysis, which was negative. In reviewing the record it was found that the patient had taken ammonium chloride, methenamine, boric acid and acriflavine bladder irrigations, acetylsalicylic acid, magnesium sulfate, morphine sulfate, sodium amytal, sulfadiazine, phenobarbital (total 0.9 Gm.) and atabrine (total 5.1 Gm. in October and November and 0.2 Gm. on December 30). These drugs had been administered at various times between September 22 and November 21. On December 11 the patient was given 0.1 Gm. of phenobarbital without reaction and on Feb. 1, 1945 he was given 13 Gm. of sulfadiazine without reaction. On February 7 a patch test with a suspension of atabrine in water in the form of a paste was performed on the forearm and left for forty-eight hours. A similar patch with an intravenous preparation was applied to the opposite arm. In forty-eight hours there were severe local reactions showing papules, vesicles rapidly becoming



Fig. 2 (case 5).—Closer view.

bullae and subsequent weeping, crusting, itching then exfoliation and finally lichenification over a period of ten days.

Through the courtesy of Lieut. Col. Philip G. C. Bishop of the 14th Evacuation Hospital, under whom the foregoing studies were carried out, the patient was referred back to the 20th General Hospital for further study on March 5. Physical examination at this time showed a spastic paraplegia with anesthesia below the nipple line, a suprapubic cystostomy scar with a small urinary fistula, incontinence of urine, and the old wound scar at the nape of the neck. The liver and spleen were not enlarged, and there was no adenopathy. The skin was smooth, shiny and not scaling, with pigmented roughened areas over the sites of the forearm patch tests. There was a macular fungous infection around the umbilicus, which cleared promptly on therapy. It was realized that this was an important test case, and a definite program of investigation was followed. The patient was bedridden, so that it was easy to keep him inside and eliminate the sunlight factor. Medications of all kinds were prohibited, and the only treatment he received was bladder irrigations with boric acid. Photographs of the entire body and tongue were taken for future comparison (figs. 1, 2 and 3). A daily temperature record was kept and the following preliminary laboratory studies were done:

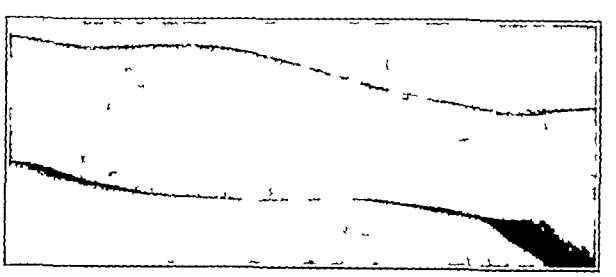


Fig. 3 (case 5).—Skin of left arm before medication.

Chest x-ray. Slight increased prominence of the lung markings bilaterally, probably due to hypoventilation. The left dome of the diaphragm was elevated because of enlarged spleen.

Urine. Many white and red blood cells, specific gravity 1.021.

Blood count. Hemoglobin 14.5 Gm., white blood cells 5,100, polymorphonuclears 62, lymphocytes 31, monocytes 3, eosinophils 4. The Kahn blood test was negative. The direct van den Bergh negative, indirect insufficient quantity.

Glucose tolerance Fasting 113, in fifteen minutes 135, in thirty minutes 214, in sixty minutes 217, in 120 minutes 183 mg per hundred cubic centimeters

Sulfobromophthalein 0 per cent retention

Icterus index 6.

Serum protein Total, 7 2 Gm , albumin globulin ratio, 4 11/3 09, or 1 3

Blood atabrine levels, followed at weekly intervals, were, March 7, 8 micrograms per liter, March 15, 9 micrograms per liter, March 26, 4 micrograms per liter (It is difficult to explain these levels because the patient denied taking any atabrine since December 30 He knew of the danger of atabrine and it was only with great difficulty that he could be made to take a test dose later on The levels were run by a man skilled in the use of the photofluorometer and doing many of these determinations daily It appears that this patient had an abnormally long retention of atabrine in some way connected with his sensitivity, unless the method was unreliable It is equally difficult to explain the rise in blood level from 4 to 12 micrograms per liter on only 0 25 Gm of atabrine )

On March 15 he was patch tested on the forearms, the moistened powder of acetylsalicylic acid phenobarbital, sulfadiazine sulfathiazole and sodium amytal being used, all read at forty-eight hours and all showing no reaction

From March 18 to 23 acetylsalicylic acid 0 6 Gm., sodium amytal 0 1 Gm, sulfadiazine 1 Gm., sulfathiazole 1 Gm and phenobarbital 1 gram (0 06 Gm ) were administered by mouth

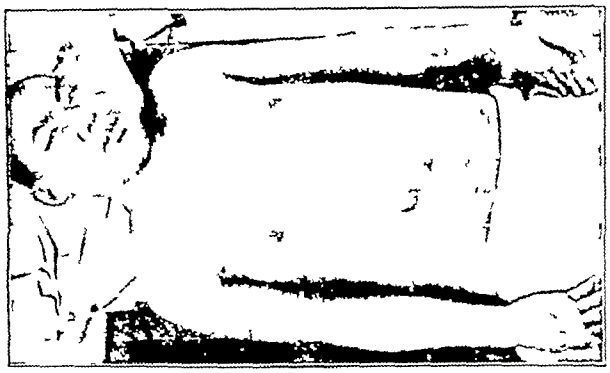


Fig 4 (case 5) —Appearance of patient seventy two hours after original test dose of atabrine. Total dose 0 25 Gm Notice flare of patch test areas on forearms

with no reaction except a rise in temperature to 99 4 F when sulfathiazole was given The dose of sulfathiazole was then repeated without any febrile reaction Then patch tests were made of morphine sulfate 1 per cent solution, ammonium chloride 3 per cent solution, methenamine powder and magnesium sulfate crystals all read at forty-eight hours and all negative.

From March 28 to April 1 these substances were given internally morphine sulfate ¼ grain (0 016 Gm ) subcutaneously, methenamine 0 6 Gm , ammonium chloride 1 Gm , and magnesium sulfate ½ ounce. There was no reaction.

Atabrine patch tests were then carried out by saturating a small gauze square with the appropriate dilution of atabrine dihydrochloride and reading the test both at twenty-four and at forty-eight hour intervals

Atabrine 0 001 per cent, no reaction.

Atabrine 0 01 per cent, some itching Questionable fine papules

Atabrine paste made of intravenous powder moistened with water, approximately 0 04 per cent. At twenty-four hours, definite fine papules at site of patch with severe itching

Atabrine was then administered by mouth

April 5, atabrine 0 05 Gm , twenty-four hours later no symptoms fever or dermatitis

April 6, atabrine 0 10 Gm., twenty-four hours later patient complained of slight itching

The patch test area now showed an eczematoid reaction, but the area in contact with the tape also showed a similar although weaker reaction Previously there had been no tape reaction.

April 7 atabrine 0 10 Gm was given At this time the old patch test areas done at the previous hospital flared on both forearms, and the recent patch test areas with the more dilute

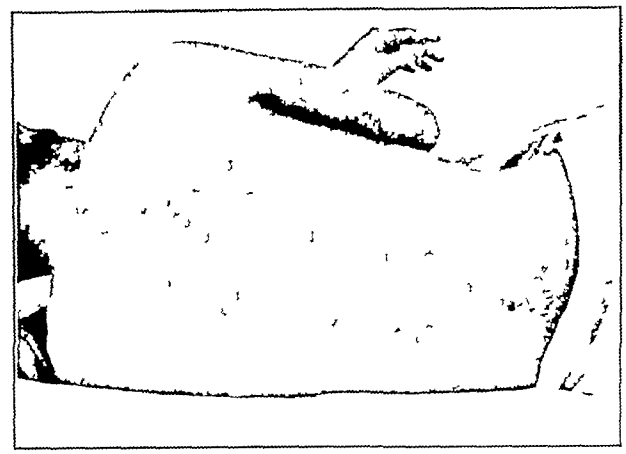


Fig 5 (case 5) —Back of patient seventy two hours after original test dose

solutions, including the one that was negative at 0 001 per cent dilution, developed eczematoid reactions No further atabrine was given, this making a total dose of 0.25 Gm

On the morning of April 8, about seventy-two hours after the original test dose, itching and burning sensations over the whole body became severe and the patient was miserable The temperature rose to 100 F and the generalized diffuse reddening of the skin with innumerable tiny papules and vesicles made a striking picture. These vesicles were especially evident over the palms and soles, and the tongue was reddened and coated *and had begun to scale Photographs were taken at this time* (figs 4, 5 and 6) and the following laboratory studies were carried out

Blood atabrine levels April 9 12 micrograms per liter, April 12, 12 April 15, 8, April 18, 2 April 21, 10 (probable error), April 23, 4

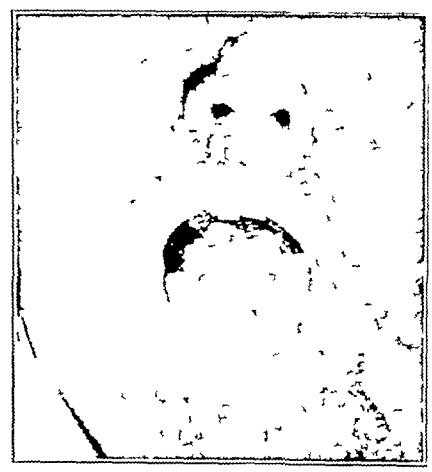


Fig 6 (case 5) —Face and tongue seventy two hours after original test dose.

The urine contained many red blood cells

Blood cell counts

| | | | | | |
|---|---|---|---|---|---|
| April 9—WBC 15 000 | P-83 | L-15 | E 2 | M-0 |
| April 12—WBC 11 600 | P 79 | L-17 | E-0 | M-4 |
| April 15—WBC 7 050 | P-61 | L-34 | E-0 | M 5 |
| April 18—WBC 7 950 | P 72 | L-25 | E 3 | M-0 |
| April 21—WBC 9 900 | P-62 | L-30 | E 2 | M-6 |
| April 23—WBC 8 100 | P 70 | L-26 | E-0 | M-4 |

Serum protein Total, 6 32 Gm. per hundred cubic centimeters, albumin globulin ratio, 3 85/2 47, or 1.52.

Van den Bergh Delayed, 0 5 mg (normal 0 1 to 0 25 mg)
Cholesterol, 160 Cholesterol esters 117, or 73 per cent
Blood fibrinogen 0 61 per cent
Sulfobromophthalein retention 3 per cent.
Glucose tolerance test (oral) Fasting, 96, fifteen minutes, 143, thirty minutes, 178, sixty minutes, 200, one hundred and twenty minutes, 170 Gm per hundred cubic centimeters

The patient remained febrile, having a low grade temperature up to 100 F until April 28 By April 10 he had developed huge bullae over the palms and soles which had to be aspirated and which unfortunately were not photographed On April 12 the dermatitis began to subside and a fine branny desquamation began to appear over the face and trunk, the eczematoid changes being confined to the sites of the patch tests From that time he improved steadily and was fairly comfortable by the time his fever declined but by April 29 was still scaling and had scattered violaceous papules over the upper trunk and some slight persistent eczematoid changes at the patch test sites and the paranasal and circumoral regions A sulfobromophthalein test done on April 27 showed a return to normal, there being no retention of the dye.

COMMENT

It is seen that these cases are remarkably similar in clinical appearance and autopsy findings In all there was a rash followed by desquamation, the rash being scarlatiniform, maculopapular or a dry scaling involving the entire body, beginning on the face and including the palms and soles The onset of the rash may occur as early as the second or as late as the tenth day on as little as 0 1 Gm in a sensitized patient, although larger doses are usually necessary It may be that sensitization is acquired from previous ingestion of the drug, because all these patieants as well as the one who was the subject of the report had had atabrine one or more times before reaction occurred Also it seems that smaller and smaller amounts are required to produce severe reactions In addition to the rash, conjunctivitis and exfoliation of the tongue occur Jaundice resulting from hepatitis may appear, usually several days after the skin eruption, accompanied by high septic fever, leukocytosis as high as 40,000 per cubic millimeter and with a rising eosinophil count up to 45 per cent The urine contains bile and albumin but is usually negative for urobilinogen The liver is first enlarged and tender but rapidly shrinks in size and in 2 cases was strikingly small at autopsy Mental clouding is a constant feature and as the desquamation progresses to a thick leathery skin, generalized discrete adenopathy becomes palpable The downhill course is gradual with wasting, often eczematoid skin changes, progressive liver failure and death in coma in the third to the fifth week At autopsy there is characteristically the exfoliative dermatitis, gross and microscopic evidence of severe hepatitis or necrosis producing a small wrinkled liver with mottled red and yellow degenerated areas, acute cloudy swelling of the kidneys with bile staining, generalized moderate lymphadenopathy and splenomegaly typical of malarial infection

The evidence for atabrine as the etiologic agent may be summarized as follows 1 Atabrine was the only drug common to all cases 2 Positive patch tests to atabrine with negative controls were obtained in the 4 cases tested (80 per cent), whereas in a control group of patients with severe dermatitis only 8 3 per cent positive reactions were obtained 3 Autopsy and laboratory studies revealed no other etiologic agent 4 The cases were admitted for totally unrelated diseases, but their terminal clinical and pathologic findings were strikingly similar 5 Exfoliation was accidentally produced in the first case with only 0 1 Gm of the drug 6 The fifth case was well controlled and would seem to leave no doubt that atabrine was the etiologic agent

ATABRINE SENSITIVITY TESTS

It was thought desirable to devise some sensitivity test to determine atabrine sensitivity Such a test would be useful both in predicting and in preventing reactions in selected cases and as a diagnostic procedure when clinical evidence of reaction already existed Routine Chinese admissions to a medical service were used All of these were proved malarial and were getting or had just received atabrine in therapeutic doses Ordinary atabrine dihydrochloride tablets dissolved in tap water in approximate dilutions of 0 1 Gm to 10 cc, giving in effect a dilute paste, were found most suitable for patch tests, a small square of gauze being saturated with this solution and taped on the forearm for the period of the test A control test using one of the sulfonamides, acetylsalicylic acid or phenobarbital was always used on the opposite arm In a number of cases the skin was also superficially scratched before the patch was applied These tests were read at twenty-four or forty-eight hour intervals In addition, a 1 200 dilution of atabrine dihydrochloride was used for conjunctival tests

In 45 patients tested no conjunctival reactions were seen, and since 3 of these patients had positive skin tests this procedure was discarded In an attempt to learn the incidence of false positive reactors, 100 selected patients were tested with the twenty-four hour patch, the forty-eight hour patch and the twenty-four hour scratch-patch tests Three of these patients were thought to have atabrine psychoses and were the only ones in the group having any evidence of atabrine sensitivity Only those patients were included whose control tests were negative There were 5 positive reactors when the twenty-four hour patch test was used and an additional 5 positives when the patch was left on for forty-eight hours When the twenty-four hour scratch-patch test was used there were 11 positive reactors Of the psychosis patients 1 was negative by all tests, the other 2 positive by all tests (Subsequent testing on patients with atabrine psychosis has shown only infrequent positive skin tests) Positive reactions varied from itching and reddening to ulceration In some cases a large yellow bulla formed at the site of the patch The most typical reaction was a pruritic reddened slightly edematous area with several small discrete papules Discounting the 2 positively reacting psychosis patients, it is seen that the percentage of false positive reactors is 3 with the twenty-four hour patch test, 8 with the forty-eight hour patch test and 9 with the scratch-patch test It is believed that this increase in the incidence of false positive reactors is due to the nonspecific irritating effect of atabrine on the skin This conclusion is further borne out by the type of reaction seen Itching, reddening and formation of papules was the extent of the reaction seen in the twenty-four hour patch test, while ulceration and formation of bullae occurred only with the more prolonged or more severe tests For this reason ulceration and bullous formation should be regarded with the suspicion that a nonspecific irritation rather than a positive test for sensitivity has been obtained, although it is possible for true reactors to produce this severe type of reaction Because of the lessened incidence of false positive reactors and because of the more characteristic skin response, the twenty-four hour patch test is recommended as the one of choice In cases with an existent dermatitis, this nonspecific irritant effect casts some doubt on the validity of the reaction, but a positive atabrine test with a negative control lends considerable weight to the argument that atabrine is

the offending agent Twelve severe dermatitis cases of known cause (scabies, with pyoderma, infectious eczematoid dermatitis and dermatitis venenata) were tested with the twenty-four hour patch test while the skin was in an irritated state, and only 1 venenata case gave a false positive reaction, manifested by vesiculation at the site of the patch Only 3 cases of proved atabrine dermatitis other than exfoliative dermatitis have been found One was a maculopapular eruption resembling measles The other 2 were discrete papular rashes on the trunk and the extremities Atabrine patch tests were positive in all these cases, and the rashes were reproduced by readministration of atabrine but only after a minimum of 0 6 Gm was given One case is cited

A young Chinese man was admitted for simple P vivax malaria and was given atabrine On the third day he became excited and confused and developed a discrete papular rash over the face, trunk and extremities, especially on the distal extensor surfaces. Conjunctival and intradermal tests were negative, but the twenty-four patch test produced an itchy, papular reaction The malaria was controlled with quinine, and two weeks later, when the patient had recovered, atabrine was again administered and the patch test repeated The latter was again positive, but no symptoms appeared until 0 7 Gm was given, 0 1 Gm. the first day, 0.2 Gm the second and 0 4 Gm the third day At this time the psychosis and dermatitis were reproduced, being more severe and more persistent than on the first occasion.

It is felt that patch testing may be useful in patients giving any history of previous dermatologic sensitivity and is definitely of value in determining the etiologic agent in patients suspected of showing skin reactions to atabrine

SUMMARY

1 In a large series of Chinese patients receiving atabrine for prophylaxis or treatment for malaria, 5 with severe hepatitis and exfoliative dermatitis were encountered, 3 of whom died of this complication This represented a very small incidence, about 1 in 2,000 to 3,000 cases

2 From clinical and pathologic studies it is concluded that atabrine was the causative agent of the hepatitis and the exfoliative dermatitis

3 The reaction may occur from extreme sensitivity on as little as 0 1 Gm of the drug or may be a toxic reaction from prolonged and repeated administration

4 Prompt recognition and treatment of these complications with recognized detoxifying agents like vitamin C and liver extract, intravenous glucose and plasma, combined with withdrawal of the drug, may prove to be life saving procedures, although the mortality in 5 cases was 60 per cent

5 The twenty-four hour patch atabrine test giving only 3 per cent false positive reactions with normal skins and 8 3 per cent false positive reactions in patients with existent dermatitis is a useful test for investigation of atabrine sensitivity

**Men in Natural Sciences**—In the last fifty years men in the natural sciences have had no difficulty in understanding in fully appreciating the efforts of, and meeting on common grounds with, fellow scientists from every nation of the earth In the natural sciences, at least, we do not need so much additional practice in fair and humane international relations with our fellow scientists—Carlson A J Is There "A Standard to Which the Wise and the Honest Can Repair?" *Science* **103** 377 (March 29) 1946

## TREATMENT OF A SERIOUSLY ILL ASTHMATIC PATIENT

HADDON M CARRYER, M D
LOUIS E PRICKMAN, M D
C K MAYTUM, M D
and
GILES A KOELSCHE, M D
Rochester, Minn

During the recent emergency the care of patients seriously ill from asthma was thrust on many physicians who were not especially interested or trained for this responsibility Contrary to the pessimistic view frequently expressed by the public, considerable benefit can be given most patients with asthma by the application of measures now at the command of most physicians These two considerations have prompted us to reexamine the procedure and remedies which have been found most helpful at the Mayo Clinic in the symptomatic treatment of the patient severely ill with asthma

HOSPITALIZATION

Severe asthma can be treated best in a hospital, and preferably the patient should have a private room There are a number of reasons for hospitalization In the first place, nervous factors are often important in aggravating asthma Patients who are apprehensive or panic stricken by their dyspnea in an atmosphere of anxiety caused by an oversolicitous family or friends, respond favorably to the new surroundings Confidence and hope replace in some a fear of impending death The quiet hospital atmosphere and prompt administration of appropriate remedies as soon as needed help the nervous sufferer from asthma to react favorably

In the hospital room devoid of rugs, drapes and overstuffed furniture, and where no animals with offending danders have been, the patient is removed from many of the important inhalent allergens found in his home environment Before the asthmatic patient arrives in the hospital room all feather pillows and the mattress should be made dustproof with special impervious covers Every hospital should have a supply of such covers immediately available for the asthmatic patient. Kapok pillows are not satisfactory, but rubber foam or air pillows may be used occasionally The daily cleansing of the room throughout the patient's stay in the hospital is best done with a damp cloth All types of sweeping should be avoided The physician should see that orders of this type are transmitted to the proper persons

If the patient's asthma is associated with hay fever, a pollen filter in the window is most important Transoms, doors and other windows in the room should be kept closed when a pollen filter is being used

When bronchitis or other respiratory infections are the chief cause of the patient's asthma, as so often occurs in the group of older patients, there are distinct advantages to hospital care Asthmatic bronchitis subsides more quickly in a room which is free from drafts, smoke and furnace or other fumes and is kept at an even temperature Also control of medication with sulfonamides and penicillin when indicated is attained more readily in the hospital than at home, together with oxygen and helium therapy, intravenous medication and treatment of certain complications such as bronchostenosis

From the Division of Medicine, Mayo Clinic

Van den Bergh Delayed, 0.5 mg. (normal 0.1 to 0.25 mg.)
Cholesterol, 160. Cholesterol esters 117, or 73 per cent.
Blood fibrinogen 0.61 per cent.
Sulfobromophthalein retention 3 per cent.
Glucose tolerance test (oral). Fasting, 96, fifteen minutes, 143, thirty minutes, 178, sixty minutes, 200, one hundred and twenty minutes, 170 Gm. per hundred cubic centimeters.

The patient remained febrile, having a low grade temperature up to 100 F. until April 28. By April 10 he had developed huge bullae over the palms and soles which had to be aspirated and which unfortunately were not photographed. On April 12 the dermatitis began to subside and a fine branny desquamation began to appear over the face and trunk, the eczematoid changes being confined to the sites of the patch tests. From that time he improved steadily and was fairly comfortable by the time his fever declined but by April 29 was still scaling and had scattered violaceous papules over the upper trunk and some slight persistent eczematoid changes at the patch test sites and the paranasal and circumoral regions. A sulfobromophthalein test done on April 27 showed a return to normal, there being no retention of the dye.

*COMMENT*

It is seen that these cases are remarkably similar in clinical appearance and autopsy findings. In all there was a rash followed by desquamation, the rash being scarlatiniform, maculopapular or a dry scaling involving the entire body, beginning on the face and including the palms and soles. The onset of the rash may occur as early as the second or as late as the tenth day on as little as 0.1 Gm. in a sensitized patient, although larger doses are usually necessary. It may be that sensitization is acquired from previous ingestion of the drug, because all these patients as well as the one who was the subject of the report had had atabrine one or more times before reaction occurred. Also it seems that smaller and smaller amounts are required to produce severe reactions. In addition to the rash, conjunctivitis and exfoliation of the tongue occur. Jaundice resulting from hepatitis may appear, usually several days after the skin eruption, accompanied by high septic fever, leukocytosis as high as 40,000 per cubic millimeter and with a rising eosinophil count up to 45 per cent. The urine contains bile and albumin but is usually negative for urobilinogen. The liver is first enlarged and tender but rapidly shrinks in size and in 2 cases was strikingly small at autopsy. Mental clouding is a constant feature and as the desquamation progresses to a thick leathery skin, generalized discrete adenopathy becomes palpable. The downhill course is gradual with wasting, often eczematoid skin changes, progressive liver failure and death in coma in the third to the fifth week. At autopsy there is characteristically the exfoliative dermatitis, gross and microscopic evidence of severe hepatitis or necrosis producing a small wrinkled liver with mottled red and yellow degenerated areas, acute cloudy swelling of the kidneys with bile staining, generalized moderate lymphadenopathy and splenomegaly typical of malarial infection.

The evidence for atabrine as the etiologic agent may be summarized as follows: 1. Atabrine was the only drug common to all cases. 2. Positive patch tests to atabrine with negative controls were obtained in the 4 cases tested (80 per cent), whereas in a control group of patients with severe dermatitis only 8.3 per cent positive reactions were obtained. 3. Autopsy and laboratory studies revealed no other etiologic agent. 4. The cases were admitted for totally unrelated diseases, but their terminal clinical and pathologic findings were strikingly similar. 5. Exfoliation was accidentally produced in the first case with only 0.1 Gm. of the drug. 6. The fifth case was well controlled and would seem to leave no doubt that atabrine was the etiologic agent.

ATABRINE SENSITIVITY TESTS

It was thought desirable to devise some sensitivity test to determine atabrine sensitivity. Such a test would be useful both in predicting and in preventing reactions in selected cases and as a diagnostic procedure when clinical evidence of reaction already existed. Routine Chinese admissions to a medical service were used. All of these were proved malarial and were getting or had just received atabrine in therapeutic doses. Ordinary atabrine dihydrochloride tablets dissolved in tap water in approximate dilutions of 0.1 Gm. to 10 cc., giving in effect a dilute paste, were found most suitable for patch tests, a small square of gauze being saturated with this solution and taped on the forearm for the period of the test. A control test using one of the sulfonamides, acetylsalicylic acid or phenobarbital was always used on the opposite arm. In a number of cases the skin was also superficially scratched before the patch was applied. These tests were read at twenty-four or forty-eight hour intervals. In addition, a *1:200* dilution of atabrine dihydrochloride was used for conjunctival tests.

In 45 patients tested no conjunctival reactions were seen, and since 3 of these patients had positive skin tests this procedure was discarded. In an attempt to learn the incidence of false positive reactors, 100 selected patients were tested with the twenty-four hour patch, the forty-eight hour patch and the twenty-four hour scratch-patch tests. Three of these patients were thought to have atabrine psychoses and were the only ones in the group having any evidence of atabrine sensitivity. Only those patients were included whose control tests were negative. There were 5 positive reactors when the twenty-four hour patch test was used and an additional 5 positives when the patch was left on for forty-eight hours. When the twenty-four hour scratch-patch test was used there were 11 positive reactors. Of the psychosis patients 1 was negative by all tests, the other 2 positive by all tests. (Subsequent testing on patients with atabrine psychosis has shown only infrequent positive skin tests.) Positive reactions varied from itching and reddening to ulceration. In some cases a large yellow bulla formed at the site of the patch. The most typical reaction was a pruritic, reddened slightly edematous area with several small discrete papules. Discounting the 2 positively reacting psychosis patients, it is seen that the percentage of false positive reactors is 3 with the twenty-four hour patch test, 8 with the forty-eight hour patch test and 9 with the scratch-patch test. It is believed that this increase in the incidence of false positive reactors is due to the nonspecific irritating effect of atabrine on the skin. This conclusion is further borne out by the type of reaction seen. Itching, reddening and formation of papules was the extent of the reaction seen in the twenty-four hour patch test, while ulceration and formation of bullae occurred only with the more prolonged or more severe tests. For this reason ulceration and bullous formation should be regarded with the suspicion that a nonspecific irritation rather than a positive test for sensitivity has been obtained, although it is possible for true reactors to produce this severe type of reaction. Because of the lessened incidence of false positive reactors and because of the more characteristic skin response, the twenty-four hour patch test is recommended as the one of choice. In cases with an existent dermatitis, this nonspecific irritant effect casts some doubt on the validity of the reaction, but a positive atabrine test with a negative control lends considerable weight to the argument that atabrine is

the offending agent Twelve severe dermatitis cases of known cause (scabies, with pyoderma, infectious eczematoid dermatitis and dermatitis venenata) were tested with the twenty-four hour patch test while the skin was in an irritated state, and only 1 venenata case gave a false positive reaction, manifested by vesiculation at the site of the patch Only 3 cases of proved atabrine dermatitis other than exfoliative dermatitis have been found One was a maculopapular eruption resembling measles The other 2 were discrete papular rashes on the trunk and the extremities Atabrine patch tests were positive in all these cases, and the rashes were reproduced by readministration of atabrine but only after a minimum of 0 6 Gm was given One case is cited

A young Chinese man was admitted for simple P vivax malaria and was given atabrine On the third day he became excited and confused and developed a discrete papular rash over the face, trunk and extremities, especially on the distal extensor surfaces Conjunctival and intradermal tests were negative, but the twenty-four patch test produced an itchy, papular reaction The malaria was controlled with quinine, and two weeks later, when the patient had recovered, atabrine was again administered and the patch test repeated The latter was again positive, but no symptoms appeared until 0 7 Gm was given, 0 1 Gm. the first day, 0.2 Gm the second and 0 4 Gm the third day At this time the psychosis and dermatitis were reproduced being more severe and more persistent than on the first occasion

It is felt that patch testing may be useful in patients giving any history of previous dermatologic sensitivity and is definitely of value in determining the etiologic agent in patients suspected of showing skin reactions to atabrine

SUMMARY

1 In a large series of Chinese patients receiving atabrine for prophylaxis or treatment for malaria, 5 with severe hepatitis and exfoliative dermatitis were encountered, 3 of whom died of this complication This represented a very small incidence, about 1 in 2,000 to 3,000 cases

2 From clinical and pathologic studies it is concluded that atabrine was the causative agent of the hepatitis and the exfoliative dermatitis

3 The reaction may occur from extreme sensitivity on as little as 0 1 Gm of the drug or may be a toxic reaction from prolonged and repeated administration

4 Prompt recognition and treatment of these complications with recognized detoxifying agents like vitamin C and liver extract, intravenous glucose and plasma, combined with withdrawal of the drug, may prove to be life saving procedures, although the mortality in 5 cases was 60 per cent

5 The twenty-four hour patch atabrine test giving only 3 per cent false positive reactions with normal skins and 8 3 per cent false positive reactions in patients with existent dermatitis is a useful test for investigation of atabrine sensitivity

**Men in Natural Sciences**—In the last fifty years men in the natural sciences have had no difficulty in understanding, in fully appreciating the efforts of, and meeting on common grounds with, fellow scientists from every nation of the earth. In the natural sciences, at least, we do not need so much additional practice in fair and humane international relations with our fellow scientists—Carlson, A J Is There "A Standard to Which the Wise and the Honest Can Repair?" *Science* **103** 377 (March 29) 1946

# TREATMENT OF A SERIOUSLY ILL ASTHMATIC PATIENT

HADDON M CARRYER, M D
LOUIS E PRICKMAN, M D
C K MAYTUM, M D
and
GILES A KOELSCHE M D
Rochester, Minn

During the recent emergency the care of patients seriously ill from asthma was thrust on many physicians who were not especially interested or trained for this responsibility Contrary to the pessimistic view frequently expressed by the public, considerable benefit can be given most patients with asthma by the application of measures now at the command of most physicians These two considerations have prompted us to reexamine the procedure and remedies which have been found most helpful at the Mayo Clinic in the symptomatic treatment of the patient severely ill with asthma

## HOSPITALIZATION

Severe asthma can be treated best in a hospital, and preferably the patient should have a private room There are a number of reasons for hospitalization In the first place, nervous factors are often important in aggravating asthma Patients who are apprehensive or panic stricken by their dyspnea in an atmosphere of anxiety caused by an oversolicitous family or friends, respond favorably to the new surroundings Confidence and hope replace in some a fear of impending death The quiet hospital atmosphere and prompt administration of appropriate remedies as soon as needed help the nervous sufferer from asthma to react favorably

In the hospital room devoid of rugs, drapes and overstuffed furniture, and where no animals with offending danders have been, the patient is removed from many of the important inhalent allergens found in his home environment Before the asthmatic patient arrives in the hospital room all feather pillows and the mattress should be made dustproof with special impervious covers Every hospital should have a supply of such covers immediately available for the asthmatic patient Kapok pillows are not satisfactory, but rubber foam or air pillows may be used occasionally The daily cleansing of the room throughout the patient's stay in the hospital is best done with a damp cloth All types of sweeping should be avoided The physician should see that orders of this type are transmitted to the proper persons

If the patient's asthma is associated with hay fever, a pollen filter in the window is most important Transoms, doors and other windows in the room should be kept closed when a pollen filter is being used

When bronchitis or other respiratory infections are the chief cause of the patient's asthma, as so often occurs in the group of older patients, there are distinct advantages to hospital care Asthmatic bronchitis subsides more quickly in a room which is free from drafts, smoke and furnace or other fumes and is kept at an even temperature Also control of medication with sulfonamides and penicillin when indicated is attained more readily in the hospital than at home, together with oxygen and helium therapy, intravenous medication and treatment of certain complications such as bronchostenosis

From the Division of Medicine Mayo Clinic

The ward, which is less costly than a private room, has a number of serious disadvantages Much more dust is encountered than in the private room because it is impossible to cover all pillows and mattresses in the ward with dustproof covers and to control other patients' use of cosmetics their clothing or accessories, any of which may be irritating to the patient who has asthma. An acute attack of asthma alarms all the patients in the ward and interferes with their rest, especially at night

When hospitalization of the severely ill asthmatic patient is not possible, every effort to make the environment at home as nearly like that of a hospital room is well worth while It also goes without saying that intelligent, calm professional or home nursing care is essential to the patient seriously ill from asthma He cannot help himself and he rapidly becomes worse when prompt symptomatic relief is not at hand when he needs it.

### USEFUL DRUGS AND PROCEDURES

There are scores of preparations for the symptomatic relief of asthma, many of proved value, others not so effective or with properties which should prohibit their general use Some of the drugs or procedures most useful in the treatment of asthma will be considered.

*Inhalation Therapy*— Inhalation therapy is a valuable part in the treatment of seriously ill asthmatic patients The use of a mask of the BLB type is most satisfactory Patients frequently object to being confined in an oxygen tent Also the continued use of a nasal catheter proves objectionable The prompt administration of gases is not as readily achieved with the last two methods

Oxygen or preferably oxygen diluted with helium may be used For the most seriously ill patient 20 per cent oxygen with 80 per cent helium is preferable More often greater concentrations of oxygen may be used The rate of flow of these gases should be from 6 to 9 liters per minute, provided this rate of flow keeps the rebreathing bag filled

Treatment with oxygen and helium should be used during acute attacks The patient should understand that the gases are not provided to stop an acute paroxysm but to serve to make him more comfortable during such an episode Often patients unaccustomed to such treatment will discard the mask at first and call for remedies with which they are acquainted

Barach[1] studied the deranged physiology of breathing in cases of asthma and advocated administration of therapeutic gases under positive pressure This tends to relieve the increased negative intrapulmonary pressure of obstructive dyspnea and facilitates the entrance of therapeutic gases during inspiration During expiration the bronchioles are less constricted These benefits in turn lessen edema in the pulmonary tissues and vascular congestion

With these findings in mind, Barach suggested oxygen and helium therapy for two hours daily even in the absence of acute respiratory distress Such gases may be administered with a positive pressure hood or mask Positive pressure of from 10 to 13 cm of water is used in such cases, with a flow of from 6 to 9 liters of gas per minute

Mixtures rich in helium cause the patient's voice to be higher pitched A word of explanation will prevent alarm over the pitch of the voice Oxygen containers should be removed from the room, as a precautionary measure, if burning stramonium powders are employed in treatment of asthma

Periodic inhalation of carbon dioxide causes hyperventilation, which tends to prevent the retention of secretions and the development of atelectasis This form of therapy is most helpful for asthmatic patients after undergoing surgical procedures, especially in the upper part of the abdomen The tendency of such patients to atelectasis is lessened

*Epinephrine*—Many medicines are of proved value in the relief of an acute asthma attack The use of these may begin before the hospital care is made available and must be continued throughout the stormy phase of the patient's illness

Epinephrine remains the most useful drug An aqueous solution administered hypodermically is best At times it may be necessary to give it at intervals of twenty minutes The usual dose employed at the Mayo Clinic is 0 5 cc of a 1 1,000 solution. When a patient presents a history of a satisfactory therapeutic response to less epinephrine, less should be used The accidental use of inadequate dosage by employing solutions of epinephrine in dilutions weaker than 1 1,000 should be avoided Such dilutions are frequently used in obstetric practice

The general limits of blood pressure should be known before the administration of epinephrine Moderate elevation of the blood pressure is not, however, a contraindication to the use of this drug An acutely ill asthmatic patient may receive greater trauma to his cardiovascular system from struggling in a severe attack of asthma than he will from the cautious use of epinephrine to halt the attack The use of this drug for elderly patients who have arteriosclerotic changes must be undertaken with caution, although here too age alone is not an absolute contraindication

The slow absorption of epinephrine dissolved in oil or in solutions containing gelatin does not make for accurate control of medication Relief is not as promptly attained when epinephrine is given in oil or gelatin, and epinephrine is absorbed at times when perhaps it is less urgently needed than it was earlier For this reason use of aqueous solutions are preferred for patients in the hospital where nursing service is available

As improvement takes place we prefer giving instruction in the use of a spray for the oral administration of this drug to the patient for whom continued use of epinephrine appears indicated In such a spray a 1 per cent aqueous solution of epinephrine usually is employed, although at times a 3 per cent solution may be required A number of effective nebulizers are available for the administration of epinephrine Careful instructions in the use of the spray should be given the patient The spout of the nebulizer should be placed in the mouth and directed toward the pharynx As the rubber bulb is squeezed, the patient should inhale deeply the fine spray through the mouth Merely spraying the throat is frequently the cause for the poor results from this procedure At the onset not more than two inhalations of nebulized epinephrine at a time should be taken because of the potential danger of overmedication, since a latent period of five minutes or longer occurs before the full therapeutic effect is

1 Barach A. L. Physiologically Directed Therapy in the Treatment of Intractable Bronchial Asthma, Bull. New York Acad Med. 20: 538-549 (Oct.) 1944

realized After some experience the patient can judge his own dosage needs Because of the greater strength of solutions of epinephrine designed for oral use, the patient should be warned not to use this solution hypodermically Profuse bronchial secretions dilute the epinephrine in the spray and may render it ineffective

Patients to whom large and frequent doses of epinephrine have been administered in the preceding few hours may become "epinephrine fast" on occasions At this time they will respond little or not at all to the continued administration of the drug Reversal of this state usually will occur within twelve to twenty-four hours, provided epinephrine is not used and reliance is temporarily placed on measures to be described

*Substitutes for Epinephrine*—For the acutely ill asthmatic patient the intravenous administration of hypertonic solutions of dextrose containing aminophylline is of great value It has been our custom to administer twice daily 250 cc of 20 per cent solution of dextrose to which 3¾ grains (0 25 Gm ) of aminophylline has been added When this concentration of dextrose is not immediately available, a 10 per cent solution may be used It is probable that the use of such hypertonic solutions reduces pulmonary edema Likewise this dextrose furnishes nutriment to an exhausted patient Repeated use of epinephrine tends to exhaust the glycogen content of the liver Replacing this is accomplished by the administration of dextrose

Aminophylline[2] is of proved value in relaxing bronchial spasm in the asthmatic patient Its intravenous administration should be slow and in diluents as described, concentrated solutions should rarely be given by vein Oral administration of aminophylline can be used to augment the dose given intravenously From 1½ to 3 grains (0 1 to 0 2 Gm ) administered by mouth three times daily seems to be the optimal dose This drug may be given by rectal administration in a dose of 7½ grains (0 5 Gm ) For such use the powder may be dissolved in 20 cc of tap water and inserted by means of a syringe and catheter or the drug may be provided in the form of a suppository to which a sedative has been added[1]

*Ephedrine and Ephedrine-like Drugs*—Use of ephedrine-like drugs stimulates the sympathetic nervous system and thus causes relaxation of the bronchial constriction in bronchial asthma It also may exert a direct effect on the bronchial musculature Proprietary preparations commonly employ a barbiturate, such as phenobarbital or pentobarbital, in combination with ephedrine to offset side actions, such as psychic excitation and palpitation Xanthine derivatives, such as theophylline or aminophylline, likewise are often included in such preparations Certain newer ephedrine-like synthetic drugs have less severe side effects than the older preparations For the acutely ill patient these drugs may be used about four times daily As soon as convalescence becomes established, these may be used every four hours if needed for the control of asthma When nocturnal attacks of asthma prove troublesome an enteric coated preparation containing ephedrine may be given at bedtime Since absorption is delayed, this preparation frequently will control such attacks

*Expectorants*—The mucus in the bronchioles of an asthmatic patient is usually viscous and tenacious Much exhausting coughing on the part of the patient is necessary to dislodge and raise this mucus Therefore an expectorant is of utmost value to the patient, particularly when bronchitis is a prominent etiologic factor Iodides in liberal quantities are the most useful of the expectorants, ammonium chloride is less effective and is reserved for the occasional patient who does not tolerate iodides well The expectorant is a frequently omitted adjuvant in the treatment of asthmatic patients The air of the patient's room should be adequately humidified Inhalation of steam will help in most cases of acute bronchitis

Two prescriptions containing iodides which are of value are given in table 1 The first mentioned prescription is more palatable and hence is preferred by most patients When bronchitis is the primary problem,

TABLE 1—*Two Prescriptions Containing Iodides*

| | Gm or Cc |
|---|---|
| Potassium iodide | 17 50 |
| Fluidextract of lobelia | 1 50 |
| Fluidextract of hyoscyamus | 1.50 |
| Glycerin | 20 00 |
| Simple elixir in sufficient quantity to make | 250 00 |

Directions One teaspoon in water three times daily after meals

| | Gm or Cc |
|---|---|
| Potassium iodide | 10 00 |
| Sodium iodide | 10 00 |
| Tincture of belladonna | 20 00 |
| Tincture of hyoscyamus | 20 00 |
| Tincture of lobelia | 20 00 |
| Fluidextract of grindelia fluidextract of glycyrrhiza syrup of tolu balsam each in sufficient quantity to make | 200 00 |

Directions One teaspoon in water three times daily after meals

TABLE 2—*Ammonium Chloride in Sour Mixture*

| | | Gm or Cc |
|---|---|---|
| Ammonium chloride | | 10 00 |
| Syrup of citric acid | | 50 00 |
| Water | to make | 100 00 |

Directions One teaspoon freely diluted with water every two hours

it is preferable In the second prescription there are apparent pharmacologic antagonists present with the tinctures offsetting the effect of the iodides However, actually the effects are not diametrically opposed and the prescription is of definite value Its value is particularly great when bronchorrhea produced by the first prescription is excessive, when associated vasomotor rhinitis is aggravated and when allergic factors are of greatest importance It should be pointed out to the patient that the expectorant containing iodide is given for the bronchitis and should be used continuously when asthma is troublesome or when asthma is threatened, as in convalescing from acute bronchitis Should evidence of active tuberculosis be present, iodides are contraindicated For children a saturated solution of potassium iodide is more easily administered than either of the prescriptions given

A small percentage of patients are unable to tolerate iodides An acne-like eruption or swelling and pain in the salivary glands develop When a skin eruption appears only after iodides have been given for several days, iodides may be used in short courses and treatment can be stopped before the day of the anticipated

2 Young R. H and Gilbert R. P The Use of Theophylline with Ethylenediamine (Aminophylline) for the Control of Bronchial Spasm A Pharmacologic Study J Allergy **12** 235 241 (March) 1941 Use of Aminophylline (Theophylline Ethylenediamine) to Control Bronchial Spasm Induced by Histamine, J A M. A. **114**: 522 (Feb 10) 1940 Dees Susan C The Use of Aminophylline Rectal Suppositories in the Treatment of Bronchial Asthma Preliminary Report, J Allergy **14**: 492 494 (Sept.) 1943 Luduena F P Bronchial Antispasmodic Actions of Theophylline Derivatives Including Effects of Continued Administration J Pharmacol. & Exper Therap **75** 316-327 (July) 1942

eruption In many cases ammonium chloride must be used then Ammonium chloride is best prescribed in sour mixtures [3] in the manner presented in table 2

*Sedatives, Estrogens and Stramonium*—Fear is an important factor in the production of asthma Severe exhaustion and apprehension coupled with poor nervous stamina will increase the severity of an attack of asthma and will cause an attack to develop on slight provocation Likewise the loss of sleep brought about by repeated nocturnal attacks of asthma causes profound exhaustion For such patients small doses of phenobarbital are helpful Excessive sedation should be avoided, as it is important not to suppress the belabored respiratory center

For women who have premenstrual tension associated with exacerbation of their asthma, oral use of estrogens during the two weeks before menstruation may be necessary in addition to sedatives The continuous use of estrogens should be considered particularly for menopausal patients who have ceased menstruating and who have appreciable vasomotor instability

Use of opiates is mentioned to be condemned Although they ease the apprehension of the patient, they depress the respiratory center and in doing so place the patient in serious jeopardy of immediate death from respiratory failure Secondarily the closely associated cough center is suppressed at a time when raising secretions is of utmost importance

Another commonly used treatment which is mentioned because of its deleterious effect from a long-range point of view is the fumes from burning stramonium powder Temporary relief is obtained from this treatment, but bronchial irritation produced may cause further asthma at a later date If the patient has confidence in such treatments, it is a good practice not to deprive one who is seriously ill of this during the first day or so of hospital care The reason for this is to prevent the fear that withdrawal of such medication would induce

*Special Measures for Patients Who Are Critically Ill*—For critically ill patients such measures as intravenous administration of 1 cc of 1 1,000 solution of epinephrine in 1 liter of isotonic solution of sodium chloride given very slowly and the use of nikethamide or pentamethylene tetrazol (metrazol) may be necessary Such measures are employed only when respiratory failure is imminent They are particularly useful when morphine has been given before the patient has come under observation With respiratory failure the use of an inhalator will increase the respiratory excursion, and helium and oxygen mixtures should be used for inhalation therapy

*Diet*—In considering a diet for the seriously ill asthmatic patient, foods known to be poorly tolerated by that patient should be omitted A positive skin test alone is insufficient evidence to warrant the omission of nutritious foods from the diet of a patient In most cases a general tray may be served Subsequent modifications of this regimen may be introduced as their necessity becomes apparent Often a patient with an eye too closely fixed on reactions to skin tests will cause his health to suffer more through bizarre and inadequate diet than it might from the atopic disorders prompting such diets A light evening meal is preferred to a large meal Supplements of vitamins which appear indicated in an individual case should be given

3 Hatcher R A and Wilbert M I The Pharmacology of Useful Drugs Chicago American Medical Association 1915 p 327

### COMPLICATIONS

Complications of asthma frequently include bronchostenosis, bronchitis with fever and pneumonia The role of coexisting bronchostenosis should be suspected if the patient presents a history of recurrent febrile episodes associated with chills, if there is a history of unexplained hemoptysis or if examination of the chest reveals persistent suppression of breath sounds, especially in the bases of the lungs When any of these characteristic features is present, bronchoscopy is indicated after the acute phase of the asthma has subsided For bronchitis associated with fever and for pneumonia, sulfonamides or penicillin should be employed early Because many of these patients have associated emphysema, acute infectious processes represent a considerably greater hazard to the patient

A useful adjunct in the treatment of asthma in which bronchitis is an important etiologic factor may be had in a roentgen treatment to the bronchi Opinions that roentgen irradiation may exercise a beneficial effect on the chronically inflamed bronchial mucous membrane are accumulating [4]

As the patient improves, greater latitude in an evaluation of long-range factors affecting the asthma is possible An investigation of the allergies involved may be undertaken The presence of coexisting sinus disease may be determined If purulent discharge is seen in the nose, if a history of frequent head colds is obtained or if a yellow postnasal drip is noted, sinusitis should be suspected Roentgenographic examination of the sinuses should be made in all cases of asthma Active sinusitis should be eradicated by such measures as may prove to be indicated

### TREATMENT AFTER DISMISSAL FROM HOSPITAL

When finally the patient is dismissed from the hospital, *it is well to outline a regimen which will include* several items Methods for preparing a dustfree bedroom must be suggested Dustproof covers should be applied to the mattress and pillows in the patient's home This is done partly because of allergic factors and partly because dust serves as a respiratory irritant Caution concerning the irritation from a habit of coughing is at times warranted, although patients who raise quantities of sputum should be spared such admonitions The use of tobacco is contraindicated in most cases of asthma The addition of any irritation from tobacco to the bronchitis under treatment had best be avoided The medication employed to the time of the patient's dismissal from the hospital should be continued without interruption during the transition to home care This should include expectorant (if tolerated), ephedrine or ephedrine-like drugs and, if epinephrine has been required in quantity, use of nebulized epinephrine Certain patients should be instructed in the method of administering epinephrine hypodermically The availability of this form of treatment eases the patient's apprehension

### SUMMARY

We now have at our disposal many tried adjuncts in treatment of the patient who is seriously ill with asthma While not one of these is of recent introduction, the diligent application of these several measures will materially aid in the care of such a patient

4 Kaplan I I and Rubenfeld Sidney The Treatment of Asthma with the Roentgen Ray Am J Roentgenol. **50** 791 796 (Dec) 1943 Hull W M Balyeat R M and Chont L K The Therapeutic Value of Roentgen Treatment in Chronic Asthma ibid **49** 227 233 (Feb) 1943 Maytum, C K and Leddy E T Roentgen Treatment of Severe Asthma J Allergy **8**: 66 70 (Nov) 1936

# MULTIPLE CASES OF CHORIOMENINGITIS IN AN APARTMENT HARBORING INFECTED MICE

GILBERT DALLDORF, M D
Albany N Y

C W JUNGEBLUT, M D
New York

and

MARGARET DOUGLASS UMPHLET, B S M A
Raleigh N C

Many house mice trapped in the homes of choriomeningitis patients are virus carriers [1] and infection in experimental mouse colonies may persist indefinitely, being transmitted from one generation to the next [2] These observations suggest that a building harboring infected mice could be a persistent source of human disease, and the present report appears to be an instance in which this occurred

Three cases of choriomeningitis developed among the residents of a multiple family dwelling in Raleigh, N C, and a fourth case in a near neighbor All 4 were quite characteristic clinically The first patient, a woman aged 32, was identified by the development of neutralizing antibodies in her blood serum The cerebrospinal fluid was avirulent for mice The following month two house mice were trapped in the building Their brains were suspended in saline solution and injected intracerebrally into albino mice Typical convulsions occurred seven days later The virus was later shown to be serologically indistinguishable from the W E strain of choriomeningitis [3]

Two years later a man aged 31 who also lived in the building developed similar symptoms In this case virus was demonstrated in the cerebrospinal fluid drawn on the third day of the disease Antibodies were likewise demonstrated in this case Twelve months later a woman aged 40 residing in the building had aseptic meningitis Virus was not found in her cerebrospinal fluid, drawn on the sixth day, but neutralizing antibodies appeared in her blood one month later

The fourth patient was a boy aged 14 years whose home was in an adjoining building but who frequented the apartment house Cerebrospinal fluid was drawn on the second day and found to contain virus At the time his fluid contained 540 cells per cubic millimeter Two days later the cells had increased to 950 per cubic millimeter

Unfortunately neither further trapping nor a survey of the residents of the building was feasible The frequency of infection without clinical signs suggests that many others may have been infected The experience is similar to that of Farmer and Janeway,[4] who learned from hospital records that the 4 recognized cases of choriomeningitis among Boston Negroes during a period of eight years had all occurred in one district It was discovered that all had lived within two blocks of one another In this instance the diagnosis in the 2 earliest cases rested on clinical records Virus was demonstrated in 1 patient and antibodies in another

The incidence of infected house mice appears to be variable Armstrong's [5] estimate for Washington, D C is 21 5 per cent, while Yamarat [6] found 4 per cent of the mice he trapped in Boston to be carriers Between September 1943 and October 1944 we examined 290 mice trapped in Greater New York [7] and found 11, or approximately 4 per cent, to be infected Eleven rats were examined and all proved to be avirulent Rats are relatively insusceptible to choriomeningitis and have *not been shown to carry virus in nature* [8]

It is worth noting that our results suggest small, persistent foci of infection The persistence of infection is readily understood from the observations showing in utero transmission [2] The limited size of the foci probably reflects the circumscribed range of mice [9] Thus the 11 infected mice we found were in four buildings, one store and three apartments Three were found in the former during the initial trapping and another eight months later A number of mice from adjoining buildings were free of virus A second trapping was also made in an apartment in which a carrier had been found The second collection likewise yielded an infected mouse

Mosquitoes,[10] ticks [11] and body lice [12] are capable of harboring choriomeningitis virus Farmer and Janeway [4] suggested that 1 of their patients might have been infected by a dog, but subsequent studies [13] have so far failed to demonstrate that dogs are carriers On the other hand, several reports have incriminated house mice [14]

SUMMARY

Three consecutive cases of choriomeningitis were noted among the residents of a multiple family dwelling which harbored infected mice A fourth case developed in a near neighbor

It would seem justifiable to make special efforts to search out colonies of infected mice in the premises of known cases of the disease, both to verify further the causal relationship and to identify what may be a persistent focus of infection

The incidence of choriomeningitis virus carriage in house mice in Greater New York was found to be approximately 4 per cent

From the Division of Laboratories and Research New York State Department of Health Albany (Dr Dalldorf) and the Department of Bacteriology Columbia University College of Physicians and Surgeons New York (Dr Jungeblut)

1 Armstrong C and Sweet L. K. Lymphocytic Choriomeningitis Report of 2 Cases, with Recovery of the Virus from Gray Mice (Mus Musculus) Trapped in the Two Infected Households Pub Health Rep **54** 673 683 1939

2 Traub E. The Epidemiology of Lymphocytic Choriomeningitis in White Mice J Exper Med **64** 183 200 1936 Epidemiology of Lymphocytic Choriomeningitis in a Mouse Stock Observed for Four Years ibid **69** 801 817, 1939

3 Dalldorf G The Simultaneous Occurrence of the Viruses of Canine Distemper and Lymphocytic Choriomeningitis J Exper Med **70** 19 27 1939

4 Farmer T W, and Janeway C A Infections with the Virus of Lymphocytic Choriomeningitis Medicine **21** 1 63 1942

5 Armstrong C Some Recent Research in the Field of Neurotropic Viruses, with Especial Reference to Lymphocytic Choriomeningitis and Herpes Simplex, Mil Surgeon **91**: 129 146 1942

6 Yamarat, C A Study of Lymphocytic Choriomeningitis Thesis Harvard School of Public Health 1940

7 Jungeblut C W, and Dalldorf, G Epidemiological and Experimental Observations of Poliomyelitis in New York City (1943 1944) Am J Hyg **43**: 49-64, 1946

8 Howitt Beatrice F, and van Herick W Relationship of the St. Louis and the Western Equine Encephalitic Viruses to Fowl and Mammals in California J Infect Dis **71**: 179 191 1942 Kreis B La maladie d Armstrong (chorio-méningite lymphocytaire) Une nouvelle entite morbide? Thesis, Paris J B Baillière, 1937

9 Garlough F E. and Spencer D A Control of Destructive Mice Conservation Bulletin no 36, United States Department of Interior Fish and Wildlife Service 1944 Hamilton W J, Jr Activity and Home Range of the Field Mouse Microtus Pennsylvanicus Pennsylvanicus (ord) Ecology **18**: 255-263 1937 Townsend, M T Studies on Some of the Small Mammals of Central New York Bull New York State Coll Forestry S 1 120 1935 (Roosevelt Wild Life Annals, 1935 vol 4, no 1)

10 Coggeshall L. T The Transmission of Lymphocytic Choriomeningitis by Mosquitoes Science **89**: 515 516 1939

11 Shaughnessy H J and Milzer A. Experimental Infection of Dermacentor Andersoni Stiles with the Virus of Lymphocytic Choriomeningitis, Am. J Pub Health **29** 1103 1108 1939

12 Findlay, G M Stuart Harris C H and MacCallum F O Lymphocytic Choriomeningitis with Report of a Case J Roy Army M Corps, **75**: 8-15, 1940

13 Dalldorf G Lymphocytic Choriomeningitis of Dogs Cornell Vet **33** 347 350 1943 The Simultaneous Occurrence of the Viruses of Canine Distemper and Lymphocytic Choriomeningitis [3]

14 Farmer and Janeway [4] Armstrong [5]

eruption In many cases ammonium chloride must be used then Ammonium chloride is best prescribed in sour mixtures [3] in the manner presented in table 2

*Sedatives, Estrogens and Stramonium*—Fear is an important factor in the production of asthma Severe exhaustion and apprehension coupled with poor nervous stamina will increase the severity of an attack of asthma and will cause an attack to develop on slight provocation Likewise the loss of sleep brought about by repeated nocturnal attacks of asthma causes profound exhaustion For such patients small doses of phenobarbital are helpful Excessive sedation should be avoided, as it is important not to suppress the belabored respiratory center

For women who have premenstrual tension associated with exacerbation of their asthma, oral use of estrogens during the two weeks before menstruation may be necessary in addition to sedatives The continuous use of estrogens should be considered particularly for menopausal patients who have ceased menstruating and who have appreciable vasomotor instability

Use of opiates is mentioned to be condemned Although they ease the apprehension of the patient, they depress the respiratory center and in doing so place the patient in serious jeopardy of immediate death from respiratory failure Secondarily the closely associated cough center is suppressed at a time when raising secretions is of utmost importance

Another commonly used treatment which is mentioned because of its deleterious effect from a long-range point of view is the fumes from burning stramonium powder Temporary relief is obtained from this treatment, but bronchial irritation produced may cause further asthma at a later date If the patient has confidence in such treatments, it is a good practice not to deprive one who is seriously ill of this during the first day or so of hospital care The reason for this is to prevent the fear that withdrawal of such medication would induce

*Special Measures for Patients Who Are Critically Ill*—For critically ill patients such measures as intravenous administration of 1 cc of 1 1,000 solution of epinephrine in 1 liter of isotonic solution of sodium chloride given very slowly and the use of nikethamide or pentamethylene tetrazol (metrazol) may be necessary Such measures are employed only when respiratory failure is imminent They are particularly useful when morphine has been given before the patient has come under observation With respiratory failure the use of an inhalator will increase the respiratory excursion, and helium and oxygen mixtures should be used for inhalation therapy

*Diet*—In considering a diet for the seriously ill asthmatic patient, foods known to be poorly tolerated by that patient should be omitted A positive skin test alone is insufficient evidence to warrant the omission of nutritious foods from the diet of a patient In most cases a general tray may be served Subsequent modifications of this regimen may be introduced as their necessity becomes apparent Often a patient with an eye too closely fixed on reactions to skin tests will cause his health to suffer more through bizarre and inadequate diet than it might from the atopic disorders prompting such diets A light evening meal is preferred to a large meal Supplements of vitamins which appear indicated in an individual case should be given

3 Hatcher R A and Wilbert M. I The Pharmacology of Useful Drugs Chicago American Medical Association 1915 p 327

## COMPLICATIONS

Complications of asthma frequently include bronchostenosis, bronchitis with fever and pneumonia The role of coexisting bronchostenosis should be suspected if the patient presents a history of recurrent febrile episodes associated with chills, if there is a history of unexplained hemoptysis or if examination of the chest reveals persistent suppression of breath sounds, especially in the bases of the lungs When any of these characteristic features is present, bronchoscopy is indicated after the acute phase of the asthma has subsided For bronchitis associated with fever and for pneumonia, sulfonamides or penicillin should be employed early Because many of these patients have associated emphysema, acute infectious processes represent a considerably greater hazard to the patient

A useful adjunct in the treatment of asthma in which bronchitis is an important etiologic factor may be had in a roentgen treatment to the bronchi Opinions that roentgen irradiation may exercise a beneficial effect on the chronically inflamed bronchial mucous membrane are accumulating [4]

As the patient improves, greater latitude in an evaluation of long-range factors affecting the asthma is possible An investigation of the allergies involved may be undertaken The presence of coexisting sinus disease may be determined If purulent discharge is seen in the nose, if a history of frequent head colds is obtained or if a yellow postnasal drip is noted, sinusitis should be suspected Roentgenographic examination of the sinuses should be made in all cases of asthma Active sinusitis should be eradicated by such measures as may prove to be indicated

## TREATMENT AFTER DISMISSAL FROM HOSPITAL

When finally the patient is dismissed from the hospital, it is well to outline a regimen which will include several items Methods for preparing a dustfree bedroom must be suggested Dustproof covers should be applied to the mattress and pillows in the patient's home This is done partly because of allergic factors and partly because dust serves as a respiratory irritant Caution concerning the irritation from a habit of coughing is at times warranted, although patients who raise quantities of sputum should be spared such admonitions The use of tobacco is contraindicated in most cases of asthma The addition of any irritation from tobacco to the bronchitis under treatment had best be avoided The medication employed to the time of the patient's dismissal from the hospital should be continued without interruption during the transition to home care This should include expectorant (if tolerated), ephedrine or ephedrine-like drugs and, if epinephrine has been required in quantity, use of nebulized epinephrine Certain patients should be instructed in the method of administering epinephrine hypodermically The availability of this form of treatment eases the patient's apprehension

## SUMMARY

We now have at our disposal many tried adjuncts in treatment of the patient who is seriously ill with asthma While not one of these is of recent introduction, the diligent application of these several measures will materially aid in the care of such a patient

4 Kaplan, I I and Rubenfeld Sidney The Treatment of Asthma with the Roentgen Ray Am J Roentgenol 50 791 796 (Dec.) 1943 Hull W M Balyeat, R M. and Chont, L. K. The Therapeutic Value of Roentgen Treatment in Chronic Asthma ibid 49: 227 233 (Feb) 1943 Maytum C K and Leddy E T Roentgen Treatment of Severe Asthma J Allergy 8 66 70 (Nov) 1936

# MULTIPLE CASES OF CHORIOMENINGITIS IN AN APARTMENT HARBORING INFECTED MICE

GILBERT DALLDORF, M D
Albany, N Y
C. W JUNGEBLUT, M D
New York
and
MARGARET DOUGLASS UMPHLET, B S M A
Raleigh, N C

Many house mice trapped in the homes of choriomeningitis patients are virus carriers [1] and infection in experimental mouse colonies may persist indefinitely, being transmitted from one generation to the next [2] These observations suggest that a building harboring infected mice could be a persistent source of human disease, and the present report appears to be an instance in which this occurred

Three cases of choriomeningitis developed among the residents of a multiple family dwelling in Raleigh, N C, and a fourth case in a near neighbor All 4 were quite characteristic clinically The first patient, a woman aged 32, was identified by the development of neutralizing antibodies in her blood serum The cerebrospinal fluid was avirulent for mice The following month two house mice were trapped in the building Their brains were suspended in saline solution and injected intracerebrally into albino mice Typical convulsions occurred seven days later The virus was later shown to be serologically indistinguishable from the W E strain of choriomeningitis [3]

Two years later a man aged 31 who also lived in the building developed similar symptoms In this case virus was demonstrated in the cerebrospinal fluid drawn on the third day of the disease Antibodies were likewise demonstrated in this case Twelve months later a woman aged 40 residing in the building had aseptic meningitis Virus was not found in her cerebrospinal fluid, drawn on the sixth day, but neutralizing antibodies appeared in her blood one month later

The fourth patient was a boy aged 14 years whose home was in an adjoining building but who frequented the apartment house Cerebrospinal fluid was drawn on the second day and found to contain virus At the time his fluid contained 540 cells per cubic millimeter Two days later the cells had increased to 950 per cubic millimeter

Unfortunately neither further trapping nor a survey of the residents of the building was feasible The frequency of infection without clinical signs suggests that many others may have been infected The experience is similar to that of Farmer and Janeway,[4] who learned from hospital records that the 4 recognized cases of choriomeningitis among Boston Negroes during a period of eight years had all occurred in one district It was discovered that all had lived within two blocks of one another In this instance the diagnosis in the 2 earliest cases rested on clinical records Virus was demonstrated in 1 patient and antibodies in another

The incidence of infected house mice appears to be variable Armstrong's [5] estimate for Washington, D C is 21 5 per cent, while Yamarat [6] found 4 per cent of the mice he trapped in Boston to be carriers Between September 1943 and October 1944 we examined 290 mice trapped in Greater New York [7] and found 11, or approximately 4 per cent, to be infected Eleven rats were examined and all proved to be avirulent Rats are relatively insusceptible to choriomeningitis and have not been shown to carry virus in nature [8]

It is worth noting that our results suggest small, persistent foci of infection The persistence of infection is readily understood from the observations showing in utero transmission [2] The limited size of the foci probably reflects the circumscribed range of mice [9] Thus the 11 infected mice we found were in four buildings, one store and three apartments Three were found in the former during the initial trapping and another eight months later A number of mice from adjoining buildings were free of virus A second trapping was also made in an apartment in which a carrier had been found The second collection likewise yielded an infected mouse

Mosquitoes,[10] ticks [11] and body lice [12] are capable of harboring choriomeningitis virus Farmer and Janeway [4] suggested that 1 of their patients might have been infected by a dog, but subsequent studies [13] have so far failed to demonstrate that dogs are carriers On the other hand, several reports have incriminated house mice [14]

## SUMMARY

Three consecutive cases of choriomeningitis were noted among the residents of a multiple family dwelling which harbored infected mice A fourth case developed in a near neighbor

It would seem justifiable to make special efforts to search out colonies of infected mice in the premises of known cases of the disease, both to verify further the causal relationship and to identify what may be a persistent focus of infection

The incidence of choriomeningitis virus carriage in house mice in Greater New York was found to be approximately 4 per cent

From the Division of Laboratories and Research New York State Department of Health Albany (Dr Dalldorf) and the Department of Bacteriology Columbia University College of Physicians and Surgeons New York (Dr Jungeblut)

1 Armstrong C., and Sweet L K Lymphocytic Choriomeningitis Report of 2 Cases with Recovery of the Virus from Gray Mice (Mus Musculus) Trapped in the Two Infected Households Pub Health Rep 54: 673-683, 1939

2 Traub E The Epidemiology of Lymphocytic Choriomeningitis in White Mice, J Exper Med 64 183 200 1936 Epidemiology of Lymphocytic Choriomeningitis in a Mouse Stock Observed for Four Years ibid 69 801 817 1939

3 Dalldorf G The Simultaneous Occurrence of the Viruses of Canine Distemper and Lymphocytic Choriomeningitis J Exper Med. 70 19 27 1939

4 Farmer T W, and Janeway C A Infections with the Virus of Lymphocytic Choriomeningitis Medicine 21 1 63 1942

5 Armstrong C Some Recent Research in the Field of Neurotropic Viruses with Especial Reference to Lymphocytic Choriomeningitis and Herpes Simplex Mil Surgeon 91: 129-146, 1942

6 Yamarat, C A Study of Lymphocytic Choriomeningitis, Thesis Harvard School of Public Health 1940

7 Jungeblut, C W, and Dalldorf G Epidemiological and Experimental Observations of Poliomyelitis in New York City (1943 1944) Am J Hyg 43: 49 64 1946

8 Howitt Beatrice F, and van Herick W Relationship of the St. Louis and the Western Equine Encephalitic Viruses to Fowl and Mammals in California J Infect Dis 71 179 191 1942 Kreis B La maladie d Armstrong (chorio-méningite lymphocytaire) Une nouvelle entite morbide? Thesis Paris J B Baillière, 1937

9 Garlough F E. and Spencer, D A Control of Destructive Mice Conservation Bulletin no 36 United States Department of Interior Fish and Wildlife Service 1944 Hamilton W J Jr Activity and Home Range of the Field Mouse Microtus Pennsylvanicus Pennsylvanicus (ord) Ecology 18 255 263 1937 Townsend, M T Studies on Some of the Small Mammals of Central New York Bull New York State Coll Forestry 8 1 120 1935 (Roosevelt Wild Life Annals 1935 vol 4, no. 1)

10 Coggeshall L T The Transmission of Lymphocytic Choriomeningitis by Mosquitoes Science 89: 515 516, 1939

11 Shaughnessy H J and Milzer, A Experimental Infection of Dermacentor Andersoni Stiles with the Virus of Lymphocytic Choriomeningitis, Am. J Pub Health 29 1103-1108 1939

12 Findlay G M Stuart Harris C. H and MacCallum F O Lymphocytic Choriomeningitis with Report of a Case J Roy Army Med Corps, 75 8-15 1940

13 Dalldorf, G Lymphocytic Choriomeningitis of Dogs Cornell Vet 33 347 350 1943 The Simultaneous Occurrence of the Viruses of Canine Distemper and Lymphocytic Choriomeningitis [3]

14 Farmer and Janeway [4] Armstrong [5]

# Clinical Notes, Suggestions and New Instruments

## CHRONIC PORPHYRIA

Irving J. Taylor, M.D., Milton L. Solomon, M.D., Glenn S. Weiland, Ph.D. and Frank H. J. Figge, Ph.D., Baltimore

Porphyria, sometimes referred to by the obsolete term "hematoporphyrinuria," is a disease or a group of diseases associated with an intrinsic or inborn error of porphyrin metabolism. The three types recognized by most authorities[1] are (1) congenital, (2) acute and (3) chronic. Almost all of the reported cases of porphyria have occurred in Europe, and the small number of papers in this country have dealt mainly with the acute type[2] and, to a lesser extent, the congenital type. To our knowledge the only case of chronic porphyria which had been reported in this country proved to be a case of acute porphyria with mental symptoms,[3] hence the object of recording this case.

Nesbitt[2] has suggested that porphyria is not as uncommon as is indicated by the paucity of case reports and that if attention is focused on this disease more cases will be detected. The historical, chemical and clinical aspects of porphyria have been adequately reviewed in English by other investigators[4] in whose articles extensive bibliographies may be found. A summarizing table has been prepared to facilitate a discussion of the differentiation of the various types of porphyria. This also gives an isolated clear picture of the clinical symptoms associated with this group of diseases.

The three types of porphyria can be easily differentiated if the following facts are kept in mind. The original classification was based on the fact that in the acute variety the abnormal porphyrin excretion occurred intermittently or only during the acute attack. In the congenital and chronic forms, however, abnormal amounts of porphyrin are excreted continuously. These names are somewhat unfortunate because all three types are chronic diseases.

1. The congenital type is possibly inherited as a mendelian recessive.[3] Uroporphyrin type I is excreted predominantly and the classic clinical symptoms are a sensitivity of the skin to light (blistering resembling hydroa estivale). The teeth and bones are usually discolored with uroporphyrin, and the patients exhibit symptoms characteristic of endocrine disturbances.

2. The acute type of porphyria is inherited as a mendelian dominant[5] and, contrary to its name, is a chronic disease. Uroporphyrin type III is excreted in large amounts in the urine and feces during attacks. There is little or no light sensitivity, but abdominal, neurologic and mental symptoms are common manifestations.

3. Chronic porphyria includes those cases which cannot be classified as either congenital or acute but exhibit the clinical symptoms of both in a milder form. For example, in patients with chronic porphyria the skin is somewhat sensitive to light, and abdominal, nervous or mental symptoms may appear singly or in combination. Patients with this disease usually excrete large amounts of coproporphyrin III or a mixture of III and I, but uroporphyrin I and III have been isolated.[3] No information on the genetics of this type of porphyria could be found.

The attempt to include acute toxic porphyria in the classification[6] is not justified and indicates a superficial concept of the disease. This should be regarded as porphyrinuria caused by certain specific toxic substances or drugs.[5]

*Differentiation of Various Types of Porphyria*

| Type of Porphyria | Duration and Genetics | Type of Excess Porphyrin Excreted | Clinical Symptoms |
|---|---|---|---|
| Congenital | Inherited possibly as a mendelian recessive; may appear early in life, chronic disease | Uroporphyrin I with coproporphyrin I (excreted continuously) | Great photosensitivity and cutaneous manifestations resembling hydroa estivale in spring and summer appearing frequently in childhood; urine burgundy red with brown tinge, teeth and bones discolored by uroporphyrin I |
| Acute | Inherited as a mendelian dominant; chronic disease | Uroporphyrin III excreted in large amounts chiefly during attacks (reason for designation as acute); smaller amounts of coproporphyrin III or I found occasionally | No photosensitivity; no skin lesions; great variation in clinical picture; symptoms of three main types<br>1. Abdominal: severe cramplike pain, vomiting and constipation often with slight fever, hypertension and tachycardia<br>2. Nervous: symmetrical ascending myelitis (Landry's) sometimes with neuritis<br>3. Mental: any type of psychic disturbance; urine during attack usually red but may be light straw colored, darkening on exposure |
| Chronic | Chronic disease | Mixtures of coproporphyrin III and I or uroporphyrin I and III | Slight photosensitivity; some skin lesions, abdominal pains and symptoms; it thus resembles congenital porphyria in some respects and acute porphyria in others |

### REPORT OF CASE

*History*.—A white woman aged 20, married, a native of Baltimore, was admitted to the West Baltimore General Hospital on Nov. 5, 1944 with the chief complaint of severe generalized abdominal pain with nausea and vomiting. The present illness began on Aug. 1, 1944 while she was visiting her husband at a Marine station in North Carolina. At this time she noticed vesicles which itched intensely on the knuckles of both hands. In the next two weeks this spread half-way up the dorsum of the forearms. One month later vesicles began to appear on her face. A sulfonamide (one tablet four times a day) was taken for one week, starting about September 25. Vitamins A and $B_1$ were then tried for about one month. Acetylsalicylic acid was taken on numerous occasions, but this drug had been used previously with no untoward reactions. No sleeping tablets were necessary.

Since this medication appeared to be of no value, the patient consulted a dermatologist two weeks prior to admission, again without obtaining relief. Four days prior to admission, because the skin condition had not improved, she was given calcium gluconate intravenously with no noticeable effect. A second injection of calcium gluconate was given two days prior to admission. On the morning just prior to this injection the patient first noticed generalized abdominal pain and nausea. This persisted and was accompanied by vomiting during the twenty-four hours before admission to the hospital. The vomiting was so severe that the patient was able to retain nothing but tea. On the day of admission the patient first

Dr. Taylor is now in the Army of the United States.

From the West Baltimore General Hospital and the University of Maryland School of Medicine.

This work was aided by grants from the Anna Fuller Fund and the International Cancer Research Foundation.

1. Gunther, H.: Die Bedeutung der Hamatoporphyrine in Physiologie und Pathologie, Ergebn. d. allg. Path. u. path. Anat. **20**: 609-764, 1922. Waldenstrom, Jan.: Studies on Porphyria, Acta med. Scandinav., 1937, supp. 82, pp. 1-254. Dobriner and Rhoads,[3] Nesbitt.[2]
2. Nesbitt, Samuel: Acute Porphyria, J. A. M. A. **124**: 286-294 (Jan. 29) 1944.
3. Dobriner, Konrad, and Rhoads, C. P.: The Porphyrins in Health and Disease, Physiol. Rev. **20**: 416-468, 1940.
4. Welcker, M. L.: Medical Progress: The Porphyrins, New England J. Med. **232**: 11-19, 1945. Dobriner and Rhoads,[3] Nesbitt.[2]
5. Dobriner and Rhoads,[3] Nesbitt.[2]
6. Fetter, F., Humphrey, A. A., and Longenecker, C. R.: Acute Idiopathic Porphyria, U. S. Nav. M. Bull. **43**: 349-352, 1944. Avery, L. W.: Porphyria in Relation to Nervous and Mental Diseases, Dis. Nerv. System **6**: 217-221, 1945.

noticed urgency and frequency of urination, with much difficulty in initiating the flow

The family history was noncontributory No relative had ever shown similar symptoms or exhibited any allergy

The past history revealed only childhood diseases, such as chickenpox, measles, whooping cough and the mumps The patient worked in a paint factory handling titanium dioxide and later in 1943-1944 in a factory where she used a chemical called "glycthol" to solder tops on metal tubes This so-called solder is a plastic and contains no lead, benzene or other known toxic material

A review of the symptoms was noncontributory No history of asthma, hay fever, food or drug allergy was obtained There were no previous urinary symptoms

*Physical Examination*—On admission the rectal temperature was 100 4 F, the pulse rate was 90, the respiratory rate was 20, the blood pressure 120/80 and the weight 112 pounds (51 Kg) The patient appeared to be well developed and well nourished and looked acutely ill The respirations were full but quite deep in character The lips appeared red There was a skin eruption consisting of a few unbroken vesicles with mostly excoriations, superimposed pustules and crusts over the dorsum of the forearms and hands, the face, the forehead and the anterior part of the neck The remainder of her body was unaffected Examination of the abdomen revealed a diffuse extreme tenderness but no spasm or rigidity There was no rebound tenderness, and no organs or masses were palpable. There was no costovertebral angle tenderness or tenderness on percussion over or alongside the spinal column A complete neurologic examination was negative. Pelvic and rectal examinations revealed no abnormality

*Course in Hospital*—The patient was believed at first to have a virus infection involving the nerve roots and a skin eruption of unknown etiology limited to the exposed areas A plasma carbon dioxide was found to be 40 volumes per cent and sodium r-lactate was administered parenterally The normal menstrual flow started two days after admission and the abdominal cramps and urinary urgency, although still present at that time, had subsided considerably The flow stopped four days after its onset. However, three days later the patient had a small amount of vaginal bleeding

Spectroscopic examination of a twenty-four hour specimen of the patient's urine on the third hospital day revealed absorption bands characteristic of porphyrin, and 1,635 micrograms of ether-soluble porphyrin was extracted. The urine collected the following day yielded 1,248 micrograms of porphyrin

The following therapy was then instituted The patient was given calcium lactate 40 grains (2 6 Gm), sodium bicarbonate 80 grains (5 2 Gm.) and riboflavin 40 mg by mouth daily One fourth of this daily dose was administered with 200 cc. of an imperial drink every six hours In addition, one ampule of Solu B was given intravenously [7] and 5 cc. of crude liver extract was administered intramuscularly daily This treatment was suggested by a review [8] of methods used to treat porphyria patients, but the dosages which were used in this case were much higher than those used by other investigators The riboflavin was thus used as a drug and not to satisfy the normal requirement. The urinary porphyrin excretion was followed for the next twelve days and found to vary between 300 and 1,045 micrograms per day

During the first four weeks in the hospital the patient required isonipecaine or codeine at least one or more times a day (less terminally than initially) for relief of severe abdominal cramps By the ninth hospital day the patient became almost free from urinary urgency, but on that day she experienced an especially severe attack of abdominal cramps, made worse by pressure on the abdomen She also complained of severe pain in the right sacroiliac region and diffuse leg aches which were not relieved by 1 gram (0 06 Gm.) of codeine administered hypodermically but were relieved by 100 mg of isonipecaine.

Ultraviolet radiation was applied on the ninth hospital day to a clear area the size of a quarter (24 mm) on the dorsum of the right forearm in order to see if the patient was sensitive to this radiation The unfiltered radiation from a therapeutic quartz mercury arc lamp at a distance of 2 feet was applied for ten minutes, but no skin lesions resulted This dosage of light may have been too small to elicit a response. The apparent lack of light sensitivity seemed incompatible with the observation that all skin lesions occurred on areas normally exposed to light

By the tenth day the abdominal and right back pains were present only at intervals, and two days later she was able to sleep about half the night without any pain

The patient was examined under near ultraviolet light,[9] and about half of the skin lesions exhibited a bright reddish orange fluorescent glow This red fluorescent glow was especially noticeable on the most recent lesions and more noticeable on those which had been weeping during the previous twenty-four hours Along the nasolabial grooves, the sebaceous secretions



Fig 1—Appearance of patient with chronic porphyria one year after the onset of the disease Most of the lesions which appear dark in this and in figure 2 were red fluorescent when examined in near ultraviolet light Many of the scarred areas do not show in the illustrations The slight enlargement of the thyroid which is evident developed after the patient became pregnant

stood out as pearly, round, bright orange-red fluorescent puncta. The tongue also showed a brilliant red fluorescence over its entire surface The skin, mucous membranes, teeth and nails fluoresced normally The patient suffered no new skin lesions immediately after this fluorescence examination, but several days later three new skin vesicles were noted on the dorsum of the hands At this time the abdominal pains were of shorter duration and much less severe but usually appeared with low back pain in the evenings The urinary urgency and leg pains disappeared at this time and never recurred In the next three days the patient had only two minor episodes of abdominal pain, and she was permitted up in a wheel chair on the fiftieth hospital day Up until this time there had been no itching of the skin lesions However, it was now noted that the patient had scratched her forearms while asleep. From this time until her discharge on the sixty-third hospital day the patient was asympto-

7 Major crystallized vitamin B components, consisting of thiamine hydrochloride 10 mg riboflavin 10 mg., pyridoxine hydrochloride 5 mg., calcium pantothenate 50 mg and nicotinamide 250 mg

8 Vannotti A. Porphyrine und Porphyrinkrankheiten Berlin Julius Springer 1937

9 Figge, F H. J Near Ultraviolet Rays and Fluorescence Phenomena as Aids to Discovery and Diagnosis in Medicine, Bull School Med Univ Maryland 26: 165 176 1942

# Clinical Notes, Suggestions and New Instruments

## CHRONIC PORPHYRIA

Irving J Taylor M D, Milton L. Solomon M D, Glenn S Weiland, Ph D, and Frank H J Figge Ph D Baltimore

Porphyria, sometimes referred to by the obsolete term "hematoporphyrinuria," is a disease or a group of diseases associated with an intrinsic or inborn error of porphyrin metabolism. The three types recognized by most authorities [1] are (1) congenital, (2) acute and (3) chronic. Almost all of the reported cases of porphyria have occurred in Europe, and the small number of papers in this country have dealt mainly with the acute type [2] and, to a lesser extent, the congenital type. To our knowledge the only case of chronic porphyria which had been reported in this country proved to be a case of acute porphyria with mental symptoms, [3] hence the object of recording this case.

Nesbitt [2] has suggested that porphyria is not as uncommon as is indicated by the paucity of case reports, and that if attention is focused on this disease more cases will be detected. The historical, chemical and clinical aspects of porphyria have been adequately reviewed in English by other investigators, [4] in whose articles extensive bibliographies may be found A summarizing table has been prepared to facilitate a discussion of the differentiation of the various types of porphyria This also gives an isolated clear picture of the clinical symptoms associated with this group of diseases

The three types of porphyria can be easily differentiated if the following facts are kept in mind The original classification was based on the fact that in the acute variety the abnormal porphyrin excretion occurred intermittently or only during the acute attack. In the congenital and chronic forms, however, abnormal amounts of porphyrin are excreted continuously These names are somewhat unfortunate because all three types are chronic diseases

1 The congenital type is possibly inherited as a mendelian recessive [3] Uroporphyrin type I is excreted predominantly and the classic clinical symptoms are a sensitivity of the skin to light (blistering resembling hydroa estivale) The teeth and bones are usually discolored with uroporphyrin, and the patients exhibit symptoms characteristic of endocrine disturbances

2 The acute type of porphyria is inherited as a mendelian dominant [5] and, contrary to its name, is a chronic disease Uroporphyrin type III is excreted in large amounts in the urine and feces during attacks There is little or no light sensitivity, but abdominal, neurologic and mental symptoms are common manifestations

3 Chronic porphyria includes those cases which cannot be classified as either congenital or acute but exhibit the clinical symptoms of both in a milder form For example, in patients with chronic porphyria the skin is somewhat sensitive to light, and abdominal, nervous or mental symptoms may appear singly or in combination Patients with this disease usually excrete large amounts of coproporphyrin III or a mixture of III and I, but uroporphyrin I and III have been isolated. [3] No information on the genetics of this type of porphyria could be found

The attempt to include acute toxic porphyria in the classification [6] is not justified and indicates a superficial concept of the disease. This should be regarded as porphyrinuria caused by certain specific toxic substances or drugs [5]

*Differentiation of Various Types of Porphyria*

| Type of Porphyria | Duration and Genetics | Type of Excess Porphyrin Excreted | Clinical Symptoms |
|---|---|---|---|
| Congenital | Inherited possibly as a mendelian recessive may appear early in life chronic disease | Uroporphyrin I with coproporphyrin I (excreted continuously) | Great photosensitivity and cutaneous manifestations resembling 'hydroa estivale' in spring and summer appearing frequently in childhood urine burgundy red with brown tinge teeth and bones discolored by uroporphyrin I |
| Acute | Inherited as a mendelian dominant chronic disease | Uroporphyrin III excreted in large amounts chiefly during attacks (reason for designation as acute) smaller amounts of coproporphyrin III or I found occasionally | No photosensitivity, no skin lesions, great variation in clinical picture symptoms of three main types<br>1 Abdominal severe crampllke pain vomiting and constipation often with slight fever hypertension and tachycardia<br>2 Nervous symmetrical ascending myelitis (Landry s) sometimes with neuritis<br>3 Mental any type of psychic disturbance urine during attack usually red but may be light straw colored darkening on exposure |
| Chronic | Chronic disease | Mixtures of coproporphyrin III and I or uroporphyrin I and III | Slight photosensitivity some skin lesions abdominal pains and symptoms it thus resembles congenital porphyria in some respects and acute porphyria in others |

### REPORT OF CASE

*History*—A white woman aged 20, married, a native of Baltimore, was admitted to the West Baltimore General Hospital on Nov 5, 1944 with the chief complaint of severe generalized abdominal pain with nausea and vomiting The present illness began on Aug 1, 1944 while she was visiting her husband at a Marine station in North Carolina At this time she noticed vesicles which itched intensely on the knuckles of both hands In the next two weeks this spread half way up the dorsum of the forearms One month later vesicles began to appear on her face. A sulfonamide (one tablet four times a day) was taken for one week, starting about September 25 Vitamins A and $B_1$ were then tried for about one month. Acetylsalicylic acid was taken on numerous occasions, but this drug had been used previously with no untoward reactions No sleeping tablets were necessary

Since this medication appeared to be of no value, the patient consulted a dermatologist two weeks prior to admission again without obtaining relief Four days prior to admission, because the skin condition had not improved, she was given calcium gluconate intravenously with no noticeable effect. A second injection of calcium gluconate was given two days prior to admission On the morning just prior to this injection the patient first noticed generalized abdominal pain and nausea This persisted and was accompanied by vomiting during the twenty-four hours before admission to the hospital The vomiting was so severe that the patient was able to retain nothing but tea On the day of admission the patient first

Dr Taylor is now in the Army of the United States
From the West Baltimore General Hospital and the University of Maryland School of Medicine
This work was aided by grants from the Anna Fuller Fund and the International Cancer Research Foundation

1 Gunther H Die Bedeutung der Hamatoporphyrine in Physiologie und Pathologie Ergebn d allg Path u path Anat **20**: 609 764 1922 Waldenstrom Jan Studies on Porphyria Acta med Scandinav 1937 supp 82 pp 1 254 Dobriner and Rhoads [3] Nesbitt [2]

2 Nesbitt Samuel Acute Porphyria, J A M A **124**: 286-294 (Jan 29) 1944

3 Dobriner Konrad, and Rhoads C. P The Porphyrins in Health and Disease, Physiol Rev **20** 416-468 1940

4 Welcker M L. Medical Progress The Porphyrins New England J Med **232** 11 19, 1945 Dobriner and Rhoads [3] Nesbitt [2]

5 Dobriner and Rhoads.[3] Nesbitt [2]

6 Fetter F Humphrey A A and Longenecker C. R Acute Idiopathic Porphyria, U S Nav M Bull **43** 349 352 1944 Avery, L. W Porphyria in Relation to Nervous and Mental Diseases Dis Nerv System **6** 217 221 1945

noticed urgency and frequency of urination, with much difficulty in initiating the flow

The family history was noncontributory No relative had ever shown similar symptoms or exhibited any allergy

The past history revealed only childhood diseases, such as chickenpox, measles, whooping cough and the mumps The patient worked in a paint factory handling titanium dioxide and later in 1943-1944 in a factory where she used a chemical called "glypthol" to solder tops on metal tubes This so called solder is a plastic and contains no lead, benzene or other known toxic material

A review of the symptoms was noncontributory No history of asthma, hay fever, food or drug allergy was obtained There were no previous urinary symptoms

*Physical Examination*—On admission the rectal temperature was 100 4 F, the pulse rate was 90, the respiratory rate was 20, the blood pressure 120/80 and the weight 112 pounds (51 Kg) The patient appeared to be well developed and well nourished and looked acutely ill The respirations were full but quite deep in character The lips appeared red There was a skin eruption consisting of a few unbroken vesicles with mostly excoriations, superimposed pustules and crusts over the dorsum of the forearms and hands, the face, the forehead and the anterior part of the neck The remainder of her body was unaffected Examination of the abdomen revealed a diffuse extreme tenderness but no spasm or rigidity There was no rebound tenderness, and no organs or masses were palpable There was no costovertebral angle tenderness or tenderness on percussion over or alongside the spinal column A complete neurologic examination was negative. Pelvic and rectal examinations revealed no abnormality

*Course in Hospital*—The patient was believed at first to have a virus infection involving the nerve roots and a skin eruption of unknown etiology limited to the exposed areas A plasma carbon dioxide was found to be 40 volumes per cent and sodium r-lactate was administered parenterally The normal menstrual flow started two days after admission and the abdominal cramps and urinary urgency, although still present at that time, had subsided considerably The flow stopped four days after its onset. However, three days later the patient had a small amount of vaginal bleeding

Spectroscopic examination of a twenty-four hour specimen of the patient's urine on the third hospital day revealed absorption bands characteristic of porphyrin, and 1,635 micrograms of ether-soluble porphyrin was extracted. The urine collected the following day yielded 1,248 micrograms of porphyrin

The following therapy was then instituted The patient was given calcium lactate 40 grains (2 6 Gm), sodium bicarbonate 80 grains (5.2 Gm) and riboflavin 40 mg by mouth daily One fourth of this daily dose was administered with 200 cc. of an imperial drink every six hours In addition, one ampule of Solu B was given intravenously [7] and 5 cc. of crude liver extract was administered intramuscularly daily This treatment was suggested by a review [8] of methods used to treat porphyria patients, but the dosages which were used in this case were much higher than those used by other investigators The riboflavin was thus used as a drug and not to satisfy the normal requirement. The urinary porphyrin excretion was followed for the next twelve days and found to vary between 300 and 1,045 micrograms per day

During the first four weeks in the hospital the patient required isonipecaine or codeine at least one or more times a day (less terminally than initially) for relief of severe abdominal cramps By the ninth hospital day the patient became almost free from urinary urgency, but on that day she experienced an especially severe attack of abdominal cramps, made worse by pressure on the abdomen She also complained of severe pain in the right sacroiliac region and diffuse leg aches which were not relieved by 1 grain (0 06 Gm) of codeine administered hypodermically but were relieved by 100 mg of isonipecaine.

Ultraviolet radiation was applied on the ninth hospital day to a clear area the size of a quarter (24 mm) on the dorsum of the right forearm in order to see if the patient was sensitive to this radiation The unfiltered radiation from a therapeutic quartz mercury arc lamp at a distance of 2 feet was applied for ten minutes, but no skin lesions resulted This dosage of light may have been too small to elicit a response The apparent lack of light sensitivity seemed incompatible with the observation that all skin lesions occurred on areas normally exposed to light

By the tenth day the abdominal and right back pains were present only at intervals, and two days later she was able to sleep about half the night without any pain

The patient was examined under near ultraviolet light,[9] and about half of the skin lesions exhibited a bright reddish orange fluorescent glow This red fluorescent glow was especially noticeable on the most recent lesions and more noticeable on those which had been weeping during the previous twenty-four hours Along the nasolabial grooves, the sebaceous secretions



Fig 1—Appearance of patient with chronic porphyria one year after the onset of the disease Most of the lesions which appear dark in this and in figure 2 were red fluorescent when examined in near ultraviolet light. Many of the scarred areas do not show in the illustrations The slight enlargement of the thyroid which is evident developed after the patient became pregnant.

stood out as pearly, round, bright orange-red fluorescent puncta. The tongue also showed a brilliant red fluorescence over its entire surface. The skin, mucous membranes, teeth and nails fluoresced normally The patient suffered no new skin lesions immediately after this fluorescence examination, but several days later three new skin vesicles were noted on the dorsum of the hands At this time the abdominal pains were of shorter duration and much less severe but usually appeared with low back pain in the evenings The urinary urgency and leg pains disappeared at this time and never recurred. In the next three days the patient had only two minor episodes of abdominal pain, and she was permitted up in a wheel chair on the fiftieth hospital day Up until this time there had been no itching of the skin lesions However, it was now noted that the patient had scratched her forearms while asleep. From this time until her discharge on the sixty-third hospital day the patient was asympto-

7 Major crystallized vitamin B components, consisting of thiamine hydrochloride 10 mg riboflavin 10 mg., pyridoxine hydrochloride 5 mg calcium pantothenate 50 mg and nicotinamide 250 mg

8 Vannotti A Porphyrine und Porphyrinkrankheiten Berlin, Julius Springer, 1937

9 Figge, F H. J *Near Ultraviolet Rays and Fluorescence Phenomena as Aids to Discovery and Diagnosis in Medicine*, Bull. School Med Univ Maryland 26: 165 176 1942

matic except for the appearance of new itching skin vesicles about every other day on the face and dorsum of her hands At the time of her discharge from the hospital her condition was much improved. The medication mentioned earlier has been maintained since discharge with only slight interruption The Solu B injections were, however, reduced from one a day to only two a week and finally to one a week.

*Laboratory and X-Ray Findings*—Examination of the blood on admission showed a red cell count of 4,010,000 with 79 per cent of hemoglobin and a white cell count of 7,500 with 60 per cent neutrophils and 40 per cent lymphocytes This was repeated a week later with similar results The plasma carbon dioxide combining power on admission was 40 volumes per cent The blood cholesterol was 230 mg per hundred cubic centimeters The icterus index on admission was 11 and the direct van den Bergh was negative, while the indirect showed a slight trace. Two days later a repeat icterus index was 8 3 A sulfobromophthalein liver function test was done every two weeks between November 1944 and April 1945 The initial sulfobromophthalein test revealed 20 per cent retention with 5 mg of the dye per kilogram of body weight, a blood sample being withdrawn in forty-five minutes In the following two months this dropped gradually to a 2 per cent retention but jumped two weeks later,

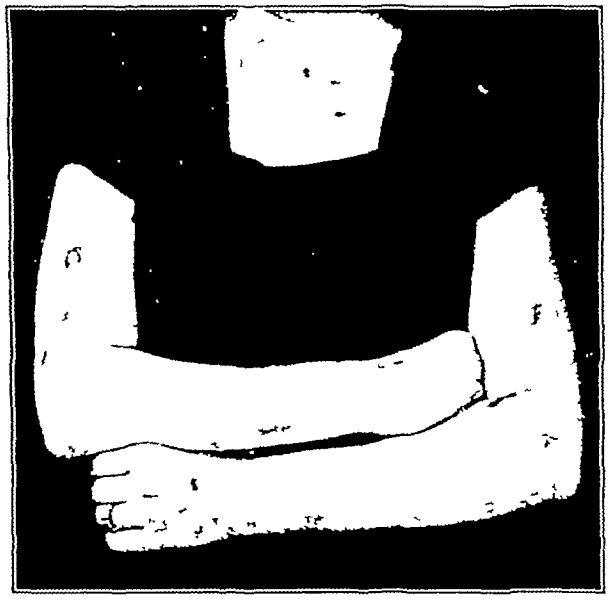


Fig 2—Lesions on arms.

after discharge from the hospital, to 32 per cent. Within two more months this had again dropped to 2 per cent. The cephalin flocculation, galactose tolerance test, total protein and albumin-globulin ratio, serum calcium, phosphorus and alkaline phosphatase values were normal Urinalysis was negative at all times The spinal fluid showed no abnormalities

X-ray studies of the gastrointestinal tract during a period of moderate abdominal cramps revealed much of the barium in the upper half of the small intestine on the five minute film The upper part of the small intestine was hypermotile especially around the pyloric area and the jejunum The remainder of the intestinal tract showed sluggish motility with barium in the lower small intestine at the end of eight hours At twenty-eight hours all of the barium was in the ascending and right half of the transverse colon, where it appeared to be stopped by spasm. A barium enema was given while the patient was entirely free from abdominal pain and revealed no abnormality

### ISOLATION, DETERMINATION AND IDENTIFICATION OF PORPHYRIN EXCRETED IN URINE

The urine collected over twenty-four hour periods was reddish brown, and the porphyrin could be detected spectroscopically but not by fluorescence in near ultraviolet light. Definite absorption bands could be observed at 6,140, 5,730 and 5 350 angstroms The red fluorescence of the porphyrin in the urine was not apparent because of the presence of an abundance of substances that were so intensely blue fluorescent that they suppressed the weaker red fluorescence. Dobriner's methods [8] of extraction of urinary porphyrins were used with minor modifications The porphyrin was separated from the urine by adsorption on the precipitate which forms when sodium hydroxide and calcium chloride are added to the urine. After filtration this precipitate containing the porphyrins was dissolved in hydrochloric acid and adjusted to $p_H$ 2 7-3 0 or until neutral to congo red The main fraction of the porphyrin was then extracted with ether and further purified by passing back and forth from ether to 10 per cent hydrochloric acid and finally into 25 per cent hydrochloric acid. Spectroscopic examination revealed that the absorption bands of this ether-soluble porphyrin in ether and in 25 per cent hydrochloric acid coincided with the known values for coproporphyrin [10] and with the absorption bands of a sample of synthetic coproporphyrin The fact that it was soluble in 20 per cent sodium hydroxide also indicated that the predominant porphyrin was coproporphyrin These ether-soluble fractions, representing the total urine collected over a period of fourteen days, were pooled and further purified and fractionated to determine the melting points of the methyl esters

The neutralized aqueous solutions that had been extracted with ether were examined spectroscopically for uroporphyrin In some of these it was thought that the absorption bands of uroporphyrin could be detected. However, the position of the absorption bands of uroporphyrin and coproporphyrin are so similar that absorption spectrums cannot be relied on to differentiate these two pigments Careful extraction of these aqueous solutions with more ether removed additional small amounts of coproporphyrin No definite evidence indicating the presence of uroporphyrin was obtained

The ether-soluble porphyrins which had been isolated as described were pooled and converted to their methyl esters by the conventional methanol-hydrochloric acid procedure. Considerable material was lost in unsuccessful attempts to separate the methyl esters of the isomeric coproporphyrins I and III by the anhydrous ether method of Rimington [11] and by adsorption on alumina. Using anhydrous methanol as recommended by Dobriner,[12] the alcohol insoluble fraction yielded a substance melting at 235-238 C. This corresponds to the values reported in the literature [8] for the melting point of the methyl ester of coproporphyrin I isolated from natural sources The pure synthetic ester melts at 248-252 C. The absorption spectrum in chloroform was found to be in agreement with the values given in the literature for coproporphyrin methyl ester From the methanol soluble fraction there were secured crystals melting at 125-135 C Repeated attempts to raise the melting point by recrystallizing were not successful, probably because of the small amount of substance available. The pure synthetic ester of coproporphyrin III shows a double melting point at 135 or 142 and 167-170 C. The absorption spectrum of this material in chloroform also agreed with that of the coproporphyrin I methyl ester, leaving little doubt that it was impure coproporphyrin III ester It was therefore concluded that the patient was excreting a mixture of coproporphyrin III and coproporphyrin I

*Posthospital Record*—The patient has thus far been followed for one year after discharge. For the first four months she had biweekly sulfobromophthalein liver function tests which varied between 2 and 32 per cent retention She continued to be free from gastrointestinal symptoms until three and one-half months after her hospital discharge when she experienced a moderately severe continuous pain in the entire left abdomen lasting over twelve hours She slept well but awakened in the morning with a somewhat milder pain in the right lower quadrant lasting half a day This was followed by intermittent epigastric pains which disappeared entirely by bedtime. After this there was no recurrence of abdominal pain, however, there was a bloated feeling accompanied by a meager appetite for a week. There was no nausea, vomiting or bladder difficulty at any time after the patient's discharge from the hospital For the first six months following discharge the patient experi-

10 Fischer H and Orth H Die Chemie des Pyrrols Leipzig Akademische Verlagsgesellschaft m b H., 1937 vol 2 pt. 1 p. 764

11 Rimington C and Hemmings, A. W Sulfanilamide Porphyrinuria Biochem J 33 960-977 1939

12. Dobriner, Konrad Porphyrin Excretion in the Feces in Normal and Pathological Condition J Biol Chem. 120: 115 127 1937

enced no new skin lesions on her face, neck or legs The old lesions had healed and had left almost undetectable pockmarks On her forearms and hands she was not so fortunate, however, and new lesions appeared sporadically except for a period of two weeks, when the patient wore a long-sleeved dress and gloves During June 1945 she developed numerous new vesicles on the hands and arms in spite of trying to protect the exposed areas with gloves

The patient had been advised to avoid becoming pregnant because of the uncertain influence that this might have on the prognosis and because the other types of porphyria appear to be inheritable In June 1945 it was discovered, however, that she had become pregnant approximately two months previously By this time she had improved to such a degree that the discontinuance of the Solu B and liver injections was contemplated and tried for one month Either because of this discontinuance of treatment or for other reasons, the patient became much worse and a therapeutic abortion was contemplated but not carried out There appeared to be no record of a similar case of chronic porphyria complicated by pregnancy The Solu B and liver injections were therefore started again At this writing the patient has been pregnant for six months and is feeling relatively well The skin lesions continue to appear, however, on the legs and arms and sometimes on the face. They become secondarily infected from scratching and heal slowly An attempt is being made at present to treat these with penicillin applied locally and ointments containing local anesthetics Examination of the urine fourteen months after the onset of the disease reveals that large quantities of porphyrin are still being excreted

### COMMENT

The initial diagnosis of porphyria in this instance was made on the basis of skin lesions limited to exposed areas and the reddish brown urine which, when examined, was found to contain relatively large amounts of porphyrin The specific diagnosis of chronic porphyria was, however, based on these facts. The clinical symptoms (severe generalized abdominal pain along with skin lesions on exposed areas) did not coincide with those observed in either congenital or acute but resembled those of both types of porphyria When the porphyrin excreted in this case was finally isolated and identified by means of the melting point, spectroscopic examination and solubility tests it was found to be a mixture of coproporphyrin III and coproporphyrin I This again would not be characteristic of either congenital porphyria, in which uroporphyrin I is excreted, or of acute porphyhia, in which uroporphyrin III predominates in the urine. The excretion of excessive amounts of coproporphyrin in the urine has continued unabated for over one year during which time the patient has been isolated from possible toxic agents in factories or at home This has ruled out the possibility that the disease was only a severe porphyrinuria of toxic origin

It is true that predisposing factors or the disease in a latent form may have existed in this patient at birth but were set off at the age of 20 years by one of the following factors 1 Work in a factory environment containing some allergen or other agents such as titanium dioxide or plastic solvents that were specifically toxic to the patient. 2 The administration of a sulfonamide drug The skin lesions were present before any drugs were given, so that there is good reason to believe that the porphyria existed before the sulfonamide drug was taken. Since, however, the patient was not under our observation at this stage of the disease and no urinary porphyrin determinations were made prior to the administration of the sulfonamide drug, we cannot rule out the possibility that this was responsible for starting the excretion of excess porphyrins [13] The continued excretion of porphyrin for over a year after the discontinuance of the sulfonamide also makes such a hypothesis untenable. In some experiments in which sulfonamides were administered to a group of over 1,000 mice, 3 of the 4 siblings in one litter developed porphyria so severe that the teeth and bones became red fluorescent.[14] Attempts to repeat this have been unsuccessful

13 Figge, F H J Carey T N and Weiland G S To be published. Dobriner and Rhoads[2] Rimington and Hemmings[11]
14 Figge F H J Unpublished data

For some time after the treatment was started, skin lesions continued to appear on the legs, ankles and hands of the patient, but none appeared on the face This was perplexing because the face was apparently exposed to as much light as the hands and ankles More recently, however, new lesions appeared on the face in spite of the fact that an attempt has been made to keep exposure to sunlight to a minimum Application of suntan lotions likewise failed to prevent the appearance of some skin lesions

The treatment in this case seems to alleviate the most distressing symptoms but does not prevent either the photosensitivity or the increased porphyrin excretion Recently the vitamin C intake of the patient has been increased to 400 mg per day Vitamin C therapy was originally suggested by Dobriner [15]

### SUMMARY

Chronic porphyria, a disease associated with an inborn error of porphyrin metabolism, was observed in a woman aged 20 In this case the outstanding symptoms were the severe generalized abdominal pain associated with red fluorescent skin lesions on exposed areas The patient has excreted 300 to 1,600 micrograms of coproporphyrin I and III daily for over one year Porphyria is probably not as rare as the reports of cases would lead one to believe and should be kept in mind when considering cases with mental, cutaneous, neurologic or abdominal symptoms

## COMMON DUCT STONE RELIEVED BY INJECTION OF NUPERCAINE SOLUTION INTO T TUBE

FRANKLIN I HARRIS M D and SANFORD A MARCUS M D
San Francisco

The management of a persistent common duct stone following cholecystectomy and choledochostomy is a particularly vexing problem to the surgeon, for it frequently demands further operative intervention and, at the least, prolongs the period of convalescence. Several methods of removing these stones have been advanced, among them the systemic and local (intraduodenal) use of autonomic drugs,[1] the use of nitrites [2] various regimens involving flushing through the T tube and the so called "physiologic flush" of Best,[3] which includes the administration of the nitrites, antispasmodics, bile salts and fatty foods as well as direct T tube irrigation. Ether,[4] chloroform [5] and recently solution G," [6] containing citric acid, have all been employed in an attempt to dissolve or dislodge the stones

The presence of a stone in the duct causes a reflex spasm of the sphincters of Boyden and Oddi, [7] likewise there has been noted the production of a traumatic cholangitis with mucosal edema, both of which phenomena tend to grasp the stone more firmly and to maintain the obstruction.

In a case of this type, in which the presence of a persistent stone had been established postoperatively by cholangiography and all accepted methods had failed to dislodge it, it was suggested by Dr Ralph Rabinowitz, internist that a method

15 Dobriner Konrad Simultaneous Excretion of Coproporphyrin I and III in a Case of Chronic Porphyria Proc Soc Exper Biol & Med **35** 175 176 1936

From the Department of Surgery Mount Zion Hospital

1 Butsch W L McGowan J M and Walters, W Clinical Studies on the Influence of Certain Drugs in Relation to Biliary Pain and to Variations in Intrabiliary Pressure Surg Gynec & Obst. **63** 451-456 1936 Necheles H Olson W H Neuwelt, F and Spier E A Pharmacological and Clinical Study of Spasmolytic Drugs, Gastroenterology **2** 46-59 1944

2 McGowan J M Butsch W L and Walters W The Use of Glyceryl Trinitrite for the Control of Pain Following Cholecystectomy Ann. Surg **104** 1013-1018 1936

3 Best R R. A Physiologic Biliary Flush in the Management of Biliary Tract Disease, Southwest Med **23**: 396 399 1939

4 Probstein J G and Eckert C T Injection of Ether into the Biliary Tract as a Treatment for Choledocholithiasis Arch Surg **35** 258 267 (Aug.) 1937

5 Narat, J K and Cipolla A F Fragmentation and Dissolution of Gallstones by Chloroform Arch Surg **51** 51 56 (July Aug.) 1945

6 Goldman, B, Jackman J, and Eastman, R H The Management of Postoperative Choledocholithiasis Another Use for Solution G Surg Gynec. & Obst **81**: 521 524 1945

7 Boyden E A The Physiology of the Sphincter Choledochus Anat. Rec (supp.) **64** 7 1936 Snell A M McGowan J M and Butsch W L. Colics Following Cholecystectomy Probable Mechanism of Their Production (Role of Spastic Contraction of the Sphincter of Oddi with Secondary Rise of Pressure in Bile Ducts) Rhode Island M J **19** 113 119 1936

might be employed which arrests the spastic reflex at its receptor end and permits the stone to be dislodged, either through the tube or through the relaxed sphincters It was decided to use a nontoxic, topical anesthetic agent to achieve this effect. The urologists have long used such agents [8] in the urinary tract, not only to diminish subjective unpleasantness during instrumentation, but to reduce spasm of the smooth muscle in cases of inflammation (e g urethritis, bladder stone) One of the solutions most widely used has been nupercaine in a concentration of 1 1,000 to 1 500 No record of its use in the common duct has been encountered

### REPORT OF CASE

A white man aged 49, a physician, had a long history of right upper quadrant pain associated with the presence of a palpable mass in that region, nausea and vomiting His icterus index at the time of admission was 26 units At operation an acutely diseased gallbladder was found, and exploration of the common duct revealed many gravel like stones A T tube was placed in the duct following removal of the gallbladder

Postoperatively the course was marked by attacks of pain in the right upper quadrant whenever the T tube was clamped or when more than 8 or 10 cc of saline solution was instilled into it Referral of pain to the substernal region was likewise noted The saline solution was always returned bile stained, indicating that it did not go through the sphincter Stools were consistently clay colored Cholangiograms which were taken on the thirteenth and nineteenth postoperative days (fig 1) revealed an absolute block at the sphincter of Oddi, with the presence of a curved shadow in this region suggesting a nonopaque stone Despite several days of treatment with the Best regimen (nitrites, antispasmodics and bile salts, with oil



Fig 1.—Cholangiogram taken on the nineteenth postoperative day after unsuccessful attempts to relieve the obstruction by frequent irrigations and by the Best regimen

and saline irrigations of the tube) there was no progress made in dislodging the obstruction

On the twentieth postoperative day approximately 10 cc. of sterile nupercaine solution in a strength of 1 500 was instilled into the tube, which was then clamped for twelve minutes, following which the tube was again gently irrigated with warm saline solution, 50 cc of which was instilled without evidence of the pain which had regularly occurred following the administration of only 8 or 10 cc. On the basis of the subjective relief of the patient, and because the injected fluid could no



Fig 2.—Cholangiogram taken after instillation of nupercaine solution into duct showing complete disappearance of obstruction and free flow of dye into duodenum

longer be reaspirated from the tube, it became evident that the obstruction was no longer present, and this was confirmed by a cholangiogram taken a few hours later (fig 2) With the finding of a completely patent common duct it was possible to remove the T tube, and after a progressively improving hospital course the patient was discharged in good condition.

### COMMENT

Relief experienced by the patient after the instillation of the anesthetic solution into the common duct as well as the ease with which the irrigation of saline solution passed through the duct into the duodenum, compared with previous attempts, makes us feel certain that the anesthetic solution was the responsible factor Although it is hoped to confirm these findings later with experimental work on animals, it was thought that this case report should be submitted so that other surgeons might try this harmless method clinically

It is also suggested that a topical anesthetic solution, such as nupercaine, be used by surgeons during the operative exploration of the common duct. The instillation of such a solution should relax the sphincter of Oddi and allow an easy, nontraumatic dilatation

### SUMMARY

1 A new method has been developed for the treatment of persistent postoperative common duct stones

2 Based on the premise that these stones cause a reflex spasm of the sphincters, an attempt has been made to arrest this reflex at its receptor end by the instillation of a topical anesthetic solution (nupercaine 1 500) directly into the common duct.

450 Sutter Street.

8 Ockerblad N F and Carlson, H E Nupercaine—Its Place in Urologic Practice, J Missouri M A. 36: 120-122, 1939

## Special Article

# OFFICIAL STATEMENT CONCERNING STREPTOMYCIN

CHESTER S KEEFER M D
Chairman Committee on Chemotherapeutics and Other Agents of the National Research Council
Boston

Many recent publications describing the effects of streptomycin have created so much interest and so many demands for it that the medical profession and public should be informed of the arrangements now in effect to adjust the present very limited supply to a program of clinical investigation

The Committee on Chemotherapeutics and Other Agents of the National Research Council, at the request of the Civilian Production Administration and the Streptomycin Producers Advisory Committee, is supervising an investigation of the clinical usefulness and possible toxicity of streptomycin The primary interest of the committee in streptomycin is to determine its effectiveness and toxicity in certain infections which are not susceptible to treatment with sulfonamides, penicillin and other therapeutic agents

The introduction of streptomycin to the medical profession is so recent that much remains to be learned concerning limitations of its usefulness, methods of administration, dosage, toxicity, and so on Most of the information obtained so far has issued from military and civilian hospitals as a result of clinical investigations which have been carried out under arrangements between producers of streptomycin and individual clinical investigators Similar studies are being continued and amplified by the Committee on Chemotherapeutics and Other Agents of the National Research Council, and a fraction of the streptomycin is now being allocated to the committee for these purposes It is placed in charge of the chairman for distribution to those hospital physicians most competent to obtain the vitally needed information

In addition to the group of accredited investigators, individual physicians have been included in the research program when they have patients with diseases which are being studied by the committee Full information concerning the bacteriologic diagnosis of the case is required, and when streptomycin is allotted it is with the understanding that a full report of the case is to be returned to the committee for analysis and that all unused material is to be returned for use in other suitable cases

Because of the restricted supply of streptomycin, it is obvious that patients selected to receive it must be those whom it can be expected to benefit and from whose treatment useful, needed information can be derived Under present conditions many requests will inevitably have to be refused

Following is a list of the diseases which are under investigation, together with a list of those which are not being investigated

### DISEASES WHICH ARE TO BE INVESTIGATED WITH STREPTOMYCIN UNDER THE COMMITTEE

1 *Gram negative bacillary infections of the genitourinary tract resistant to the sulfonamides*
2 Gram negative bacillary infections with bacteremia
3 Hemophilus influenzae infections, including meningitis, pneumonia, middle ear disease and laryngotracheitis
4 Friedlander's bacillus (Klebsiella pneumoniae) pneumonia
5 Typhoid
6 Salmonella infections (paratyphoid)
7 Acute brucellosis with bacteremia
8 Tularemia
9 Bacterial endocarditis due to gram negative bacilli

### DISEASES WHICH ARE NOT BEING INVESTIGATED BY THE COMMITTEE AT PRESENT

1 Chronic idiopathic ulcerative colitis
2 Lupus erythematosis acutus disseminatus
3 Leukemia
4 *Cancer*
5 Fever of unknown cause
6 Rheumatic fever
7 Rheumatoid arthritis

### TUBERCULOSIS

For the present only those cases of tuberculosis which were already under treatment prior to March 1, 1946 are being studied A broader program for the study of tuberculosis is planned, but it cannot be undertaken at the present time because of inadequate supplies of streptomycin It is the hope of the Committee on Chemotherapeutics and Other Agents to explore this problem further The medical profession will be kept informed of developments

### PROCUREMENT AND ALLOCATION OF STREPTOMYCIN

All streptomycin now being produced must be reported to the Civilian Production Administration for allocation by it Allocations are made to the Army, Navy, U S Public Health Service, Veterans Administration and the National Research Council after discussion of the needs of each and adjustment of the available supply to those needs

No one other than the agencies named may purchase streptomycin No patient who receives it may pay for it No physician is charged for it

The present program of clinical research is being conducted by the concerted efforts of the government, streptomycin producers, the National Research Council and civilian medical scientists of the highest standing with the sole purpose of obtaining the necessary information concerning streptomycin in the shortest possible time The program of the National Research Council is being supported by grants in aid from eleven pharmaceutical and chemical companies

### MEMBERS OF COMMITTEE

The members of the committee are

Chester S Keefer, Chairman, 65 East Newton Street, Boston,

John S Lockwood, Secretary, Yale University School of Medicine, New Haven, Conn.,

E K. Marshall Jr, Johns Hopkins University School of Medicine, Baltimore,

Francis G Blake, Yale University School of Medicine, New Haven, Conn.,

Perrin H Long, Johns Hopkins University School of Medicine, Baltimore,

W Barry Wood Jr, 600 South Kingshighway, St. Louis

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - Chicago 10, Ill

Cable Address 'Medic Chicago

Subscription price Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY, MAY 4, 1946

## ORAL BASAL TEMPERATURES AND OVULATION

Van de Velde's observation as to the existence of variations in body temperature during phases of the menstrual cycle has been confirmed by a number of observers[1] Rubenstein correlated his study of vaginal smears with a study of basal temperatures, he found that during the phase of follicle development the basal rectal temperature tends to drop progressively The low point in the temperature is reached when the follicle matures The diphasic character of the menstrual cycle in normal women was confirmed by a number of observers, among them Palmer," who believes that rises and falls in the body temperatures of normal menstruating women are brought about in some way by the activity of the two types of hormones, estrogens and progestogens elaborated by the ovary Palmer states that diagnosis of pregnancy may be made from a patient's basal body temperature as early as it can be made from other signs, symptoms or tests, if not earlier Sterility apparently due to improper timing of coitus may be overcome if use is made of the basal body temperature record

Tompkins[3] advocated a wider clinical application of the method of detection of the date of ovulation through basal temperature graphs He likewise points out that the temperature is relatively low during the first part of the month, drops to a minimum about the time at which ovulation occurs and rises definitely thereafter to a relatively high level, which is maintained until the next menses, when the temperature drops abruptly Such temperature fluctuations are not found before the menarche, after the menopause or in men If conception occurs, the temperature will remain at the high postovulation level Tompkins has developed a special form printed on grid paper for the recording of daily basal temperatures He believes that with the aid of these graphs it will be possible frequently to indicate the date of ovulation

In a study of 500 patients whose basal temperature graphs have been collected during the past two years, Davis[4] reemphasized recently in The Journal the value of basal temperatures in the clinical interpretation of ovarian physiology Davis urges the substitution of oral temperatures for the record of rectal and vaginal temperatures in use now These temperature observations have been correlated with a study of vaginal smears, endometrial biopsies and operative material Basal temperatures were found to be reliable indexes of ovarian activity in at least 3 out of 4 women In the remaining 1 the curve is so atypical that no accurate interpretation of physiologic changes can be made The temperature drops twenty-four to thirty-six hours before the onset of bleeding, reaching a low level during the first day or two after the onset of the menses Davis believes that the rise in the temperature is brought about by ovulation and that the elevated basal temperatures are maintained by the corpus luteum activity Persistence of the elevated temperature during pregnancy would add weight to this interpretation When pregnancy occurs the basal temperature remains at the postovulatory level during the first few months of the gestation Davis feels that a basal temperature curve should be a part of every study of sterility This is the simplest technic for ascertaining ovarian activity and dating ovulation The persistence of the postovulatory elevated temperature in the event of conception constitutes the most accurate early data concerning pregnancy Temperature curves can be used as contraceptive aids

1 Temperature Recording for Female Fecundity editorial J A M A **130** 412 (Feb 16) 1946 Basal Temperature and Date of Ovulation ibid **124**: 707 (March 11) 1944

2 Palmer Allan Basal Body Temperature in Disorders of Ovarian Function and Pregnancy Surg, Gynec & Obst **75**: 768 (Dec) 1942

3 Tompkins Pendleton The Use of Basal Temperature Graphs in Determining the Date of Ovulation J A M A **124**: 698 (March 11) 1944

4 Davis M E. The Clinical Use of Oral Basal Temperatures, J A M A **130**: 929 (April 6) 1946

## THE AMERICAN ACADEMY OF PEDIATRICS STUDY OF CHILD HEALTH SERVICES

Under the auspices of the American Academy of Pediatrics a study of child health services is now being conducted throughout the United States This study is being made under the control of physicians The Academy of Pediatrics has contributed substantial sums from its reserve funds and has obtained contributions from other sources to finance its work The U S Public Health Service and the Children's Bureau are supporting this survey with assigned personnel to assist in the accumulation and statistical analysis of the data A considerable grant was also made for a two year period by the National Foundation for Infantile Paralysis because of the special interest of that foundation in diseases affecting children their hospitalization and their medical care

The study arose from a belief of the American Academy of Pediatrics that we must have scientific planning to meet the needs of children in the postwar

period and that the responsibility for such planning rests on physicians themselves The study includes services of hospital facilities, community health services, distribution, qualification and activities of professional personnel and pediatric education The survey will supply a collection of factual data to be used as the basis for recommendations leading to a long term program for the medical and health care of the child Since those who are making the study will depend largely on the medical profession and particularly on pediatricians for the assembling of data and for opinions as to the quality of medical services available, THE JOURNAL would urge every physician who can render aid in this project to do everything possible to facilitate the accumulation of data No similar study of health services for children has ever been conducted on a national level Preliminary tests were made in North Carolina which led to the development of the forms by which data will be assembled

At the completion of the study a factual report will be prepared and made available to all who may be concerned with planning in the field of child care Thus it will concern particularly legislative programs both on a national and on a state level In several states activities are already well under way toward completion of the project A manual for state chairmen and executive secretaries has been developed and a considerable staff is devoting full time to this work The office of the survey is 7950 Rockville Pike (Bethesda Station), Washington 14 D C The director is Dr John P Hubbard, formerly a member of the staff of the Children s Hospital in Boston

## FACTORS OF SAFETY IN THE HUMAN BODY

In engineering the term "factors of safety" means the margin required in the building of engines or bridges to cover any contingency that may arise in the form of unusual stress or strain The term was introduced into medical literature by the late Samuel J Meltzer He suggested the doctrine that the human body is constructed with special consideration for the greatest degree of safety rather than for the greatest economy Circumstances may develop, however, in which factors of safety are resolved into elements of peril by processes so subtle that the body is warned of danger only when restitution is impossible For example, one kidney may be removed with impunity if the other is normal and the amount and composition of the urine under the changed regimen remain practically unaltered This means, of course, that the kidney has an amount of excess tissue which is sufficient on short notice to take on at least twice the total of work to which the organ is ordinarily accustomed In addition, experiment reveals that at least two thirds of the available kidney tissue in the body may be removed without detriment to function In both instances it is the remaining glomerulus with its tubular extension which constitutes the factor of safety In the compensating kidney the glomeruli enlarge, sometimes in such manner as to stretch their limiting membranes, and the tubules increase in caliber The glomerulus is then in a position to receive a larger supply of blood, and the tubule is prepared to accommodate reasonable increase in the output of fluid In certain conditions of disease the glomeruli by thousands are partially or completely replaced by overgrowth of the epithelium of Bowman's capsule or by fibrous tissue or by amyloid deposits Many of the remaining glomeruli enlarge and, within limits, compensate for those which have been injured or destroyed Beyond these limits compensation fails and the patient begins to show signs of renal disturbances, indicating that anatomic factors of safety have been disposed of in numbers sufficient to damage the organ irreparably—insidiously and without warning, factors of safety have been converted into elements of peril

Factors of safety are present in the heart, both in the endocardium and in the muscle tissue The valves, notably the aortic and pulmonary cusps, are provided with an amount of tissue which is more than that needed at any one time On the aortic and pulmonary valves above the lines of closure are semilunar sheets of endocardium which are almost precisely the same size as that of the valvular endocardium below the lines of closure, so that the valves contain about twice as much tissue as is needed to prevent leakage When certain disease processes attack the valves along and below the lines of closure, causing retraction the endocardium above the lines of closure is automatically drawn down to take the place of the retracted part This mechanism makes it possible for heart valves thus fortified to undergo extensive sclerotic changes and still remain functionally intact However, a time comes when the process of retraction assumes the ascendancy and at that moment the valve becomes incompetent Similarly, anatomic factors of safety are inherent in the heart muscle, lungs, liver, pancreas adrenal capsules, skin and elsewhere

In the human body certain cells are set apart for purposes of regeneration necessitated by natural attrition, especially those of the lowermost layer of the skin, the germinal follicles in the lymph nodes and the hemopoietic bone marrow As long as growth control is under proper restraint, these cells reproduce and differentiate, function and are discarded But the process of reproduction is a potential menace because cells are often manufactured in excess of those needed to meet physiologic requisites In certain tissues not only is the supply of new cells excessive but the new cells, at least according to one view, assume a type of architecture in which equilibrium between structure and function is unstable and growth may progress beyond control, a tumor resulting In this way, again, factors of safety are converted into elements of danger

# Current Comment

## DISTRIBUTION OF STREPTOMYCIN

Elsewhere in this issue (page 31) appears an official statement concerning streptomycin, prepared by Dr Chester S Keefer chairman of the Committee on Chemotherapeutics and Other Agents of the National Research Council As pointed out by Dr Keefer, introduction of streptomycin is so recent that much still has to be learned of the limitations, usefulness, methods of administration, dosage toxicity and other aspects of the therapeutic use of this antibiotic Supplies are restricted, so that distribution of what is available must be carried out with the object of accumulating important information in the most efficient manner possible Dr Keefer points out that many requests for the drug will have to be denied because patients selected to receive it must be those most likely to benefit Physicians realize that in the circumstances a technic for the most equitable usage of the available supplies of streptomycin had to be established and will continue to be patient until the supplies are more adequate and the therapeutic indications are more clearly elucidated

## PHYSIATRIST

Now that the term "physical medicine" has replaced the designation physical therapy and has been generally accepted throughout the United States, a one word term is needed to designate the physician who specializes in this field There now exist the Council on Physical Medicine of the American Medical Association the American Congress of Physical Medicine and the Society of Physical Medicine The Council now publishes a "Handbook of Physical Medicine" and the Congress publishes the *Archives of Physical Medicine* There has been a tendency to speak of technical workers in this field as physiotherapists or physical therapists For more than two years a representative group from the membership of the American Congress of Physical Medicine has been discussing a suitable designation for the physician who specializes in physical medicine Three such designations have been proposed, and all sound strange when first used The three terms which have been suggested are (1) "physiatrist," (2) "physiatrician" and (3) "physicologist" Among all groups of physicians who have discussed these terms a distinct preference has been expressed for the designation 'physiatrist" While this term may sound peculiar to the unmitiated ear the terms "psychiatrist," 'physicist," "internist" and "orthopedist" probably sounded equally queer when they were first proposed The term "physiatrics" already appears in standard dictionaries as an acceptable word The designation "physiatrist" is etymologically correct and stems from pure Greek origins It derives from the two Greek words 'physis" and "iatreia" "Physis" pertains to physical phenomena or natural phenomena and the terms "physicist" and "physiologist" derive their first syllables from the same origin "Iatreia" refers to healing or healer or physician so that a physiatrist would be a physician who employs physical agents At its last annual meeting the Council on Physical Medicine voted to sponsor the term "physiatrist" as the designation for the physician specializing in physical medicine Now that fellowships or residencies in physical medicine are being offered at such institutions as the University of Pennsylvania, University of Minnesota, Harvard University, New York University Ohio State University and University of Kansas and at many other medical centers, a one word term should designate physicians who complete such fellowships

## OFFICIAL STATEMENT ON PENICILLIN IN SYPHILIS

The following statement, for release to the press, was prepared jointly on April 22 by Dr J R Heller Jr, director of the U S Public Health Service, and Dr J E Moore, chairman, Syphilis Study Section, National Institute of Health, and was approved by Dr A N Richards, Committee on Medical Research, Dr R E Dyer and Dr Thomas Parran, U S Public Health Service, and Dr R P Herwick, Food and Drug Administration The statement was released to all leading press services

The Syphilis Study Section of the National Institute of Health, U S Public Health Service, became aware some months ago of the fact that penicillin as commercially prepared contained not one but several penicillins, known as G, X, F and K. Penicillin K has been shown to be of little or no value in syphilis and in certain other infections because, as compared with other penicillins, it is rapidly destroyed in the body The relative effectiveness of the other penicillins G, X and F, has not yet been determined for syphilis or for other infections

As commercially supplied during recent months the penicillin of some manufacturers but not of all, has contained substantial though not preponderant amounts of penicillin K. The proportions of K have not been enough to reduce seriously the value of the drug in the treatment of syphilis or in any other infections and there is no occasion for alarm on the part of physicians who have used it or of patients who have been treated with it. As currently available and employed, penicillin is the best and safest method of treatment of syphilis yet devised. Any patient frightened by newspaper publicity has only to consult his physician or clinic for his usual recheck examination in order to determine his present status

The situation as to penicillin is a complicated scientific problem under cooperative study both in laboratories and in clinics working under the sponsorship of the National Institute of Health and by industry Industry has already taken immediate steps to reduce the K content of commercial penicillin and will rapidly apply further scientific information as it becomes available The public will likewise be informed of important developments as they occur

The statement was necessitated by the fact that a writer named Albert Deutsch in a paper called *PM* published a grossly inaccurate and irresponsible statement on the subject before the official scientific report directed to the medical profession could be prepared and released The source of Deutsch's information is unknown, but presumably some one who participated in the official conference violated his agreement to abide by the official release of the facts

# MEDICINE AND THE WAR

## ARMY

### PROFESSIONAL CONSULTANTS

In order to insure the maintenance of the highest professional standards and to provide close liaison with leaders in the medical profession at large a system of utilizing professional consultants developed by the Surgeon General during World War II will be continued and extended in the future Professional consultants who are recognized experts in the medical and allied specialties including internal medicine, surgery, neuropsychiatry, preventive medicine, dentistry, veterinary medicine and other special medical fields, will be designated by the Surgeon General, according to War Department Circular 101 dated April 4, 1946

Recommendations for appointments in connection with special subjects such as dentistry and veterinary medicine will be made by the senior officer in these fields They may be either appropriate officers commissioned in the military service (Regular Army Army of the United States Officers Reserve Corps or National Guard of the United States) or qualified civilians selected to render consultant service Although the provisions of this circular apply particularly to the United States overseas commanders will utilize appropriate medical officers in their commands for similar duties or may procure professional advice from locally available civilian medical experts

Qualified persons, designated by the Surgeon General will be utilized as medical consultants in one of two capacities—that is either by being ordered to active duty as officers commissioned in the Officers' Reserve Corps or the National Guard of the United States in accordance with War Department policy or by being employed as consultant holding accepted civilian appointments under the authority of the Secretary of War The consent of the individual concerned will be obtained prior to placing him on duty The Surgeon General will maintain up to date lists and from time to time inform all concerned of the names address and qualifications of medical experts selected and approved for consultant duty He will also furnish details regarding the procedures for placing consultants on duty These instructions are equally applicable to dental and to veterinary consultants

### AWARDED MERITORIOUS SERVICE UNIT PLAQUE

The Meritorious Service Plaque was recently awarded to the Army Institute of Pathology The letter of transmittal from the Surgeon General to the director of the institute, Col J E Ash read, in part Under the provisions of circular 345, War Department, 1944 as amended by section 1 circular 331, 1945, I take great pleasure in awarding the Meritorious Service Plaque to the Army Institute of Pathology, your command, for superior performance of an exceptionally difficult mission and for untiring devotion to duty of the personnel of this unit during the period July 1945 to Dec 31, 1945 '

### ARMY AWARDS AND COMMENDATIONS

#### Colonel Paul F Russell

The Legion of Merit was recently presented to Col Paul F Russell Washington D C, for exceptionally meritorious conduct in the performance of services in Italy from March 14 to Sept 24, 1944 During this time, according to the citation 'Colonel Russell, as chief malariologist, Allied Commission by his efficiency in the performance of his duties and unceasing application to the problems under his jurisdiction, succeeded in eliminating the factors which threatened the addition of an acute malaria epidemic to those other problems with which the Allied Forces in Italy were faced Working under all the disabilities imposed by the chaotic conditions of modern warfare, he organized civilian malaria control bodies and coordinated their work in such a fashion that the menace of malaria, which might well have nullified much of the Allied military efforts in the Italian campaigns, was successfully coped with in all occupied territory and in the combat areas Apart from the value to actual military operations, Colonel Russell's work ranks among the highest accomplishments of the Allied Forces in Italy"

Colonel Russell also received the Oak Leaf Cluster to the Legion of Merit, which was accompanied by a citation stating that while he was serving as chief of the Tropical Disease Control Section, Preventive Medicine Service, Office of the Surgeon General, from May 23, 1942 to Sept 9 1943, he 'rendered services of inestimable value in the Army's program for the control of insect borne diseases Skilfully utilizing his wide experience in malariology, Colonel Russell developed a program for the control of malaria in overseas theaters where this disease has become one of the Army's foremost medical problems of World War II He initiated the establishment of malaria survey and control detachments within the Medical Department, planned tables of organization and equipment and formulated policies for their employment in the field The effective functioning of these control units was a decisive factor in reducing malaria rates to a point where they were no longer a significant influence on military operations Colonel Russell's meritorious achievements were a highly effective contribution to the war effort, and his services were rendered with an unselfish devotion to our armed forces"

Dr Russell graduated from Cornell University School of Medicine in 1921 and entered the service May 20, 1942

#### Major John M Usow

The Bronze Star Medal was recently awarded to Major John M Usow Milwaukee, "for meritorious achievement in connection with military operations in the Mediterranean Theater from Dec 1 1942 to May 8, 1945 As one of the pioneer neuropsychiatrists in the Mediterranean Theater of Operations, Major Usow personally treated a majority of the psychiatric casualties evacuated from the Tunisian front, most of whom were returned to useful duty in the theater, and in addition was responsible for the establishment of the first medical board for the disposition of such patients By his great energy and superior professional ability Major Usow was responsible personally for the return to duty in the theater of hundreds of psychiatric casualties and contributed in a large measure to the formulation of standards, policies and methods resulting in the return to duty of thousands of other such patients By his actions and by his devotion to duty he played a leading role in conserving the strength of the command and has reflected credit on himself and the Medical Corps of the Army of the United States Dr Usow graduated from Marquette University School of Medicine, Milwaukee in 1934 and entered the service Aug 30 1942

#### Major Max C Igloe

The Bronze Star was recently presented to Major Max C Igloe, DeRidder La., 'for meritorious service in connection with military operations against an enemy of the United States during the period Aug 1, 1944 to May 8 1945 Major Igloe, serving as chief of the Public Health Subsection G 5 Section, Headquarters Third U S Army, distinguished himself by his outstanding performance of duty The professional skill and resourcefulness he displayed, his loyal untiring devotion to duty reflect great credit on himself and the military service" Dr Igloe graduated from the University of Illinois College of Medicine, Chicago, in 1927 and entered the service Aug 28, 1942

# PHYSICIANS SEPARATED FROM SERVICE

## ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

### Alabama

Bishop, Brooks H., Capt., 7800 1st Ave. S., Birmingham
Caldwell, Samuel W., Major, 4315 10th Ave. Wylam
French, James H. 1st Lt., N. Main St. Brundidge.
Gray, Frederick J. Jr., 1st Lt. 82 Village, Sheffield.
Hamrick, R. A. Major, 1325 W. 45th St., Belview, Birmingham
Moore, Joseph W., Major Clanton
Partridge, Clarence V. Major, 17 S. Monterey St., Mobile.
Perley, Abraham I., Major State Board of Health, Lafayette
Peterson, Carl M., Capt., Box 442, Opelika
Simpson, Sam P., Capt., 4 Dwight Sq., Alabama City

### Connecticut

Bakunin, Maurice I., Capt. 105 Brooklawn Ave., Bridgeport.
Birnbaum, Hyman B., 1st Lt., Madison
Erskine, Louis A., Capt., 789 Howard Ave., New Haven
Horn, Benjamin, Major, 620 Clinton Ave., Bridgeport
Pious, Lawrence K., 1st Lt., 756 George St., New Haven.
Reidy, Maurice J. Jr., Capt., 43 Walnut St. Winsted.
Sayers, John J., Capt., 33 Mountford St., Hartford
Serena, J. M., 1st Lt., Cor. Garner St. & Oakfield Dr., Norwalk.

### District of Columbia

Barrett, Robert J. Jr., Capt., 14 Grant Circle N.W., Washington.
Gannon, J. A. Jr., Capt. 1915 Biltmore St. N.W., Washington
Gordon, Everett J., Capt. 321 N. St. N.W., Washington
Heilman, Charles, Capt. 5501 1st St. N.W., Washington
Henkin, Allen E., Capt. 3553 Georgia Ave. N.W., Washington
MacAtee, G. J., Capt., 2205 California St. N.W., Washington
Scott, James M., Capt., 3834 McKinley St. N.W., Washington

### Florida

Barks, Orville L., 1st Lt., Groveland
Briggs, John N., Capt., Naples
Capland, Lewis, Capt., 4475 Nautilus Dr., Miami Beach
Gowin, Thomas S., Capt., Riddle Field, Clewiston
McCall, Eugene F., Capt., 2865 College St., Jacksonville
McIntire, Frederic J. Jr. Capt., 266 W. 35th St., Miami Beach
McLemore, Carl S., Major, 4460 Post Ave. Miami Beach.
Milton, John D., Lt. Col., 604 Huntington Bldg., Miami
Schmidt, Peter P., Major, 607 W. Hillsboro St., Lake City
Seron, Zaven M. Major, 247 Lakeview Dr. N., Sebring
Stocking, John T. Jr., 1st Lt., 682 2d Ave., Daytona Beach

### Kansas

Brown, William, Major, 404 E. Peoria, Paola
Buooa, Fern W., Capt., Sante Fe Hosp., Mulvane.
Edwards, James F., Capt., 102 E. 10th St. Chanute.
Epstein, Joseph G., Capt., Vet. Hosp., Wadsworth
Nothnagel, Arnold F., Lt. Col., 712 Reynolds Ave., Kansas City
Schwegler, Raymond A., Major, 215 Vt. St., Lawrence.

### Louisiana

Baird, Frank J., 1st Lt., 1614 Valmont St. New Orleans
Beck, Merrill C., 1st Lt., 1020 Short St., New Orleans
Bingham, Clifton Major, Istrouma Hotel, Baton Rouge.
Blanchard, Neal D., Major, 553 Prospect St., Shreveport.
Breffeilh, L. A., Capt., Iberia Parish Health Unit, New Iberia
Brewer, Frederic W. Major, Box 687, Sulphur
Fischman, Jacob L., 1st Lt. 3021 Magazine St., New Orleans
Fourrier, Daniel J., Col. 939 Laurel St., Baton Rouge.
Murdock, Lloyd H., Capt., Zwolle

### Maine

Curtis, John B., Capt., Milo
Fisher, Samson, Capt., 293 Pleasant St., Oakland
McLaughlin, Ivan E. Capt., 53 Dresden Ave., Gardiner
Nickerson, Norman H. Lt. Col. Greenville.
Rich, David Capt., 165 Essex St., Bangor
Rosen, Abraham E., Lt. Col. 438 Hammond St. Bangor
Simecek, Victor H., Capt. 179 Main St., Brunswick.
Spencer, Jack Col., 339 Danforth St., Portland.

### Oklahoma

Bilger, Earl E., Capt., Claremore
Haddock, John P., 1st Lt. 231 E. Gray, Norman
Miles, Walter H., Lt. Col., 1221 N.E. 14th St., Oklahoma City
Morey, John B., Major 1314 S. Johnson, Ada.
Newell, Waldo B. Jr. Capt., 2600 E. Willow, Enid
Pigford, Charles A., Col. 1202 E. 14th Pl., Tulsa.
Smith, Charles A., Major, 406 N.W. 22d, Oklahoma

### Tennessee

Chamberlin, Arlie H. Jr., Capt., 1450 Peabody Ave., Memphis
Gessler, Ivan W., Capt., McMinnville.
Hall, James T., Lt. Col., 648 Chelsen Ave. Memphis
Hall, Vonnie A., Capt., 951 Sheridan St., Memphis
Harris, Leo C. Jr., Capt., 860 Madison Ave., Memphis
Hurt, William E., Capt., Halls
Kuykendall, Nathaniel W. Jr., Capt., 1265 Union Ave., Memphis
Manson, Tim J., Capt., 417 Sunset Rd., Lookout Mountain.
Maxwell, John W., Capt., 1508 Hawkins St., Nashville.
Morris, Al K., Major, Fork Mountain
Myron, Harry Jr., 1st Lt., Johnson City
Pentecost, Ben L., Lt. Col. 974 N. Parkway, Memphis
Saffold, John H., Capt., 1206 N. Broadway, Knoxville.
Shaw, John L., Major, 38 N. Belvedere St., Memphis

### Utah

Bourne, John R., Capt., Roosevelt
Clark, James K. Capt., 376 N. 4th E., Provo
Coletti, Anthony E., Major, Box 145, RFD 1, Clearfield.
Nelson, Walfred A., Major, 1309 Michigan Ave., Salt Lake City

### Vermont

Harris, Max, Capt., 90 Lincoln Ave., St. Albans
Mills, Ernest L., Capt., 339 Colchester Ave., Burlington
Monti, Lyle J., Capt., 15 Humbert St., Barre

### Virginia

Barton, Harry Jacobs Jr., Capt., 1301-21 Franklin Rd., Roanoke.
Buxton, Ernest P. Jr., Major, 707 Med. Arts Bldg., Richmond
Byrd, Charles W., 1st Lt., Louisa
Craddock, George B., Capt., 913 Allied Arts Bldg., Lynchburg
Foust, Glenn T. Jr., Capt. 310 Park Pl. Charlottesville
Goslmer, B. J. Capt., RFD 1, Chesapeake Beach, Lynnhaven.
Harman, William E., Capt., Floyd

### Washington

Beaver, Nathaniel E., Capt., 1125 S. Division, Walla Walla.
Broz, William R., Capt., 915 37th Ave., Seattle.
Congdon, Russell S., Capt., Red Apple Rd., Route 1, Wenatchee.
Epton, Josh W. Lt. Col., 1 Walnut Rd., Opportunity
Fitzmaurice, Bertrand T., Capt., 4201 55th Ave. N.E., Seattle.
Harmon, Merle S., Lt. Col., 214 W. Beacon, Montesano
Harrington, Bernard D., Lt. Col., 315 S. K St., Tacoma
Jones, Scott S., Lt. Col., 2208 N. Cedar St., Tacoma.
Knudson, Wendell C., Capt., 1627 Calhoun St., Seattle.
McFee, John L. Capt., 3704 S. Yakima Ave., Tacoma
Noonan, Clayton T., Major, 5810 Cowan Pl., Seattle
Parrott, Robert M., Capt., Rt. 7, Box 947, Tacoma

### West Virginia

Baldock, Harry E., Capt., 1217 Edgewood Dr. Charleston
Crews, Howard R., Capt., 1001 12th St., Huntington.
Gaynor, John S., Capt., Peters Run Rd., Elm Grove.
Given, Arnold J., Capt., Rensford
McCuskey, Paul L., Capt. 903½ McColloch St., Wheeling
Nutter, Raymond B. Jr., Capt., Lumberport
Peters, Joseph T. Capt., 436 Forest Ave., South Charleston
Polen, Frederic E., Capt., 3421 Main St., Holliday's Cove.

### Wisconsin

Bentley, John E., Lt. Col., Wisconsin Gen. Hosp., Madison
Birk, Benjamin J., Col., Route 2, Thiensville.
Boner, Albert J., Major, 15 W. Main St., Madison
Boren, John W. Jr. Capt. 363 State St. Marinette
Carl, Evan F. 1st Lt., 606 W. Wisconsin Ave., Milwaukee.
Covell, Kermit W., Major, 1024 Main St., Racine
Fosmark, Carl A., Capt., 602 S. Thornton, Madison
Hardgrove, M. A. F., Col., 2634 N. Maryland Ave., Milwaukee
McBain, Louis B., Major, 123 N. Green Bay St., Appleton.
Montgomery, Samuel A., Major 527 W. 33d St., La Crosse.
Muenzner, R. J. Jr., Major, 3308 W. Wisconsin, Milwaukee
Nathan, David A., Major, % Mrs. Nate Silver, Racine Hotel, Racine.
Nuzum, Thomas O., Major, 454 Wells St. Janesville.
Rabin, Allen, 1st Lt., 1442 N. 12th St., Milwaukee.
Rothman, Leonard E., Lt. Col., 2677 N. Grant Blvd., Milwaukee.
Saunders, Otis W., Major, 898 Hubbard St., Green Bay
Saxe, Jack J., Capt., 617 W. Wisconsin St., Portage.
Shannon, Richard C. Capt., 2749 N. 45th St. Milwaukee
Stern, Louis S., Lt. Col., 3331 W. National Ave., Milwaukee

# ORGANIZATION SECTION

## National Health Program

### PLATFORM ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

*One of the ten points in this platform will be published each week*

4 The child should have throughout infancy proper attention, including scientific nutrition, immunization against preventable disease and other services included in infant welfare Such services are best supplied by personal contact between the mother and the individual physician but may be provided through child care and infant welfare stations administered under local auspices with support by tax funds whenever the need can be shown.

## Medical Economics

### GEORGIA MEDICAL SOCIETY ACTS ON WAGNER-MURRAY-DINGELL BILL

(NOTE—Following is the official action of the Georgia Medical Society taken March 16 on the Wagner Murray-Dingell Bill )

It is the consensus of opinion of the members of the Georgia Medical Society that socialization or any other form of regimentation of medical services, administered from the national level, is expensive, wasteful and time consuming, ill suited to the care of the sick in general and the medical emergency in particular Such a program could not be administered in a democratic manner pleasing to either the patient or the physician

The quality of service to the patient would be strained and inferior in the beginning and would deteriorate rapidly Medical research would be curtailed, medical education would be static and medical progress in general would be set back two years for every single year such a program was in effect That has been the experience in those countries where regimentation of medical services has been tried

The plan of Senators Wagner and Murray and Congressman Dingell is socialization of the most vicious sort and must be defeated. Their original bills were referred to the Senate Finance Committee and the House Ways and Means Committee. They have not been reported out but after President Truman's message to Congress on Nov 19, 1945 Senators Wagner and Murray introduced a new bill S 1606 in the Senate and Congressman John Dingell introduced an identical bill, H R. 4730 in the House of Representatives These bills were shorn of some of the financial provisions, making it possible to refer them to committees more sympathetic For example S 1606 was referred to the Committee on Education and Labor, of which committee Senator Murray is chairman. These bills will undoubtedly be reported out of committee and probably at an early date. When reported out, they will have the very strong support of the C I O and other well organized groups, which may make their defeat most difficult We are informed that the Y W C A in national session at Atlantic City two weeks ago went on record as favoring such legislation

The Georgia Medical Society is gravely concerned about such trends and unalterably opposed to such legislation. Several months ago a committee was appointed to meet with similar committees from the dentists lawyers, pharmacists, retail credit men, realtors medical auxiliary, pharmacists auxiliary nurses and others to seek ways and means of opposing socialistic trends in national government and to seek ways and means of curing those ills which foster such trends

We have met with enthusiastic cooperation from the other groups and have learned much and accomplished much in our first few meetings We have organized and solidified our home front and have sent to our Senators and Congressmen more than twelve hundred letters from the citizens of Savannah letting them hear at long last the voice of our stratum of society, a voice too long silent in this country We feel confident that organization of these groups can be accomplished in every county, parish and state of this great nation and the letters of protest pouring by the millions into Washington can save for us that freedom of thought and action for which our ancestors bled and died

JOHN L ELLIOTT, M D Chairman
HOWARD T EXLEY, M D
W V LONG, M D, President.

## Washington Letter

*(From a Special Correspondent)*

April 29, 1946

### Successful Treatment of Gonorrhea with Penicillin

The War Department has announced that 96 per cent of some 11,000 cases of gonorrhea among servicemen treated with penicillin at Fort Meade during the past have been cured without hospitalization The remaining 4 per cent were generally cleared up through combining sulfathiazole with penicillin The War Department stated that the high incidence of venereal disease at Fort Meade was the result of its use as a separation center for overseas veterans and it is the policy of the Army not to discharge any man so afflicted Of 25,968 patients treated for venereal disease, approximately 11,000 received an average of four treatments each, exactly 42,807 in all.

### More Health Education for Public Schools

Dr Hobart M Corning, newly appointed superintendent of District of Columbia public schools, advocates improvement in health education in public schools He told a meeting of teachers that the schools of the country have a tremendous responsibility to build the health of students

### Senate Bill Prohibits Unauthorized Sale of Barbiturates

The Senate has passed and sent to the House a bill to ban, under heavy penalties, the unauthorized sale of barbiturates in the District of Columbia The bill was sponsored by the Federation of Women s Clubs

### Two Way Radio Telephone Service For Doctors and Nurses

A radio engineering concern in Alexandria, Va., established by four war veterans has started a new two way radio telephone service for automobiles operated by doctors and nurses, ambulances and taxicabs

## Official Notes

### "DOCTORS AT HOME" TIME NOT CHANGED

Contrary to the announcement last week the radio time of "Doctors at Home" remains unchanged with the adoption of Daylight Saving Time. This Saturday afternoon program over the NBC network will continue to be heard at 4 to 4 30 p m. Eastern Time, 3 to 3 30 Central Time, 2 to 2 30 Mountain Time and 1 to 1 30 Pacific Time. Wherever Daylight Time is not in operation, the program will be one hour earlier

Following are the programs scheduled for the remainder of the series

| | |
|---|---|
| May 4 | Child behavior |
| May 11 | Mushroom poisoning |
| May 18 | Highway safety |
| May 25 | Trichinosis |
| June 1 | Health education |
| June 8 | Medicine in the future |

These programs will be summarized alternately by Drs W W Bauer and William W Bolton respectively Director and Assistant Director of the Bureau of Health Education.

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*—ED)

*(Continued from page 1750 volume 130)*

United States Senate, Committee on Education and Labor

APRIL 10, 1946

The HONORABLE JAMES E. MURRAY Presiding

PRESENT Senators Murray, Johnston Aiken and Donnell

### Statement of Harold L Ickes, Executive Chairman of the Independent Citizens Committee of the Arts, Sciences and Professions

MR ICKES I am glad to have this opportunity to appear before this distinguished committee today in support of the purposes of the Wagner-Murray-Dingell Bill

*(Mr Ickes told of his interest in conserving our resources and of the inadequacies in health revealed by the Selective Service)*

I am not disposed to believe implicitly in the rigid accuracy of these figures or to infer too much from them I am well aware that the standards of local draft boards varied from county to county and from time to time and that some men who were rejected for physical defects might well have been accepted at a later time or in a different county I also know that there are hundreds perhaps even thousands, of men who, by one device or another simulated an illness of sufficient gravity to warrant rejection by their draft board

I am however conscious that thousands and perhaps tens of thousands, of men with fairly grave physical defects were drafted into the Army when this country reached the end of its manpower resources back in 1944 So it is my belief that while these figures from the Selective Service System may not be strictly accurate they are probably roughly so and to my mind they are indicative of a serious flaw in the system under which in normal times the medical needs of the people of this country are provided for

There are other evidences to support the contention that medical care in this country is not what it should be On the basis of the latest available figures there are seven other countries in the world which have lower infant mortality rates than this one. There are eight or nine which have lower mortality rates for adolescents

The reason for the higher incidence of death among almost all classes in this country than in many others is found in part at least in the tragic figures which show that, even before the war our rural areas were but scantily supplied with doctors and nurses

*(Mr Ickes discussed mortality and morbidity rates)*

I would be the last to deny that the country doctor has produced miracles in his time, but I think that the country doctor who has performed these miracles for years without adequate tools of his profession to help him deserves a better fate than to be consigned forever to caring for his patients through the medium of a bag of pills and a stethoscope

I am no Johnny-come-lately to the cause of more adequate hospital facilities for the people of this country When President Roosevelt designated me as public works administrator, I early had impressed on me the woful lack of modern medical facilities in the United States and during my tenure of that office nearly eight hundred projects providing for new hospitals or additions and improvements to existing ones were initiated

All told close to half a billion dollars was spent under my direction for the improvement of the means of taking care of the nation's ill and diseased And this does not include the huge sums nearly a billion dollars which were spent in what might be called the field of preventive medicine, for sewer and water systems for example My only regret is that more of the funds which were spent in those days were not put to use in permanent improvements such as the PWA built rather than in being frittered away on programs of doubtful value

*(Mr Ickes discussed at great length the mine workers plan for a health and welfare fund)*

I might add at this point that I am unable to see the wisdom of setting up veterans hospitals throughout the country solely for veterans I think that the medical problems of veterans whether they be maimed or psychotic are no different from the medical problems of the industrial worker who loses an arm or a leg or his mind I cannot see why the treatment should be different I challenge any one to tell me why a munitions worker who lost his legs in an explosion while loading shells during the war should be treated any differently than the soldier who suffered the same injury on the battlefield I am not proposing here that our veterans receive anything less than the best I am not suggesting that they be pushed out of hospitals to make room for civilians What I am advocating is that all of us everywhere in this nation have the benefit of competent medical and hospital facilities Hospitals treat people not veterans or coal miners They treat diseases—tuberculosis, silicosis cancer—not dock workers or musicians

In summary let me say that I believe that there is a real and vital need for more adequate medical care for more of this nation's inhabitants I believe something should be done about this and quickly I do not believe that this job can be done piecemeal or by industry or labor alone I think that the Wagner Murray-Dingell Bill provides what seems to me to be a real opportunity to achieve the end that all of us desire.

SENATOR MURRAY Mr Ickes I note that you have talked mainly of the lack of adequate modern medical care and hospitalization in this country and the need of some plan whereby more modern medical care and hospitalization shall be made available to the people of this country Have you studied the various technical provisions of the bill, and are you prepared to discuss those provisions in regard to the effect that they will have and the manner in which they purport to bring to the American people this modern medical care and hospitalization that we have? MR ICKES I would not be competent to discuss those, Senator but Dr Butler of Harvard Medical School is here, and I understand that he will follow me as a witness and he has forgotten more than I ever knew about such matters

SENATOR JOHNSTON I notice that you speak critically of the government taking over the medical problems of the veterans You say that they have no more right to go into that field than they do for the medical problems of the industrial workers Do you not think service connected disability is quite different from probably some one working for a private industry? MR ICKES The veterans, of course ought to have all the medical help and attention that they need, but civilians also ought to have it

SENATOR JOHNSTON You make the statement "I think that the medical problems of veterans, whether they be maimed or psychotic, are no different from the medical problems of the industrial worker who loses an arm or a leg or is maimed ' You say, in a sense, that a man that is wounded on the battlefield is no different from a man that is injured in industry MR. ICKES I said no such thing, and I am not going to be drawn into a demagogic discussion

SENATOR JOHNSTON That is what you say If anybody gets demagogic, I think from past records and history it might be the past and the ex-secretary of the interior

MR. ICKES What about a man digging coal in order to carry on the war? If you want to go down that alley, it has many ramifications SENATOR JOHNSTON Your ideas are absolutely socialistic to take over everything is that true? MR. ICKES Far from it

SENATOR JOHNSTON Where are you going to stop? MR ICKES Well, I do not have to say where I am going to stop I am saying where we ought to go

SENATOR JOHNSTON I will be the one to pass on the legislation and pass it and I want you to tell me where to stop Where would you stop? MR. ICKES The statement takes care of that

SENATOR JOHNSTON You leave it entirely up to us, but you do not say anything the way your statement is it is only general MR ICKES It is general

SENATOR JOHNSTON But you are willing to go all the way, are you not? What are you going to do with the doctors throughout the United States? MR ICKES I think people are entitled to more medical and hospitalization services than they are getting

SENATOR JOHNSTON Are you going to take over all the doctors in the United States? MR ICKES I would not propose that at all

SENATOR AIKEN I take it that you object to the 10 cent assessment on coal because that 10 cents would be added to the price of coal, and it would constitute a tax on all the people of the United States who use coal for the benefit of a single occupational group of around 500 000 men? MR ICKES It is the wrong approach and it is giving the power of taxation to a nongovernmental group

SENATOR AIKEN And if that was carried far enough you would find all union labor would be given the benefits of hospitalization and medical care whereas the majority of the people workmen who do not belong to unions would be left on the outside? MR ICKES That is right

SENATOR DONNELL Mr Ickes I observe as you emphasized that you have carefully refrained from commenting on the specific provisions of this bill S 1606 MR ICKES Yes

SENATOR DONNELL I will ask you to state whether you have read this bill 1606? MR ICKES Well I was prepared for that question because I understand that is a customary question from the Senator I have not I have read a carefully prepared digest of it and I did not know I have been appearing before Congressional committees for some thirteen years and I did not know that it was a necessary prerequisite to have read carefully a bill because I have appeared before so many committees the members of which had not read the bill

SENATOR MURRAY I believe at the commencement of these hearings it was stated that several Senators had not read the bill

SENATOR DONNELL Referring now to my question you have not read the bill is that correct? MR ICKES That is correct.

SENATOR DONNELL Have you read any part of it? MR ICKES Yes sir

SENATOR DONNELL Which part of S 1606 have you read? MR. ICKES Oh well I read the parts that I wanted to read

SENATOR DONNELL Which was that part? MR. ICKES I am not prepared to say

SENATOR DONNELL How recently have you read this bill or the part of it? MR. ICKES During the last two or three days

SENATOR DONNELL And you are still not prepared to say what parts of it you have read is that right? MR ICKES I think it would be by way of supererogation and I do not think that the question is pertinent if I may say so and I do not think that any good would result from my entering into a detailed statement of what I have read or even if I should read any of the record, to cumber up those parts which I have read

SENATOR DONNELL The point that I am making is that you have not read all of the bill MR ICKES I said that

SENATOR DONNELL And you are at this time unable to state to us what part you have read? MR ICKES I have said that two or three times

SENATOR DONNELL I would like to ask you to answer it again You have not read all of this bill and you are unable to state what parts of the bill you have read is that right? MR ICKES For the third time, no and for the fourth time in anticipation no

SENATOR DONNELL Well make it the fiftieth time and say no again. MR ICKES That is right

SENATOR DONNELL Now Mr Ickes you are described here at the outset as being the executive chairman of the Independent Citizens Committee of the Arts Sciences and Professions MR. ICKES That is correct

SENATOR DONNELL Would you tell us please, what is that committee and what is its composition and membership?

(*Mr Ickes listed the officers of the committee*)

SENATOR DONNELL How large a membership does the committee have? MR. ICKES Ten or twelve thousand

SENATOR DONNELL Are you appearing here on behalf of the committee or as an individual this morning? MR ICKES On behalf of the committee

SENATOR DONNELL Has the committee been polled in any way, Mr Ickes with respect to this bill, S 1606? MR. ICKES I can even answer that question

SENATOR DONNELL Will you tell us please about the poll? MR ICKES The national membership meeting on February 10 at the Alvin Theater in New York

SENATOR DONNELL That is, S 1606 was endorsed? MR ICKES That is correct

SENATOR DONNELL Do you have a copy there of the resolution or endorsement? MR ICKES No It has also been endorsed by the national board of directors and the board of directors of each chapter

SENATOR DONNELL How large a meeting was there in New York when this endorsement was made? MR ICKES I was not there I do not know

SENATOR DONNELL Now Mr Ickes you state also in your statement that no one would take exception to the method of paying for old age pensions which the federal government has provided Now as regards old age pensions is it not a fact that the method which the United States government has provided is one under which the states through contributions made both by the national government and by the state governments administer the distribution of those old age pensions that is correct is it not? MR ICKES I do not know What I had in mind was that this plan would be a contribution a deduction from the pay of the employee a contribution by the employer and that administration would be under a board an advisory council the head of which would be the Surgeon General of the United States

(*Senator Donnell by his questions revealed a lack of knowledge by Mr Ickes of current activities in the field of medical care*)

SENATOR DONNELL Now you also mentioned Mr Ickes in the course of your discussion the fact that hospital facilities are not adequately provided in some sections of the country and you refer to that in general terms MR ICKES That is right

SENATOR DONNELL Are you familiar with the bill recently passed by Congress having to do with this hospital problem MR ICKES No

SENATOR DONNELL You do not know how adequately if at all that bill provides for the solution of that problem MR ICKES No but my guess would be that it would not be adequate

SENATOR DONNELL But have you examined that bill? MR ICKES No

SENATOR DONNELL Then you are proceeding merely on your impression as to what that bill probably is is that right? MR ICKES No I am not taking that bill into account at all

SENATOR DONNELL You are not taking it into account at all You do know that such a bill was passed? MR ICKES I know the general situation which I became familiar with as public works administrator during which among other things we built some beautiful hospitals in St. Louis and other places in Missouri

SENATOR DONNELL You have not however studied the provisions of the hospital bill recently enacted by Congress just a few weeks ago? MR. ICKES That is right

SENATOR AIKEN You did state Mr Ickes somewhere in your testimony that construction of the hospital would not suffice unless there was some means of maintaining the operations of the hospital which is not provided for in the hospital bill MR ICKES I would expect that there would be a few flaws in it.

SENATOR MURRAY Thank you for your statement Mr Ickes MR. ICKES You are quite welcome and it is a great pleasure I would like to make one observation that I do not see why the personnel of an organization should be a matter of major interest and I do not see what bearing it has on the merits of the pending legislation

SENATOR JOHNSTON I think that is where the committee disagrees with you and I think that I do, and I think who you represent amounts to a great deal and I think the public believes that. MR. ICKES I am afraid that you have a suspicious mind.

SENATOR JOHNSTON I probably do have a suspicious mind of you MR. ICKES Now that does flatter me

SENATOR DONNELL Of course, we are here undertaking to pass on a specific bill, that is what has been presented to this committee, Mr Ickes Now may I ask you one or two further questions about this committee on behalf of which you speak here this morning? You were not present at the New York

meeting, you say, which approved S 1606? MR. ICKES That is correct.

SENATOR DONNELL Have you ever seen the copy of the resolution that was adopted at that meeting? MR ICKES No

*(Mr Ickes was questioned as to the number of members of the Independent Committee that expressed their view)*

SENATOR DONNELL Now, Mr Ickes, do you know whether or not the fact that S 1606 was to be discussed at that meeting was included in the notice of the meeting which was sent and whether or not the membership of this committee, some eleven or twelve thousand have ever received a copy of S 1606 from which to study its terms? MR. ICKES No, but I must, if I may, or I may if I must, to put it the other way express my admiration for the clean bill of health and the impeccable state of mind with which anybody apparently must approach a bill these days I do not suppose this was any immaculate conception, Senator It was a group of members that discussed, maybe inherently as one votes a straight ticket in an election booth approval or disapproval of a certain measure. It is a democratic process, democratically carried on and not subject to question, Senator, as to methods

SENATOR DONNELL Mr Ickes, if I may be pardoned, I am not at all questioning the right of that committee to pass on the matter and we welcome its views, but I do think that we have a perfect right to inquire into the degree of care which that committee and its officers, including yourself have taken for the study with respect to the study both of the principles and of the bill MR. ICKES I was not an officer at the time

SENATOR DONNELL When were you made an officer of this committee? MR ICKES Five or six weeks ago

SENATOR DONNELL So you are not informed I take it, of what transpired except in a very general way, like any citizen would be in that committee or its deliberations, prior to the time you went in? MR ICKES All that I have given you is hearsay and therefore irrelevant and incompetent.

SENATOR DONNELL I do not think so, I think we are glad to have it and it is helpful to have your views, and I want to respect your views, and I am glad to have them Mr Ickes do you know please, whether or not included in the membership of the Independent Citizens Committee of Arts Sciences and Professions there is any sizable number of physicians, and if so, I would be glad to know approximately what proportion, and perhaps Dr Butler will know DR. BUTLER They are sizable

SENATOR DONNELL The doctor is going to be on the stand and we can find out from him. You are not informed personally? MR ICKES No

SENATOR DONNELL Let me ask you one concluding question, and that is have you ever examined S 1050, namely the bill which was approved as I understand it from Dr Butler, a year or so ago? MR ICKES I have not

**Statement of Dr Allan M Butler, Associate Professor of Pediatrics Harvard Medical School, Chief of the Children's Medical Service, Massachusetts General Hospital, and an Editor of the Journal of Clinical Investigation, Journal of Pediatrics, Quarterly Review of Pediatrics and Advances in Pediatrics**

DR BUTLER Dr Allan M Butler from Boston I am here representing the Independent Citizens Committee, which has just been discussed I am associate professor of pediatrics at the Harvard University Medical School, chief of the children's service, Massachusetts General Hospital, and an editor of five medical journals

*(Dr Butler discussed at some length and with much florid diction the effects of scientific advancement on life)*

I trust that you, in considering this legislation, will accept the fact that the time honored general practitioner who rendered all aspects of medical care to patients is a casualty of the progress of science We must face the fact that the total knowledge available for the care of patients today cannot be mastered by an individual physician Modern medical care of the sick patient requires the services of not one but many physicians, as well as highly trained technical and nursing personnel skilled in the use of complicated apparatus and delicate technics The hospital's role in medicine used to be the provision of bed and operating room facilities Today, provision of these is no more important than the provision of the laboratory procedures and special technics on which proper medical diagnosis and treatment are more and more dependent.

It is a foregone conclusion that some method of adequately financing medical care in an orderly and predictable manner must be evolved Modern science has made medical care extremely costly to the individual patient. Personal experience has proved this too forcefully to probably each of us Yet science has diminished the cost of illness to society by reducing the economic loss incident to death early in life and to unemployment due to illness Obviously, distributing the cost of medical care over society as a whole is a logical solution of the problem created by the present inequitable distribution of the costs of illness

Doctors should not and cannot continue to carry this economic burden No other individuals in a system of free enterprise are asked to make such a contribution The attempt of doctors to do so by soaking the rich is an unsatisfactory and illogical method of meeting the problem As stated by the American Academy of Pediatrics, "the discrepancy that now exists between surgical fees on the one hand and free service to the indigent on the other has contributed in no small part to the problem of an equitable remuneration of physicians" The conclusion is inescapable that the high costs of modern medicine must be financed by people when they are well They cannot be financed by those who suffer the misfortunes of illness

Much is made of the difference between the voluntary or compulsory extension of insurance as a means of distributing medical costs This actually is of minor importance. The important point is that the successful operation of either voluntary or legislative medical insurance on a scale that will be significant in solving the problem of cost will require reorganization of our current medical practice and development of effective administrative agencies at federal, state and local levels

It is imperative that any extension of insurance medicine include adequate provision for teaching and research The bill before you does If adequate provision is not made, then as insured patients cared for by physicians of their own choosing replace the charity hospital patients now cared for by the specially trained personnel of well organized teaching services the quality of medical education will be jeopardized Because medical education determines what the medicine you get tomorrow will be the preservation of teaching and clinical research units is of vital importance to the public The point can hardly be overemphasized

The record of leadership of organized medicine is unbelievably reactionary Indisputable evidence is presented in a paper in the *New England Journal of Medicine*, Feb 21, 1946, which I would like to submit to this committee

SENATOR DONNELL Pardon me, if I may ask for the purposes of identification, would you be kind enough to give us the name of that particular paper? I think there were other papers in that particular issue DR. BUTLER Senator Murray has the only copy I had.

SENATOR DONNELL "Minority Views on Improving Medical Care" It is by yourself DR BUTLER By myself

SENATOR DONNELL Under the heading "Symposium on Medical Sociology" DR. BUTLER Yes These reactionaries, in arguing that attention should be paid to the solution of the general problems of housing, food, unemployment and poverty rather than to improving medical care, are again displaying a lack of responsible leadership in the field that is their business and in which wise direction of effort will bring results beneficial to public and doctors alike Positive action should be taken on the legislation before you at this session of Congress Restriction of this legislation to the provision of certain aspects of medical care to the needy with an inadequate budgetary appropriation may place government medical care in the category of our inadequately financed charity medicine This could be disastrous to American medicine, because it might establish a cheap scale for both hospital and physician remuneration If American medicine is to be good, it will be expensive. It will cost billions Cheap medicine will mean poor medicine, and that, in the long run, will be expensive to the public

SENATOR DONNELL In the first place, he makes a statement on page 2 of the mimeographed copy that is rather startling, at least to a person not a member of the profession of medicine. At the end of the first full paragraph the sentence reads "This record"—and I assume he is referring to the Minnesota record —'reflects the fact that the only standard of practice enforced by state medical societies is the standard that avoids legal malpractice." I would like to ask the doctor, is it not a fact, Doctor, that codes of ethics have been adopted by many state societies and the American Medical Association which go far beyond the mere standard of avoidance of legal malpractice? Am I not correct on that? I may say, that is an assumption

DR BUTLER No no, you are dead right They have so called codes of ethics

SENATOR DONNELL Yes DR BUTLER Those codes of ethics, Senator, are not enforcible in terms of maintaining a quality of medical service, and I used the word "enforced" in the sentence you quoted

SENATOR DONNELL May I ask you also, Doctor, is it or is it not a fact that medical societies are attempting constantly to raise the ideals of the professional ethics among the members? DR BUTLER We must keep two things clear If we are going to talk about professional ethics in terms of standards of medicine we had better define what is included in professional ethics As professional ethics are discussed in most medical societies and attempted to be maintained in most medical societies they have very little to do with the quality of medical services

SENATOR DONNELL Doctor, I am not competent to argue that question with you but it is a fact is it not that the medical societies taken by and large are attempting to see that there is a constant observance of the highest moral principles between physician and patient and the highest conceptions, not merely going back to what as I recall was the old Hippocratic Oath but with modern day developments to insure a high professional standard of ethics between the physician and the patient DR BUTLER They try to insure a pretty good standard of ethics between physician and patient, but again Senator that does not mean they are asserting every effective effort in seeing to it that the doctor renders to that patient a high quality of medical services

SENATOR DONNELL Are there instances in recent years of state medical societies expelling members of the profession for unprofessional conduct? DR. BUTLER Only malpractice

*(Senator Donnell questioned Dr Butler at length about the Citizen's Committee)*

SENATOR DONNELL Doctor, you refer in your statement to the bureaucracy that dominates the opinion expressed by the so-called organized medicine. Do you mean by that bureaucracy an inner circle within organized medicine or do you mean the association as such? DR BUTLER I mean the inner circle.

SENATOR DONNELL The inner circle DR. BUTLER In any organization which is as big as the thing like the American Medical Association and has the huge income of the American Medical Association there unfortunately develops a group whose livelihood depends on continuing to receive the full time relatively large salaries that are paid by the organization for maintaining the administrative end of their show

SENATOR DONNELL And that group is the group to which you refer as the 'bureaucracy'? DR. BUTLER That is right

SENATOR MURRAY Let me ask a question there. What is the official position of Dr Fishbein? DR BUTLER I do not know whether I should mention this because I am not well informed but I have inquired and I have been told that Dr Fishbein's official position in the American Medical Association is editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and I think one or two other journals that are published by that association SENATOR MURRAY He is not actively engaged in practicing medicine? DR. BUTLER He is not actively engaged in practicing medicine, and Senator I would like to take this opportunity to state that unfortunately Dr Fishbein, including a great many of the people who speak concerning medical matters for the American Medical Association have rarely if ever practiced medicine and certainly for years have not been engaged in the practice of medicine

SENATOR DONNELL Doctor do you know approximately the membership of the American Medical Association in number? DR. BUTLER Yes

SENATOR DONNELL What is it? DR BUTLER The American Medical Association never lets you forget. It is about 130 000

*(Senator Donnell questioned Dr Butler as to the composition of the House of Delegates of the A M A)*

SENATOR DONNELL And they are the governing body and the body which presents the expression of the Association which is made during sessions of the House of Delegates That is correct is it not? DR. BUTLER That is right

SENATOR DONNELL The House of Delegates of the American Medical Association has expressed itself has it not with respect to compulsory health insurance? DR. BUTLER That was in the course of the past fifteen years since I have been interested in the improvement of medical care, the American Medical Association has expressed itself on anything that has been suggested to include medical care, and, in retrospect, they have been wrong every time they have expressed an opinion Their record is extraordinary You speak of the Blue Cross and what a wonderful thing it is In 1934 the House of Delegates were against the Blue Cross They have only begun to support it within the last four or five years

SENATOR DONNELL Yes I understand you disagree with that conclusion You may be right, you may be wrong but you are entitled to your opinion Now, Doctor, on the first page you mention one sentence which I do not think has anything to do in particular with this bill except as an analogy You say 'Now, in peace, to prevent the total destruction of ourselves and of our civilization by the latest achievements of science, can we do other than submit to the sovereignty of a world government at the expense of our national independence? DR BUTLER Surely

SENATOR DONNELL Do I understand that you favor the creation of a world government to which there shall be submitted the sovereignty of this nation at the expense of our national independence? DR BUTLER I do not favor that at this moment I think, almost everybody must think, that we have not to look toward that pretty rapidly or, by golly our science is just as likely to destroy us as health is

*(Senator Donnell questioned Dr Butler about the functions and activities of the American Medical Association His answers showed a lack of accurate information—Ed)*

SENATOR JOHNSON Doctor, do you think this bill ought to take care of the osteopaths and chiropractors? DR BUTLER I think the best way to handle that is almost to leave it alone. I as a physician, have refused to pay any attention to the arguments pro and con of osteopaths and chiropractors In a democracy we have to be tolerant. We have to permit people to do what they want to do as long as they do not transgress our laws In doing so we sometimes benefit, we sometimes suffer I just would rather avoid any questions on osteopaths and chiropractors

SENATOR JOHNSON You think they do good do you not? DR BUTLER I would rather not answer that question because to answer it you would have to define when they did good possibly, and when they did harm It is awful hard for somebody to live in this world and not do some good some time

SENATOR JOHNSON The same is true in the medical profession sometimes they do good and sometimes they do harm? DR BUTLER That is right It is all a relative matter

### Statement of Reverend Francis W McPeek, Chairman, Legislative Committee, Council for Social Action, Congregational-Christian Churches

MR MCPEEK Created by action of the General Council is an official organization known as the Council for Social Action of the Congregational-Christian Churches Its eighteen members whose names and occupations are appended are elected by the General Council in its regular sessions Their duty is to make a study of important moral or social questions to determine Christian action in light of the social teachings of our church and to inform member churches of their judgments They are also empowered to represent themselves on these questions in such places and at such times as seem appropriate to them. The Legislative Committee of the C S A of which I have been chairman for several years has been established for the special purposes of advising our fellow church members and other church groups of legislative issues significant to the welfare of the nation I am afraid, Mr Chairman that I have been a bit tedious in explaining these matters, but I do so wish to make it clear that we have no mandate from the denomination as a whole We could not have, short of an action by the General Council

For several years we of the Legislative Committee—and of the Council for Social Action—have held firmly to a conviction that the existing plan of social security should be expanded and implemented I shall not read the various sections of this policy statement but shall mention only the paragraph most relevant to the matter at hand

'4 We hold that sickness and accidents cause social losses which can best be paid by a sound plan of public insurance We believe that health and disability insurance can be provided on a democratic basis with full consideration for the rights of doctors and private hospitals"

Under such a declaration we have published our support to S 1050 in principle—the Wagner-Murray-Dingell bill—and to

S 1606 the National Health Insurance Plan, introduced by the same distinguished members of the Congress In general, we believe that the compulsory health tax plan outlined therein is eminently fair to all citizens, as it is to all physicians Under its several features we believe that America's health gains in the last ten years especially would be conserved and that our present distressing marks of ill health, so incontestably demonstrated by the Selective Service health inventory, would tend to be much more rapidly eliminated

Having made these brief general remarks Mr Chairman, it is now my pleasure to introduce the distinguished physician who will speak on the particulars of the bill A graduate of the Northwestern University School of Medicine, Dr Theodore K Lawless has studied not only at Talladega and the University of Kansas but also in European schools of medicine His residence is in Chicago where he has an extensive practice in his field of specialization dermatology and also syphilology I might further add that Dr Lawless is a member of the American Medical Association and a member of the Council for Social Action of the Congregational-Christian Churches, for which latter organization he appears today

### Statement Made by Dr Theodore K Lawless, Accompanied by Reverend Francis W McPeek

*(After a number of the routine arguments in behalf of compulsory sickness insurance Dr Lawless complained of the difficulty of securing admission of a member of a minority race to St Luke's Hospital in Chicago)*

SENATOR DONNELL Doctor by 'minority group' member, do you mean a member of the Negro race? DR LAWLESS Negroes Mexicans Japanese Chinese

SENATOR DONNELL I meant this particular person DR LAWLESS That is a Negro The next one will be a Japanese A doctor made all arrangements to operate on a patient in a well known hospital yet when she presented herself admission was refused She was a member of a minority group Multiply these cases by 16 million and you have a vivid picture of the plight of these minorities in more than 90 per cent of American hospitals under today's plan for medical care

### Statement of Joseph P Anderson, Executive Secretary, American Association of Social Workers

MR ANDERSON We have approximately 1,000 members in all sections of the country They are employed in both private and public welfare agencies We are organized in ninety six chapters Though our members become members of a national organization they can affiliate in groups in areas where there are a sufficient number for them to do so Our purposes are twofold First of all we are concerned about improving the quality of social work in the same way Dr Butler told you the American Medical Association tries to do We make studies and collect data and publish reports We issue a magazine which goes out to all our members and others who wish to subscribe to it We have been concerned for a long time with medical care and public health service, and in 1941 we first issued a very brief statement in which we stated that it is the responsibility of government together with the medical profession to see that all the people who are in need of medical care and public health service receive that We take such action at the annual delegates conference to which the representatives of our various chapters come, and then by majority vote at that conference we adopt the statement of principles such and such

SENATOR DONNELL When was the most recent conference held? MR ANDERSON The most recent was in the middle of May of 1944 We did not have one in 1945 because there were no conferences being held Our next is going to be held this coming May

SENATOR DONNELL Is there any specific resolution or principle they adopted at that time? MR. ANDERSON Yes At that time the original Wagner-Murray-Dingell bill had not come up for hearings but had been introduced and the action we took was first to endorse in principle S 1050 and also to urge that hearings be started

MR ANDERSON Now, in terms of the statement I do not think I need read that and take the time. It merely states that we support the provisions we believe in S 1606 because we believe in supporting progressive development of public social and health services We believe that health is a basic right of our people in the community We think that at the present time people are not getting these services And then I mention the four factors, which I am sure have been presented before to this committee, as to why the services are not now available and then we mention the principles which we believe any legislation should be based on And I believe that favorable action on this particular bill will represent a courageous and comprehensive attempt to break the old and vicious cycle of poverty begetting sickness and sickness begetting poverty

### Statement of Reverend Jack R McMichael, Executive Secretary, Methodist Federation for Social Service

MR MCMICHAEL The Methodist Federation for Social Service has been in existence since 1907 and is the group out of which grew the original draft of the well known Social Creed of the Methodist Church, which became in substance the Social Creed of the Churches as adopted by the Federal Council of the Churches of Christ in America The organization has the moral blessing and backing of the General Conference of the Methodist Church It seeks to apply the ethical imperatives of the biblical gospel to the social relationships of men and women in our modern world Our organization has long been dedicated to the realization of a program in America which would actually provide adequate medical care for all From the beginning it has given earnest suport to the Wagner-Murray-Dingell bill as a great step in the direction of the ideal of universal and adequate medical care

*(After reciting the same arguments used by other witnesses in behalf of the act in about the same words he continued)*

MR MCMICHAEL Commendable also are provisions calling for maximum participation by local, state and private agencies in the administration of the act and provisions for advisory councils, including representatives of the public as well as of the medical and other professions We ministers welcome this opportunity for qualified clergymen who work intimately with individuals in a community to serve in their behalf on advisory councils We urge that specific representation be given on these important councils to Negro, Jewish and other religious and racial minority groups so as to assure to them an equitable role and share in the administration and benefits of the act We have been gratified by the interest recently shown by organized labor, not only in narrowly conceived trade union problems but in public affairs and in health problems We are confident that representatives of organized labor will also have a great contribution to make on these advisory councils

SENATOR DONNELL Reverend McMichael when was held the most recent general conference of the Methodist Church? MR MCMICHAEL 1944

SENATOR DONNELL Did that conference express itself on the subject of compulsory health insurance? MR. MCMICHAEL No

SENATOR DONNELL Has it ever expressed itself on that subject? MR MCMICHAEL Not that I know of, no It has expressed itself officially on the subject of medical care for all

SENATOR DONNELL But not on the matter of compulsory health insurance is that right? MR MCMICHAEL That is right, as far as I know

---

APRIL 16 1946

The Honorable James E Murray (Chairman), Presiding

PRESENT Senators Murray, Pepper, Ellender, Morse, Donnell and Aiken.

### Statement of William Green President, American Federation of Labor, Accompanied by Nelson H Cruikshank, Director, Social Insurance Activities, American Federation of Labor

MR GREEN Our Committee on Social Security, of which Mr Matthew Woll is chairman has been now for several years engaged in a study of the inadequacies of our present social security program and has, with the assistance of experts in this field drawn up a comprehensive plan for the development of a well rounded national social security system

The program we have developed includes in addition to provisions for extending the facilities needed for health services and provisions for grants to states for public health services and maternal and child health and welfare services and for public assistance, proposals for the establishment of a national social insurance system This covers temporary and extended disability for the extension and improvement of our old age and survivors insurance system, for the special protection needed by veterans for a genuine and practical unemployment insurance program and for a national system of health insurance. This program also includes well considered methods for meeting its entire cost

Our entire program for the development of a unified comprehensive social security program worthy of a great nation in a position of world leadership is contained in Senate bill 1050

The proposal you have before you in the Senate bill 1606, therefore, represents but another part of an overall program

Thirty years ago we were definitely against the establishment of a health insurance program But our great democratic labor organizations in response to the expressed needs and wishes of the membership have steadily swung over to the support of this program to the point where in the last national convention of the American Federation of Labor which was held in New Orleans in 1944 it was adopted unanimously

Some of the enemies of this program have attempted to taunt us by quoting my predecessor Samuel Gompers in opposition to health posters which they offer free and on which they have reduced a picture of this great leader and quoted his words thirty years ago I think I knew Samuel Gompers as well as the people who are paying for the printing of these posters I know also that some of the same interests who now so willing to pay money to induce workers to follow Samuel Gompers leadership were willing when those words of his were uttered to pay money to get workers to forsake his leadership I knew Samuel Gompers as a progressive leader—one willing and ready to change his views with the changing times True to this tradition the American Federation of Labor which he founded has changed its position regarding health insurance to meet the changed conditions of our times

Working people were shocked just as other people were by the extent of physical unfitness that was revealed by the Selective Service examinations

Our people do not minimize the importance of the maintenance of satisfactory healthful conditions as they affect their life on the job and at home They know that good housing adequate nutrition and other environmental factors contribute materially toward good health To listen to some of the opponents of health insurance however you might conclude that if workers had these things they would not need doctors nurses or hospitals They should know better especially the doctors among them.

Out of their own family experiences working people have come to realize that the methods of meeting the costs of medical care have a direct and practical relationship to the availability of that care They know that generally individual savings do not provide a practical way of meeting these costs for the very simple reason that neither the time nor the amount of savings needed can be predicted And we know that the desperate resort to the loan shark often arises from the necessity of paying the cost attendant on sickness and that the largest single reason for the cashing of war saving bonds is illness

We in the American Federation of Labor have on occasions been charged with inconsistency because we have opposed compulsory arbitration and other forms of compulsion and adhered to our traditional principle of voluntarism while at the same time embracing compulsory health insurance We do not feel that our position is in the least in violation of our traditional principle as the element of compulsion in health insurance is confined to the matter of coverage and to the payment of contributions In other forms of compulsory legislation there are embodied compulsions that seriously limit the basic freedoms of citizens the compulsory features of our public education system where our children are required to attend school and all property owners are required to support the system To carry over into a discussion of this problem the usual connotations associated with the word compulsory as opposed to voluntary confuses rather than clarifies the issue As a matter of fact, the plans of some of the voluntary programs have demonstrated that they can be quite undemocratic Those for example now being advocated so vigorously by some of the medical societies place complete control of the plan including the expenditure of the funds in the hands of a single group whose members have a direct pecuniary interest in their operation They are completely devoid of any standards to govern the quality of service to be provided and provide for no representation on the part of those who are to pay their costs

Past experience of workers particularly with certain types of contract care have led them to be cautious about any proposal which might affect the quality of service In our opinion the passage of this bill would definitely encourage high quality medical care Doctors with whom we have consulted have informed us that when the ability of the individual patient to pay is a factor in his prescription of treatment, as it is under the present system the best quality of service is often denied

Especially during the past several years many of our unions have developed medical care programs for their members Our people naturally want to know whether the adoption of a national health program would permit the continuance of these cooperative endeavors During the preparation of this legislation we insisted on provision of the continuance of these plans being included, and we are satisfied that the provision is adequate. We are convinced that the bill makes ample provision for utilizing existing services and actually encourages the establishment of new ones when they are able to meet standards of service

One of the questions which workers always ask when these proposals are under discussion is Under the plan will we be able to choose our own doctor and our own hospital? I am very sure that the proposal for the establishment of health insurance would not have received the widespread support that it has among our trade union people if they were not assured that the freedom of choice of physician would be preserved and actually improved Our people are no different from others in that they cherish the personal relationship between doctor and patient and we have insisted that the provisions in this respect make doubly sure that free choice is protected Actually we feel that the bill if adopted would in a great many instances extend the principle of free choice as under our present system of payment the actual choice of physician on the part of those in dire need of service is limited to the number of doctors who are willing to render service in the face of the possibility or even probability that the patient will not be able to pay

Our membership is concerned about the degree to which any proposed legislation threatens to set up any centralized or autocratic control Despite the contentions of the opposition we are convinced that in S 1606 there is established a fair balance between administrative responsibilities and democratic administration Certainly officials of government agencies are given duties to perform and they are properly given the necessary authority to carry out these duties but their authority is limited through a system of checks and balances The rights of insured persons and of persons and agencies rendering services are carefully spelled out and rights of appeal from decisions are provided In addition the Surgeon General is specifically directed to decentralize the administration through the states and localities

The members of this committee are aware that the proposal for national health insurance has been subject to serious attack from various quarters We do not say that all of those who oppose this measure and who are in disagreement with us are dishonest men We do say however that some of the organizations which have been busily stirring up opposition to this bill depending largely on false and misleading slogans and expending huge amounts of money should be thoroughly investigated I say quite frankly to the members of this committee that in our opinion you will not have fulfilled your responsibility to the public in these hearings unless the sources of the funds for some of these organizations have been thoroughly investigated and made known to the public. The people of the country have a right to know and they have a right to expect from this committee what individuals and what corporations have contributed to the misleading campaigns of such organizations as the National Physicians Committee for the Extension of Medical Service and the Association of American Physicians and Surgeons Inc I have tried to make clear the reasons on which the American Federation of Labor bases its support of this bill Our purposes and our records are open and the basis of our support is common knowledge We think that the reasons for the opposition of the organizations I have named and their allies should be made equally public

Senator Donnell asked whether or not Mr Murray had investigated the probable cost under S 1050

Senator Donnell quoted Earl E Muntz who says

This would raise the estimates previously given to the following totals

1 Based on Senator Wagner's figures and remarks $11 625 000 000
2 Based on Tax Foundation study $11 787 000 000
3 Based on author's estimate $13 405 000 000

I take it that is Mr Muntz's estimate

4 Based on Hirschfield's study $14 625 000 000

I understand that is Mr Gerhard Hirschfield

SENATOR DONNELL As I understand this document in arriving at this federal subsidy he is assuming a 4 per cent contribution from employers and a 4 per cent contribution from employees and bases his view on the proposition that over and above that 4 per cent contribution from employees and 4 per cent contribution from employers there would be necessary federal subsidy of more than 50 per cent of these entire figures to which he refers MR GREEN Fifty per cent of that total

SENATOR ELLENDER I agree with you The point is though that in the event that the 4 per cent from employers and 4 per cent from employees is not sufficient, then you would advocate that the federal government dip into the treasury for the purpose of getting sufficient funds to make the program go along? MR. GREEN Well that should be reduced to the lowest possible cost. Because we do not want it to be a purely paternalistic affair We base it on the principles of insurance That is

what I emphasize in this statement, a contribution by employers and employees to the cost of providing the insurance payments, hospital care, medical care, laboratory care, special care, specialists, whatever may be needed in order to protect the health of the nation The health of the nation that is the point

*(Senator Donnell brought out that the costs might be 9 per cent Mr Green aided by Mr Cruikshank, indicated it might be necessary to diminish the coverage)*

SENATOR DONNELL You also referred Mr Green, in your testimony, to the figures of physical unfitness revealed by the Selective Service examinations, and I quote this language from your statement

"With the whole record now before us, these figures are more shocking than appeared at first Where we have been saying that a third of our young men were found physically unfit for the 'duties of citizens in wartime,' to use General Hershey's phrase, actually it is now revealed that fully a half of the young men failed to meet the army s standards '

What is the source, Mr Green of your statistical information there? MR. GREEN Selective Service

SENATOR DONNELL Selective Service. Now, I hold in my hand a document which I am told is from the Selective Service official figures Am I right in that, doctor? DR GOODRICH Yes

SENATOR DONNELL And I observe these facts, if I may summarize just a little. This is the figure at the top The "total number of rejections" were set out as 4 million 49 thousand which I understand from a penciled note to me is 30 per cent of all registrants examined Also, in this 4 million 49 thousand there are a considerable number who as I understand it are persons whose rejection was not cast as the result of facts arising from inadequate medical care or from disability which would disable a person from normal civilian activity For instance, here is 'mental diseases," 657,100 "Mental deficiency," 563 300 Then there is a series of physical defects, 'eyes," 206,100, 'ears," 156,100 Now, I shall submit later for the record more in detail on this, but the figures as given to me by my informant indicate that of the 4 million 49 thousand persons rejected, of that 100 per cent, 70 7 per cent were the result not of inadequate medical care or disability from normal civilian activity I am wondering whether or not your investigation and analysis of the Selective Service figures indicate substantially the same conclusions with respect to those figures? MR. GREEN I have not gone into that in detail in the way you have pointed it out.

SENATOR DONNELL Yes sir MR GREEN But I have accepted the Selective Services report, and, of course, the "eyes" and "mental deficiency' and "mental trouble," "eye trouble,' 'ear trouble," all of that may mean that if these people had been given proper medical care and attention for eyes and ears and mental deficiency they might have been restored to normal life

SENATOR MURRAY At that point, Mr Green, is it not true that most of the eye defects in the country occur at the time of birth?

MR GREEN That is what I say

SENATOR MURRAY Due to inadequate attention?

MR GREEN Most of the eye troubles occur during the infant period, many times, and sometimes during the birth period If you take a poor man, he has not the money to go out and get a specialist Under this plan they might save a lot of those eyes and that is what we are trying to do, save them

SENATOR DONNELL As I stated in my question, I shall go into this matter more fully when we have the physicians on the stand

SENATOR MURRAY We would be glad to have the author of that appear as a witness

SENATOR DONNELL Dr Goodrich from my state furnished this and he has in turn selected this from the Selective Service records. DR GOODRICH Yes sir

MR CRUIKSHANK Those are total rejections SENATOR DONNELL They are

MR CRUIKSHANK The difference in the figures is largely that that is a rejection figure whereas the Selective Service figures we used include the Army figures on the number of corrections and the number of discharges after induction, which brings them up to about 50 per cent

SENATOR MURRAY So that under the Selective Service many young men were brought into the service who had to be discharged MR GREEN That is right They found from experience that they were deficient

SENATOR DONNELL I shall examine into that more thoroughly Mr Chairman, with the permission of the committee, a little later

I would like the record also to show that there appears in this exhibit from which I have been reading this line

"Mental deficiency (1)"

Then the figures 563,300, the per cent as 13 9 And that note "1" appears as follows

'includes registrants rejected for educational deficiency before June 1, 1943 and for failure to meet minimum intelligence standards after that date, as well as those rejected for mental deficiency"

I offer that for the record

SENATOR MURRAY I might suggest at that point that many of those cases where they were rejected because of mental deficiency or educational deficiency may be due, more or less, to the failure of an adequate health care system in the United States MR GREEN Oh, yes, certainly Certainly, Senator

*(Mr Green and Senator Donnell differed in their interpretation as to the powers of the Surgeon General and the Advisory Board)*

SENATOR DONNELL I know you are perfectly honest in thinking that, and I might be mistaken, but I think the language of subdivision (j) on page 50 vests that particular authority exclusively in the Surgeon General with no remarks However, at any rate, the Advisory Council is merely advisory and not vested with authority to determine, that is correct, is it not? MR GREEN I think this is a little different I think by implication, at least, the Surgeon General is required to carry out the advice of the Advisory Council

SENATOR DONNELL Do you think there is any legal obligation in this bill? MR GREEN Probably not, but a moral obligation

SENATOR DONNELL Then you think the ultimate right is not in the Surgeon General but in the Advisory Council? MR GREEN I think in most of the questions that will come up that it will rest with the Advisory Board

SENATOR DONNELL Do you not think the bill should be clearly stated to the effect that the Advisory Council makes the decision and that that decision supersedes that of the Surgeon General? MR. GREEN If there is any conflict Either that it is the Surgeon General or the Advisory Board

SENATOR DONNELL As I read the bill, and I may be in error, but as I read the bill what I have read on that question in the bill would seem to indicate that the Council is an advisory council, and that the Surgeon General is not legally obligated to follow its recommendations MR GREEN We will go into that

SENATOR DONNELL Very well The point I am making is this As I see it, Mr Green, today if you or I were to go to this doctor I have spoken of he could decide for himself whether or not he had arrived at the maximum of his capacity, and there would be no government official to tell him whether he had or not? That is correct, is it not? MR GREEN Well, you must take the situation as you find it.

SENATOR DONNELL Your statement is that you feel this committee would be derelict in its responsibility to the public unless the source of the funds for some of these organizations had been thoroughly investigated and made known to the public. May I ask you if you have investigated the attitude of the American Medical Association with respect to this compulsory health insurance? MR GREEN In what respect? As I understand it, the American Medical Association is opposed to it

SENATOR DONNELL Did you mean, though by reference here to these various organizations the source of whose funds should be investigated did you mean to include the American Medical Association? MR GREEN I certainly did

SENATOR DONNELL You think that association should be included? MR GREEN I certainly do

SENATOR DONNELL You know that that association does contain a very large proportion of the practicing physicians and surgeons in the country? MR GREEN Yes, sir

SENATOR DONNELL And it is considered generally a very reputable organization? MR. GREEN That is right

MR. CRUIKSHANK May I make a comment on that, Mr Chairman? SENATOR MURRAY Yes

MR CRUIKSHANK Some time ago Miss Florence Thorne and I, both of whom were on President Green's staff, received a request from a committee of the American Medical Association to come over to the Mayflower Hotel in Washington to discuss with them the various proposals We consulted with President Green, and he told us by all means to consult with them, as representatives of the predominant group of the medical association We went over, and they, in the course of their discussions, asked us if we would be willing to confer with a committee of the American Medical Association on health insurance provisions, and particularly the provisions of the

Wagner Murray Dingell bill I think I can say that they were somewhat surprised when we responded that we would be very glad to confer with them any time, any place, at a meeting of their choosing We followed that up with a confirming letter That was over a year ago and we are still waiting the invitation of the American Medical Association to confer with them on this problem

SENATOR MURRAY I might ask there do you infer from that that they had no intention of discussing these problems with you at the time, and merely expected you to refuse to consult with them? MR. CRUIKSHANK We can only go on the record, Mr Chairman. The indication at the meeting was that they were somewhat surprised by our ready acceptance of their offer, and we have not yet received the invitation to confer with them

SENATOR DONNELL Do you recall to whom your letter was addressed? MR CRUIKSHANK It was the chairman of the committee, and the name of the committee has slipped my mind

SENATOR PEPPER Mr Green, you did not have to make an extended investigation or inquiry to discover the attitude of the American Medical Association? MR GREEN Certainly not.

SENATOR MORSE Mr Chairman, I would like to discuss with Mr Green a problem which may not seem at first glance to be directly connected with this bill, but I think it is pretty underlying as we come to consider the philosophy of government that we want to have maintained in this country Now, I am sure that Mr Green's answer will be in the affirmative to my inquiry, whether or not it is not true that the American Federation of Labor believes that the economy that can best maintain a decent standard of living for the American workers is a private property economy? That is true, is it not? MR GREEN That is right

SENATOR MORSE And that in order to maintain a private property economy we are going to have to maintain in this country to the maximum extent possible the profit motive, subject to regulations of government that will protect people from exploitation under that system That is correct, too, is it not? MR. GREEN That is correct

SENATOR MORSE And would you agree with me that we are faced in this country as so many nations of the world are faced, with competition among ideologies as to economic forms that ought to prevail and to be perfectly specific about it, we might as well face the fact that probably in a decade ahead there is going to be a considerable movement in this country for some form of state socialism in various activities of our economic life and that to the degree that state socialism comes to dominate this country, to that same degree of course the rights of workers as well as other individuals must be subordinated to a master state? Would you agree to that? MR. GREEN I agree with that.

SENATOR MORSE And that in this struggle however for the government to fulfil what I think are its minimum obligations, at least to protect as I have said so many times the economic weak from the exploitation of the economic strong our workers and people generally say to a democratic form of government you do have, as a government, the responsibility of removing from us as free men a constant fear of economic insecurity'? Do you think that is true? MR GREEN That is quite true Senator All of that is sound.

SENATOR MORSE We might as well face the fact that inherent in the labor movement in this country is the demand of free workers that this economy of work under a private property form be so operated as to reduce to the minimum the fear of economic insecurity and thus we who call ourselves 'liberals' are constantly fighting for minimum wage legislation or legislation that sets up minimum economic and social standards that will protect our people as a whole and in my judgment, protect the preservation of private property economy Now, with that movement going on in the decade ahead would you agree with me that one of the demands is going to be that the government use its resources in cooperating with the medical profession of this country to see to it that the fear of economic insecurity constantly hovering over the roof of every house in this country at least of our medium and low income groups be removed by providing those householders with decent medical care under a system which at the same time preserves to the greatest degree possible the private property conception and at the same time fulfils the obligation of the government to protect our people from the danger of ill health?

Or, to put it this way would you agree with me that the law of survival of the fittest still prevails even in our civilized society but that the workers of this country are insisting that the law of survival of the fittest should not operate on the basis of economic ability of the individual to survive as far as health is concerned? MR GREEN Yes You have brought out some very convincing points which I will agree with

SENATOR MORSE There is just one more point Would you agree with me that there is an obligation on the part of the medical profession to come forward with a program that will remove this fear from the workers of this country and still protect to the maximum degree possible and at the same time remove the constant fear of economic insecurity caused by ill health, to come forward with a plan that will remove that fear and still give to the American medical profession this so called private property economy that they claim under this proposal that you have testified in support of here to a degree is weakened? I am not saying it is or is not Do you agree that there is an obligation on that profession to demonstrate and come forward with a plan that removes that fear that is hovering over every roof in the land? MR GREEN I agree heartily with that conclusion and I want to say to you that never in the history of America did such an opportunity present itself to the medical profession to organized labor and to business groups to contribute toward the maintenance the establishment and maintenance of our free enterprise system than now SENATOR MORSE I agree with you

*(Mr Green discussed at great length his part in securing workmen's compensation legislation in Ohio)*

SENATOR PEPPER I was just going to say that we all know that one of the most severe criticisms leveled against this bill is that same old catch word of 'socialism' MR GREEN That is right SENATOR PEPPER They say "Are you in favor of that Wagner-Murray Dingell bill? That is that socialized medicine bill" Do you regard Mr Green a national law which requires compulsory membership in a national insurance program as being socialism in any form? MR GREEN None whatever SENATOR PEPPER Is it any different in principle from the present law that nobody has suggested the repeal of what has been on the statute books of the nation by which under national compulsion employees and employers contribute to a fund to insure the worker against unemployment in the country? MR GREEN The same principle is involved SENATOR PEPPER Exactly MR GREEN There is no difference There is nothing socialistic about that.

SENATOR PEPPER In the various states of the union we have compulsory school laws, where parents are required by the state to send children to school in the public interest and we do not want to call those things socialistic. MR. GREEN No

SENATOR PEPPER Socialist medicine would perhaps be the kind in Russia where the patient pays nothing at all where the state does the whole thing? MR GREEN Yes The whole thing

SENATOR PEPPER And that, of course is not this bill in any sense MR GREEN This is positively insurance based on our sound insurance system

SENATOR MURRAY This maintains the American medical profession in this country and will have the effect of raising the income of a great majority of the doctors of the country MR GREEN That is right

SENATOR DONNELL Mr Green under this plan in S 1606 doctors who are paid from the monies raised in pursuance of the development of this plan will be employees of the government to that extent will they not? MR GREEN No I would not regard them as employees of the government. They are simply being paid out of a fund created through contributions from employers and employees SENATOR DONNELL You would not regard them as employees of the government? MR. GREEN No

SENATOR DONNELL Mr Green while I appreciate the comments made with respect to the health of our people after all the question here is the means of bringing that about There may be an honest difference of opinion as to that? MR GREEN That is right But the trouble is we have been experimenting for how long has the government been here one hundred and seventy-five or two hundred years?

*(Senator Donnell brought out that Mr Green has no confidence in the success of voluntary plans)*

SENATOR DONNELL Have you studied what happened in England with respect to initiative and the development of ability among the physicians over there? MR GREEN Perhaps not as much as I should Do you know about the health insurance they passed over there in England?

SENATOR DONNELL But I want to say this what I am asking you about is whether or not you have studied the English experience with a view to determining what has been the effect on the development of initiative among the English physicians? Have you studied that? MR GREEN No I have not gone into that

SENATOR DONNELL We are studying here, trying to find out things We are happy to have testimony from anybody who knows and can give us advice I do not claim to know all about this and what I do not know fills more volumes than what I do know which is very small In the matter of the experience of New Zealand they have had experience which for some reason has not proved satisfactory Do you know why that is MR GREEN I do not know I could not tell you Senator

SENATOR DONNELL My understanding is that in New Zealand their plan has pretty largely failed It may be due to something entirely contrary to the basic principles I do not know MR GREEN I am sorry I could not give you information on that because I admit I have none

SENATOR PEPPER Senator Donnell a minute ago referred to the 21 million covered under the Blue Cross plans I am sure the Senator did not mean to imply that in excess of about 3 per cent of the people of this country have anything like the total coverage under the voluntary plans that is provided in this bill There are perhaps 21 million people who have different kinds of coverage SENATOR DONNELL Yes

SENATOR PEPPER But our subcommittee disclosed facts, after comprehensive examination of all voluntary plans in existence that only about 3 per cent of the total people in the country have anything like the total coverage of this bill MR GREEN Yes

SENATOR DONNELL I had no intention of leaving any thought like that

SENATOR PEPPER We also disclosed in our inquiry that under the most favorable system the voluntary plans were not a success For example that the Department of Agriculture through the Farm Security Administration tried in the rural area and got through experimenting and subsidizing the voluntary plans with federal funds, poor results Even there, where they were voluntary plans in character the ones who needed the medical care the most dropped out first or failed to join MR GREEN That is the way it operates

SENATOR PEPPER So the Department of Agriculture in a brochure they prepared at the request of this committee, advised us that under any most favorable system the voluntary plan had not been a success MR GREEN That is my understanding

(The documents referred to are as follows )

*(Senator Murray submitted for the record statements from the State Federations of Labor of Kentucky, Kansas Connecticut and West Virginia and from the Building Service Employees Maintenance Union the Atlanta Ga Federation of Trades and the Central Labor Union of North Platte, Neb )*

### Statement of Dr W Montague Cobb, Representing the National Medical Committee of the National Association for the Advancement of Colored People

DR COBB My name is William Montague Cobb I am a physician professor of anatomy in the School of Medicine of Howard University president of the Medico-Chirurgical Society of the District of Columbia and I am appearing as a member of the National Medical Committee of the National Association for the Advancement of Colored People

It is my honor to represent as a member of its National Medical Committee the National Association for the Advancement of Colored People, in support of the National Health Bill S 1606 The National Association founded in 1909 has over 520 000 members organized into twelve hundred branches youth councils and college chapters in forty-three states It is the oldest and largest organization devoted to the securing of equal rights and opportunities for the more than 14 000 000 citizens who constitute America s most disadvantaged tenth

Even though health conditions in the country as a whole are far from satisfactory, the plight of the Negro is worse than that of the white In 1940, the latest census year the standardized death rate for the country was 8 2 per thousand for whites and 14 0 for Negroes a mortality rate 71 per cent higher than the white In 1930 the Negro excess was 82 per cent In that year the Negro mortality in the registration states was 81 per cent higher than the white in rural areas and 95 per cent higher in cities a fact of especial significance in view of the continued urban migration of Negroes

In 1940 the life expectation of Negroes at birth was about ten years less than that of whites the expectancy being for males 52.26 years in Negroes and 62 81 years in whites, and for females 55 56 years in Negroes and 67 29 years in whites

The consistent population increase shown by the Negro in spite of the high mortality and morbidity he has suffered has been due chiefly to his high birth rate which in 1942 was 23 3 as compared with 20 7 for the white But the reproductive process in the Negro is attended with almost double the rate of casualties that prevails in the white In 1942 the Negro maternal death rate was 5 5 and the white 2 2 the Negro infant mortality rate was 64 2 and the white 37 3, and the stillbirth rate was 50 5 in the Negro and 25 5 in the white

In retrospect, this approximately current unfavorable health picture shows considerable improvement over the past The Negro mortality rate has declined from 24 1 in 1910 to 14 8 in 1943 Since 1910 Negro life expectancy has increased about ten years, or 25 per cent There has been significant decrease also in reproductive mortality

The National Health Survey of 1935 1936 found that the amount of disability per person due to illnesses which incapacitated for a week or longer was 43 per cent higher in the Negro than in the white population The higher disability rate for Negroes was due chiefly to chronic diseases, which disabled the average Negro eight days per year compared with five days for the average white person The higher rate was observed for all disease groups Pneumonia was almost twice as frequent in Negroes as in whites and certain chronic diseases—the cardiovascular-renal group, rheumatism, and asthma and hay fever—were of significantly higher rate

The Survey noted that improvement of standard of living associated with a rising income increased the health status of Negroes as measured by various indices of illness The average Negro in the non-relief class experienced only one half the disability per year as the Negro on relief The survey concluded that low economic status rather than inherent racial characteristics in reaction to disease appeared to account principally for the higher disability rate in Negroes

The association I represent affirms that the vision of separate, but equal facilities for the care of Negro population in those areas where that population is concentrated has always been a myth, and would prove again to be a myth should it be attempted Specifically the association wishes to declare against the principle in the application of this bill to the development of separate hospitals, separate health centers separate training programs and separate public health programs We wish to declare emphatically for the elimination of the entire racial separation practice in the construction of any new facilities, and in the operation of all new plans for the distribution of medical care and for the integration of Negro professional personnel into all levels of the plan according to qualification Recent experience with attempts to assure adequate professional personnel through the separate system of professional education have proved how sterile and ineffective is this plan It has resulted in there being not only inadequate numbers of general practitioners (and nurses), but also of specialists in the respective fields

In many states, including the entire South and the District of Columbia, local medical societies have consistently barred Negro physicians from membership and the American Medical Association through the technicality of not admitting to its membership physicians who are not members of their local societies has extended the effect of this racial discrimination This Association, therefore, would see no outlook but the perpetuation of these discriminatory practices in the administration of a national health program and advocates that the administration be entirely in the hands of responsible public officials

*(The questioning was limited to the auspices under which Dr Cobb appeared It seemed he had been asked by the chairman of his board of directors to appear )*

### Statements of Pauline M Newman, Representing the National Women's Trade Union League of America, and of Miss Elisabeth Christman, Secretary-Treasurer of the National Women's Trade Union League of America

MISS NEWMAN The National Women s Trade Union League of America with a direct and affiliated membership of more than a million persons wishes to go on record in support of the Wagner-Murray Dingell National Health Act

*(Miss Newman told of the advantages of a prepaid plan )*

We are told that good health is purchasable Certainly so are precious jewels in Tiffany s How many of us would even dream of going to Tiffany s? How many of us can afford to purchase medical care from private physicians? Suppose Mr Chairman, we try and see what an ordinary diagnostic examination or as our English friends call it, an "over hauling,' in a private physician s office comes to

Jennie the operator decides to have such an examination and finds that the fee for the first visit to the doctor is $5 This doctor is not a 'top notcher," but an average reputable man He will want some laboratory tests—a blood count and urinalysis will cost $5 No routine examination should be made without a chest x-ray , that will cost a minimum of another $10

If there is nothing organically wrong with Jennie the doctor will prescribe some medication which will come to about $2 Here you have a total of $22 for an incomplete medical check up

I repeat that this examination is incomplete It does not include an electrocardiogram It does not include a gastro intestinal x-ray examination and the additional tests which are essential to a thorough diagnostic examination And yet Jennie has paid $22 merely to find out if anything is wrong with her health! Do you see now why it is that Jennie and her kind think long and hard before they will go to a private physician? Their limited income does not allow for such luxury It is this inability to meet the cost of medical care that prevents the wage-earner from consulting a physician until he is no longer able to work or to see a dentist until he is no longer able to endure his toothache

At this point some one may well ask Why should not Jennie and her kind use the services of our public health clinics This is a pertinent question But I think I can give you the reasons why Jennie and her kind do not like to go to those clinics

1 She will in all probability have to absent herself from her work a whole day The services of those clinics are not now available in the evenings

2 Jennie does not care for charity any more than do the rest of us *In fact Jennie would much rather pay for medical* or any other service she gets provided the cost is within her ability to pay Jennie and her kind do not want to get anything for nothing

3 And finally Jennie will tell you that if our public health clinics are to be used by people like herself they will have to be of a different type from those with which we are now familiar I happen to know quite a bit about those clinics and I am here to tell you that they are not what they might have been—the pride of a community

The physical surroundings alone are enough to discourage a sick person from going there—those hard and uncomfortable benches the cheerless and frosty atmosphere the lack of privacy the absence of kindliness and understanding the needless questioning the humiliation the hard-boiled attitude—all this and more is cause enough for Jennie and her like to stay away from these clinics Until these health clinics are infused with a spirit of helpfulness and real desire to render decent service Jennie and people like her will be reluctant to use the public health clinic

I maintain Mr Chairman, that while we have made excellent progress in medical science the fruits of this scientific knowledge are not now available to the working men and women of our land But the most deplorable thing of all I think is the fact that even the clinics I have described above are non existent in so many parts of this country! That this should be so is unbelievable but it is a fact as you gentlemen of the committee must know

*(Questioning by Senator Donnell concerned the nature of the Trade Union League and the manner of its function)*

SENATOR DONNELL That is who come to this national meeting?

MISS NEWMAN Yes sir

SENATOR DONNELL When was the last one of those held those meetings?

MISS NEWMAN Last May we had a conference right here in Washington with delegates coming from every one of our local affiliates

SENATOR DONNELL And you had six or seven hundred people at that meeting?

MISS NEWMAN Not at the last conference

SENATOR DONNELL How many did you have

MISS NEWMAN At the last conference I should say that there were close to 100 delegates from our local units

SENATOR DONNELL That is close to 100 delegates?

MISS NEWMAN That is right

SENATOR DONNELL When was that meeting held?

MISS NEWMAN Last May

SENATOR DONNELL Here in Washington?

MISS NEWMAN That is right

SENATOR DONNELL That is what you call the delegate meeting of your entire membership?

MISS NEWMAN Just one moment May I explain this You remember do you not that conventions were forbidden for a time while the war lasted

SENATOR DONNELL Yes

*(To be continued)*

# Medical Legislation

## MEDICAL BILLS IN CONGRESS

### Army and Navy Medical Schools

A bill introduced by Representative Somers, New York, H R 6073, proposes the establishment of a school for the instruction of cadets in the theory and practice of medicine and surgery, to be known as the United States Military Medical School The corps of cadets of the school will be selected on the same terms and conditions as cadets are selected and admitted to the United States Military Academy Each cadet will agree to serve with the United States government for six years after graduation and will receive the same pay and allowances as are provided for cadets in the United States Military Academy On graduation any cadet may be commissioned as a second lieutenant in the United States Army will receive his internship in an Army hospital on completion of which he will be assigned to duty with the Army or to duty in a hospital under the jurisdiction of the Veterans' Administration Another bill introduced by Representative Somers, H R 6074, provides for the establishment of a United States Naval Medical School

### Barbiturates

H R 6178 introduced by Representative Rogers Massachusetts, provides for the coverage of barbiturates under the federal narcotic laws Another bill, S 1986 has passed the Senate, proposing to bring the barbiturates within the purview of the narcotic laws applicable to the District of Columbia

### Miscellaneous

A bill to authorize the Veterans Administration to employ retired officers without affecting their retired status H R 5626 has passed the House The purpose of the bill is to authorize the Veterans' Administration to employ between 20 and 25 retired medical officers to act as superintendents and directors of medical services in veterans' hospitals

A bill relating to the prevention and control of water pollution H R 6024, has been favorably reported by the House Committee on Rivers and Harbors

S 1850, to establish a National Science Foundation has been reported without amendment by the Senate Committee on Military Affairs

Legislation to authorize the Federal Security Administrator to assist the states in matters relating to social protection, S 1779 has been reported without amendment by the Senate Committee on Education and Labor

## STATE LEGISLATION

### Massachusetts

*Bill Introduced*—H 1784 proposes the creation of a board of registration of chiropractors and defines chiropractic as the science of locating and removing by hand only interference with the transmission or expression of nerve force in the human body and the correction of misalignment or subluxations of the vertebral column It excludes operative surgery prescription or use of drugs or medicine or the practice of obstetrics except that the X-ray may be used solely for the purposes of examinations

*Bills Passed*—H 1749 passed the house April 16 It proposes that the College of Physicians and Surgeons a Massachusetts corporation duly organized and established in 1880, be dissolved

S 462 passed the house April 17 Relating to the replacement of a city board of health by a city health department it proposes that the commissioner of health shall be a citizen of the United States who has been graduated from a medical school approved by the state authority for the approval of medicine schools and either shall be the holder of a degree of public health with at least two years' full time experience in a responsible position in public health service or shall have had four years full time experience in a responsible position in such service He shall be eligible to be registered to practice medicine under the laws of the state

S 464 passed the senate April 17 To amend the law relating to opticians, it proposes certain restrictions upon the type of advertising in which an optician may engage.

### Mississippi

*Bills Enacted*—H 433 was approved April 9, 1946 It provides an appropriation of $5,000,000 to the Mississippi Commission on Hospital Care for carrying out the provisions of the law creating such commission and for the purpose of building, erecting and equipping, and contributing to the building, erecting and equipping of hospitals, nurses' homes and other facilities

H 699 was approved April 10, 1946 As reported last week, it authorizes the state board of examiners to proceed by injunction to prohibit any person from practicing any profession licensed under the supervision of said board when such person is not duly licensed so to practice, except persons practicing chiropractic, osteopathic or veterinary sciences A copy of the bill as finally approved indicates that it also exempts persons practicing "drugless healing other than surgery"

H 754 was approved April 9, 1946 It authorizes any municipality within the state, in the discretion of its governing authorities, to adopt sanitary codes or any other codes dealing with general public health

—H. 1137 was approved April 10, 1946 It provides additional riations for support of the medical school of the Uni- of Mississippi and for the purchase of equipment and s therefor

256 was approved April 9, 1946 It provides for the nent of charity patients in any hospital in the state ved by the Mississippi division of the American Cancer ety and equipped and prepared to treat cancer upon ffidavits by the county health officer and one other reputable physician that the patient is in need of care, treatment and hospitalization because of cancer

### Missouri

*Bill Enacted*—S 424 was approved April 19, 1946 It transfers to the State Board of Medical Examiners powers and duties heretofore vested in the state board of health

### New Jersey

*Bills Enacted*—A 164 has become chapter 84 of the Laws of 1946 It amends the medical practice act by providing for an addition to the State Board of Medical Examiners of a chiropodist to have equal rights and privileges in all matters affecting chiropody

S 120 has become chapter 118 of the Laws of 1946 It provides for the establishment of a diagnostic center to be fully equipped with all modern scientific equipment and provided with a staff of competent specialists in the field of medicine, psychiatry and psychology, to the end that full and complete diagnostic services shall be available to any governmental agency desiring to secure a complete diagnosis of any individual having need for such services

### New York

*Bills Enacted*—A 1223 has become chapter 802 of the Laws of 1946 It provides for the examination licensing and regulating of persons desiring to practice hairdressing and cosmetology

A 2680 has become chapter 898 of the Laws of 1946 It authorizes a town board, in lieu of employing a public health nurse or public health nurses to contract with any nonprofit institution or agency wholly or partly under private control organized to furnish visiting nursing or public health services and agree to pay fees specified in the contract for such services furnished to inhabitants of the town

S 1033 has become chapter 801 of the Laws of 1946 It provides for the licensing and regulating of the practice of barbering

### Rhode Island

*Bill Passed*—S 266 passed the senate and house April 18 It proposes a joint resolution to revivify the special Rhode Island public health laws survey commission and to appropriate funds to enable the commission to continue its work.

## Coming Medical Meetings

American Association for the Study of Goiter Chicago June 20-23 Dr Thomas C Davison 478 Peachtree St N E, Atlanta 3 Ga, Secretary

American Association for the Surgery of Trauma San Antonio, Texas June 26 28 Dr Gordon M Morrison, 520 Commonwealth Ave, Boston, Secretary

American Association for Thoracic Surgery, Detroit May 29 31 Dr Richard H Meade Jr Kennedy General Hospital Memphis 15 Tenn, Secretary

American Association of Genito Urinary Surgeons Stockbridge Mass June 20 22 Dr Charles C Higgins 2020 E 93d St Cleveland 6, Secretary

American Association of Plastic Surgeons Toronto Canada June 3 4 Dr Frederick A Figi, 102 Second Ave S W Rochester Minn Secretary

American Association of the History of Medicine Atlantic City May 26 27 Mr W B McDaniel II 19 S 22d St Philadelphia 3 Secretary

American Broncho-Esophagological Association, Chicago May 31 Dr Paul H Holinger 700 N Michigan Ave Chicago 11 Secretary

American College of Physicians Philadelphia May 13 17 Mr E. R. Loveland 4200 Pine St. Philadelphia 4 Executive Secretary

*American College of Radiology, San Francisco June 29* Mr Mac F Cahal 20 N Wacker Drive, Chicago 6 Secretary

American Dermatological Association Hot Springs Va, June 10-14 Dr Harry R. Foerster 208 E. Wisconsin Ave Milwaukee Secretary

American Federation for Clinical Research Atlantic City May 28 Dr Richard H Lyons University Hospital Ann Arbor Mich Secretary

American Gastro-Enterological Association Atlantic City May 24-25 Dr J Arnold Bargen 102 Second Ave, S W, Rochester, Minn, Secretary

American Laryngological Association Chicago May 29 30 Dr Arthur W Proetz 3720 Washington Blvd, St Louis 8 Secretary

American Laryngological Rhinological and Otological Society Chicago May 27 28 Dr C Stewart Nash 277 Alexander St Rochester 7, New York Secretary

American Neurological Association San Francisco June 26-28 Dr Henry Alsop Riley 117 E 72d St New York 21 Secretary

American Ophthalmological Society San Francisco June 26-28 Dr Walter S Atkinson 129 Clinton St Watertown N Y Secretary

American Orthopedic Association Hot Springs Va June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2, Secretary

American Otological Society Chicago May 31 June 1 Dr Gordon D Hoople 713 E Genesee St Syracuse N Y Secretary

American Psychiatric Association Chicago, May 27 30 Dr Winfred Overholser St. Elizabeths Hospital Washington 20 D C Secretary

American Radium Society San Francisco June 28 29 Dr Edward H Skinner 1103 Grand Ave Kansas City 6 Mo, Secretary

American Society for Clinical Investigation, Atlantic City May 27 Dr Eugene A Stead Jr Grady Hospital Atlanta 3 Ga Secretary

American Society for Research in Psychosomatic Problems New York May 11 12 Dr Edwin G Zabriskie, 714 Madison Ave New York 21 Secretary

American Therapeutic Society Atlantic City May 11 12 Dr Oscar B Hunter 1835 I St N W Washington D C Secretary

Association for the Study of Internal Secretions San Francisco June 28 29 Dr Henry H Turner, 1200 N Walter St Oklahoma City, Secretary

Association of American Physicians Atlantic City, May 28 29 Dr Joseph T Wearn 2065 Adelbert Road Cleveland 6 Secretary

California Medical Association Los Angeles, May 7 10 Dr George H Kress 450 Sutter St San Francisco 8 Secretary

Georgia Medical Association of Macon May 7 10 Dr Edgar D Shanks 478 Peachtree St N E. Atlanta Secretary

Illinois State Medical Society Chicago May 14 16 Dr Harold M. Camp 224 S Main St Monmouth Secretary

Louisiana State Medical Society Alexandria May 6-8 Dr P T Talbot 1430 Tulane Ave New Orleans 13 Secretary

Maine Medical Association, Poland Spring June 23 25 Dr Frederick R Carter 142 High Street Portland 3 Secretary

Massachusetts Medical Society Boston May 21 23 Dr Michael A Tighe 8 Fenway Boston Secretary

Minnesota State Medical Association St Paul May 20 22 Dr B B Souster Lowry Medical Arts Bldg St Paul 2 Secretary

Mississippi State Medical Association Jackson May 14 15 Dr T M Dye Box 295 Clarksdale Secretary

National Tuberculosis Association Buffalo N Y June 11 13 Dr Charles J Hatfield 1790 Broadway New York 19 Secretary

Nebraska State Medical Association Lincoln May 6-9 Dr R. B Adams 416 Federal Securities Bldg Lincoln 8 Secretary

New Hampshire Medical Society Manchester May 14 Dr C R. Metcalf 5 S State St Concord Secretary

New Jersey Medical Society of Atlantic City May 21 23 Dr Alfred Stahl 55 Lincoln Park Newark Secretary

New Mexico Medical Society *Santa Fe, June 6-8* Dr L B Cohenour 221 W Central Ave Albuquerque Secretary

North Dakota State Medical Association Bismarck May 26-28 Dr L W Larson 221 Fifth St. Bismarck Secretary

Ohio State Medical Association Columbus May 7 9 Mr Charles S Nelson 79 E State St Columbus Executive Secretary

Rhode Island Medical Society Providence May 15 16 Dr William P Buffum 122 Waterman St. Providence 6 Secretary

Society of American Bacteriologists Detroit May 21 24 Dr Leland W Parr 1335 H St N W Washington 5 D C Secretary

South Dakota State Medical Association Aberdeen June 1 4 Dr Roland G Mayer 22½ S Main St Aberdeen Secretary

Texas, State Medical Association of Galveston May 6-9 Dr Holman Taylor 1404 W El Paso St. Fort Worth 3 Secretary

West Virginia Medical Association Huntington May 13 15 Mr Charles Lively P O Box 1031 Charleston 24 Executive Secretary

# Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities, new hospitals, education and public health.)

## CALIFORNIA

**Appointments to Southern California**—Dr George C Griffith, formerly of Philadelphia, and Dr M Paul Starr, Pasadena, have been appointed clinical professors of medicine at the University of Southern California School of Medicine, Los Angeles.

**Changes in Health Personnel**—Dr Miriam Hubbell, El Centro, has resigned as health officer of Imperial County, effective March 1, to join the Los Angeles County Health Department in Glendale.——Dr Harold J Franklin, formerly of Trenton, N J, has been named acting health officer for Imperial County.——Dr Lenox S Goerke, formerly of Woodland, recently discharged as lieutenant colonel from the Army Medical Corps, has been appointed director of the bureau of medical services of the Los Angeles City Health Department. Dr Norman B Nelson, Los Angeles, who formerly held this position, has become head of the department of public health at the University of California, Los Angeles. Dr Goerke is returning to public health work after five years of army service, three years of which were with the selective service system and southern area headquarters in southern California. In November Dr Goerke returned from duty overseas with the 89th division.

**Warning of Smallpox Patient**—On April 5 a man was diagnosed as having smallpox after being granted shore leave in San Francisco April 2, the day after the steamship *La Salle*, from an oriental country, had been released from smallpox quarantine. The ship had been docked at Hunters Point April 2-4. The patient had boarded a public bus at Hunters Point. He had visited one Bank of America and one Western Union office, stopped at a restaurant to eat and attended two theaters, after which he had taken the public bus again to Hunters Point where he ate in another restaurant there. The patient had fever on April 3 and probably on April 2, and a rash on April 4 and 5. The warning issued by the health officer of the city and county of San Francisco, Dr Jacob C Geiger, states that the employees of the Paramount and State theaters, which had been visited by the patient, had been previously vaccinated.

## COLORADO

**Spring Clinic**—The Mesa County Medical Society announces the revival of the annual Western Slope Spring Clinic, to be held in the City Library Auditorium, Grand Junction, May 12, the first in three years. The following, all of Denver, will speak:

Dr William R Lipscomb: What to Consider the Diagnosis of Intervertebral Disk.
Dr George B Packard: Gastric Ulcer.
Dr Maurice Katzman: Significance of Heart Murmurs and the Use of the Electrocardiogram.
Dr Kenneth D A Allen: The Findings Depicted by a Simple Scout Film of the Abdomen.
Dr Bernardine T McMahon: Chest Problems in General Practice.
Dr Charles B Kingry: Interpretation and Use of the Newer Laboratory Tests.

## DISTRICT OF COLUMBIA

**Personal**—Dr Alfred Golden, Washington, has been named assistant professor of pathology at the University of Tennessee College of Medicine, Memphis, and director of laboratories at the Baptist Memorial Hospital, Memphis.

**John Lawlah Resigns as Dean**—Dr John W Lawlah, dean and professor of radiology, Howard University School of Medicine, Washington, announced his resignation as dean to devote his entire time to work in his specialty. The Washington *Star* announced that Dr Lawlah had requested his resignation to take effect April 1.

## FLORIDA

**Special Wartime Permits to Expire July 1**—All special wartime certificates permitting medical doctors to practice in Florida without passing the regular board of medical examiners tests will expire July 1. About sixty physicians, mostly retired doctors from other states, were granted special licenses by the state defense council and board of medical examiners to help fill the gaps left by Florida doctors who were called into military service. If they want to continue their Florida practices after July 1, they must obtain certificates of proficiency from the basic science board which meets June 4 and then pass the board of medical examiners tests on June 24-25. Florida law does not provide for recognition of medical licenses granted in other states or permit temporary peacetime licenses, according to the Tampa *Tribune*.

## GEORGIA

**New Health Unit**—The counties of Thomas and Grady have joined together to form the Thomas-Grady health unit, with headquarters in Albany. Dr Arthur W Hill, Atlanta, formerly with the State Department of Public Health in malaria and hookworm service, has accepted the position of commissioner of health.

**Personal**—Dr Guy V Rice Jr, Albany, recently returned from military service, has been named assistant director of the division of maternal and child health of the Georgia State Board of Health, succeeding Dr William B Harrison, who resigned to become regional medical director for both the northeastern and northwestern sections.

## ILLINOIS

**Herrick House Opens for Year Round Service**—Herrick House in Bartlett, one of the few homes in the country for children convalescing from rheumatic fever, opened April 4 for year round service after being operated heretofore only during the four months in the summer. The 40 children who were admitted were patients in various hospitals. They will spend about three months learning how to live comfortably and usefully and were selected by social agencies in Chicago and the Fox River valley. Herrick House is operated by the Sunset Camp Service League. It functions under a medical advisory committee headed by Dr James B Herrick, for whom the institution is named, and Dr Stanley Gibson, both of Chicago.

### Chicago

**Northwestern Class of 1911 Holds Reunion**—The thirty-fifth reunion of the class of 1911 of the Northwestern University Medical School will be held June 1 at the Hotel La Salle. Dr Louis Rudolph, 55 East Washington Street, is secretary.

**Alumni Reunion.**—The Alumni Association of Loyola University School of Medicine will hold a meeting during the session of the Illinois State Medical Society in Chicago May 15. At a luncheon James T Hussey, S J, president of Loyola University, will speak. Reservations should be made with the Alumni Office, 6525 Sheridan Road. Rev G G Grant, S J, is secretary of the alumni association.

**Roger Harvey Named Professor of Radiology**—Dr Roger A Harvey, assistant professor of medicine and radiology at the University of Rochester School of Medicine and Dentistry, has been appointed professor and head of the department of radiology at the University of Illinois College of Medicine, effective August 1. The appointment fills the vacancy that occurred with the death in 1944 of Dr Adolph Hartung. Dr Harvey graduated at the University of Rochester in 1939.

**Earl Kleinschmidt to Direct Tuberculosis Institute**—Dr Earl E Kleinschmidt, formerly health commissioner of Toledo and recently released from military service, has been named director of the Tuberculosis Institute of Chicago and Cook County. He will succeed Mrs Theodore B Sachs who has retired after more than twenty years' service. Mrs Sachs is the widow of Dr Theodore Sachs, founder of the institute, who died in 1916.

**Executive Secretary Named for Association for Crippled**—William C Harder, who for the past three years as regional supervisor for federal works directed programs designed to assist war impacted communities in Illinois, Indiana, Michigan, Ohio, Kentucky and Wisconsin, has been appointed executive secretary of the Illinois Association for the Crippled, 116 South Michigan Avenue. He succeeds Edgar T Stephens, who recently became chief of rehabilitation services for the state of Illinois.

**Research in Blood Diseases**—The Hematology Research Foundation invites applications for the Ruth Reader fellowship for research in blood diseases. The value of this fellowship is $1,500 for one year. It is offered to workers of any race or creed in America. Applications must be submitted no later than June 1 to Dr Ludvig Hektoen, 21 West Elm Street, Chicago, the chairman of the medical advisory council for the foundation. The council will choose the applicant and the institution in Chicago, in which the work is to be done, on the basis of merit.

**Ray Brown Named Superintendent of Clinics**—Ray E Brown assistant superintendent of the University of Chicago Clinics has been appointed to succeed Dr George O Whitecotton as superintendent, it was announced April 23 Dr Whitecotton who has been superintendent of the University Clinics since 1939 resigned to become medical director of the Alameda County Institutions and superintendent of Highland-Alameda County Hospital of Oakland, Calif (THE JOURNAL, March 16 p 725) Mr Brown who was first appointed to the hospital staff in September 1945 was superintendent and professor of hospital administration of the North Carolina Baptist Hospital of the Bowman Gray School of Medicine, Winston-Salem, N C from 1943 to 1945

**Membership to Medical Center Commission**—Dr Raymond B Allen, executive dean of the University of Illinois Chicago Colleges was elected president of the Medical Center Commission at a meeting April 18, at the University Club He succeeds Col Albert A Sprague the former president, who died April 6 Dr Allen had served the medical center commission as vice president previous to being elected to the presidency He will leave Chicago in August to serve as president of the University of Washington Seattle On the commission in addition to Dr Allen are Mr David H Brill, Mr Albert D Farwell treasurer Mr Lester W Norris, St Charles Ill, Mr Carl Stockholm and Dr Walter H Theobald, assistant professor of laryngology rhinology and otology at the University of Illinois College of Medicine

**Club for Spastics Formed**—The Young Adult Spastic Club has been organized in Chicago It aims to provide social and friendly relationships before undertaking a planned program The advisability of providing a speech therapy program under the direction of a speech pathologist is under consideration Officers of the club which is open to any victim of cerebral palsy between the ages of 18 and 35 living in Metropolitan Chicago are Henry Schmidtke college student, president, Joyce Halloway, high school senior, vice president Ruth Tully, employed in a department store secretary Richard Koplin, college student treasurer, and F Hall Roe confined at home, corresponding secretary Serving as members of the board of directors are

Kenneth Flanagan director of recreation National Society for Crippled Children and Adults
Roy G Franklin president Spastic Paralysis Aid Foundation
Mrs Blanch Mulder service director Illinois Association for the Crippled
Alma O Finnegan Instructor Spalding School for handicapped children
Carolyn Siegal and Marvin Steinberg both students at Spalding High School

The club is being sponsored by the Illinois Association for the Crippled and the Spastic Paralysis Aid Foundation which are meeting refreshment and transportation costs, respectively The Spastic Paralysis Aid Foundation was formed in June 1945 It is composed of parents who have young spastic children Mrs A E Schneider is the secretary

## MASSACHUSETTS

**Alumni Reunion**—The Alumni Association of Boston University School of Medicine will sponsor a two day continuation course as a special feature of its reunion, May 10-11 A wide range of medical topics will be discussed Dr James R. Miller, Hartford Conn a Trustee of the American Medical Association will be the principal speaker at the banquet in the evening at the Hotel Statler

## MISSOURI

**State Medical Election**—Dr Morris B Simpson, Kansas City was named president elect of the Missouri State Medical Association on March 26 at its meeting in Kansas City, and Dr Howard B Goodrich, Hannibal, was inducted into the presidency Other officers include Drs Daniel L Sexton, St Louis, Winfred L Post, Joplin, and Gaylord T Bloomer, St Joseph, vice presidents

## NEW YORK

**Physician Honored**—On April 8 "Briggs Night" was observed at Mount Kisco in honor of Dr Edward F Briggs, Mount Kisco, who after thirty-seven years, was retiring to live on Cape Cod Nearly one thousand persons attended the reception for the physician and his wife.

**Cancer Competition for Students**—The New York Cancer Committee 130 East Sixty-Sixth Street has instituted a competition in which local students of public, parochial and private high schools may participate Students may submit exhibits which cover the subject, including posters, miscellaneous material such as booklets, charts and photographs The competition will close May 9

**New District Health Officer**—Dr Robert L Vought, Jamestown, who was recently released from service in the army, has been appointed state district health officer with offices in Rochester, effective April 15 Dr Vought succeeds Dr Robert S Westphal, Batavia, who is becoming deputy health officer of Rochester (THE JOURNAL, March 30, p 885) Before entering military service in September 1942 Dr Vought, Jamestown, was district health officer, a position he had held since 1938

**Dissection of Dead Body Authorized**—The Penal Law of the state of New York has been amended so as to authorize dissection of the dead body of a human being and "whenever and so far as the husband, wife or next of kin of the deceased, being charged by law with the duty of burial, may authorize dissection for the sole purpose of ascertaining the cause of death or may authorize dissection for any other purpose by written instrument which shall specify the purpose and extent of the dissection so authorized"

**School Health Advisory Council**—On April 5 the Public School Health Advisory Council was formed to provide health service to Rochester children under a new cooperative program of medical and sociologic authorities Herman J Norton director of health education in public schools, is chairman of the new council, which is composed of public health authorities, board of education officials and members of medical and sociologic departments of the University of Rochester The Rochester *Times-Union* states that the group will be a joint policy making and advisory group without administrative functions

### New York City

**Henry Sherman Honored**—On April 17 the Franklin Institute presented the Franklin medal to Henry C Sherman Ph D, Mitchill professor of chemistry, Columbia University Morningside Heights, N Y, "in consideration of his many contributions to the science of nutrition" The medal is bestowed annually on "those workers in physical science or technology, without regard to country whose efforts have done most to advance a knowledge of physical science or its applications" Dr Sherman formerly was head of the bureau of human nutrition and home economics of the U S Department of Agriculture

**Eye Bank Awards Fellowships**—On April 22 the Eye Bank for Sight Restoration Inc announced the awarding of seven scholarships to ophthalmologists from six states for training in the technic of the corneal grafting operation and the establishment of two fellowships to carry on research in blindness resulting from corneal damage The ophthalmologists who received the scholarships are all trained eye surgeons, certified members of the American Board of Ophthalmology, recognized in their field, and veterans of the past war They will receive their training at the Corneal Research Laboratory, located at the headquarters of the Eye Bank at 210 East 64th Street The doctors who receive the awards are

Dr John A Cetner assistant attending ophthalmologist Albany Hospital and instructor in ophthalmology Albany Medical College who practices in Albany
Dr Fred Sauter chief refractionist Brooklyn Eye and Ear Hospital who practices in Brooklyn
Dr Henry L Birge who specialized in eye work at the Mayo Clinic and practices in Hartford Conn
Dr Maurice M Croll a captain in the army chief of the eye, ear nose and throat department of various station hospitals who expects to be discharged in June and after taking the course will practice in Detroit
Dr Milo H Fritz a major in the army now stationed at the Valley Forge General Hospital Phoenixville Pa who practiced for a year and a half in Ketchikan Alaska before joining the army and who after discharge will become a member of the department of ophthalmology Dartmouth Medical School
Dr Earl H Merz a captain in the army also stationed at the Valley Forge General Hospital who will practice in Chicago after his discharge
Dr Alston Callahan a former army captain who has just received the chair of ophthalmology at the University of Alabama Medical College Birmingham Ala

Of the two fellowships, one was established from the funds of the eye bank It was awarded to the New York University College of Medicine to be used by Dr Donald T Hughson of the department of ophthalmology Bellevue Hospital, under the direction of Dr Daniel B Kirby, professor of ophthalmology, for experimental work in corneal grafting The other, a fellowship of $2 650 given by the Milbank Memorial Fund to the Eye Bank for the study of the vascularization of the cornea, has not yet been awarded The Eye Bank for Sight Restoration observed its first anniversary May 1

**Dr Peterson Granted Leave of Absence**—Dr Jerome Sidney Peterson, assistant professor in the department of preventive medicine and community health, Long Island College of Medicine, Brooklyn, and District Health officer of the Red

Hook Gowanus Health Center New York City Department of Health has been granted a leave of absence of one year to work with the UNRRA in China it was announced at the college recently Dr Michael Antell formerly district health officer of the Washington Heights Health Center, has been appointed to serve in Dr Peterson's place While with the UNRRA China mission Dr Peterson will serve with the commissioned rank of surgeon (R) in the U S Public Health Service His assignment will include the teaching of modern public health methods at the training center established at Chungking for physicians and other public health personnel from all parts of China Although proceeding directly to Chungking Dr Peterson will also travel throughout China as visiting lecturer to teach in the various regional centers which are now being developed This educational program will emphasize the control of tuberculosis and other communicable diseases

## NORTH CAROLINA

**Appointment to Medical Care Commission**—Dr Clement C. Clay, Atlanta, Ga, recently relieved of active duty in the medical corps of the U S Naval Reserve has been appointed executive secretary of the North Carolina Medical Care Commission according to the *North Carolina Medical Journal*

**New Professor of Psychiatry**—Dr Lloyd J Thompson formerly associate clinical professor of psychiatry and mental hygiene of the department of psychiatry Yale University School of Medicine New Haven and recently chief consultant in psychiatry for the European theater during the war has been named professor of psychiatry and director of the department of psychiatry at Bowman Gray School of Medicine Winston-Salem Drs John P Davis Winston Salem Charles H Reid Jr, Winston Salem and Joseph B Stevens Greensboro have been appointed assistants in medicine at the school Dr Thomas T Mackie New York delivered the commencement address at Bowman Gray March 24

## OHIO

**Lecture on Planned Parenthood**—Dr Walter R Stokes Washington D C will address the Maternal Health Association in Cleveland during its eighteenth meeting at the Hotel Carter May 10 on 'New Horizons in Parenthood Planning'

**Appointments at Ohio State**—New appointments to the staff of the Ohio State University College of Medicine Columbus include those of Dr Robert M Zollinger Boston as professor of clinical surgery Dr Joseph L Morton assistant professor of roentgenology and Dr Arthur M Culler Dayton associate professor of ophthalmology in charge of postgraduate education and research

**State Mental Hygiene Association Formed**—On March 6 the Ohio State Mental Hygiene Association was formed with Rev Dores R Sharpe LL D Cleveland as chairman The object of the association will be to promote mental hygiene in the state as well as to urge the promotion of adequate state facilities for the care of the mentally ill according to the *Cincinnati Journal of Medicine*

**Fifty Years of Practice**—Dr Ernest W Riemenschneider, said to be the first Ford owner in Cleveland completed fifty years in the practice of medicine recently——Dr John C Henshaw Warren coroner of Trumbull County for thirty years observed his fiftieth year in the practice of medicine March 22——Dr Emma F Y Owsley London was guest of honor at a reception March 17, in honor of her completion of fifty years of practice.

## TENNESSEE

**Department of Anesthesiology Created at Vanderbilt**—A new department of anesthesiology has been established at Vanderbilt University School of Medicine Nashville with Dr Benjamin H Robbins associate professor of pharmacology in charge.

**Personal**—Dr Everett E Carrier Knoxville has been appointed health officer of Giles County serving part time in charge of the unit in Lincoln County——Mr V O Foster has been appointed assistant secretary of the Tennessee State Medical Association with offices in Nashville

**Dr Hutcheson to be Retained as Health Commissioner**—Dr Robert H Hutcheson Nashville will be retained as state commissioner of public health, the Nashville *Banner* reported March 20 Dr Wilson C Williams Nashville who held the position before he entered army service was to be offered another post in the department it was stated

## WEST VIRGINIA

**Coordinating Committee for Health Education**—The state health department and the department of education have jointly set up a coordinating committee for health education The principal objectives are to study recent developments and trends in health education including school community organization for health education and health welfare community resources for health education functional activities for students in health education, and health education materials Health education workshops are being offered at the summer terms at West Virginia University Marshall College West Virginia State College and Bluefield State College Undergraduate and graduate credit on renewal of teacher's certificates will be given for the two weeks spent in the workshops Consultants will be specialists from the state health department, the department of education and various colleges The courses offered are designed to aid school administrators nurses community leaders and teachers interested in health education to obtain assistance and guidance in developing plans for improving health programs in accordance with modern health education procedures Mrs Ruth J Frantz publicity director of the bureau of public health education and public relations of the state health department and Miss Katherine Steinbicker, consultant for the community health service project of the department of education are co-chairmen of the new committee

**State Medical Meeting**—The seventy-ninth meeting of the West Virginia State Medical Association will be held at the Prichard Hotel Huntington May 13 15, under the presidency of Dr Andrew E Amick Charleston who will speak on Up to Now ' Among the speakers will be

Dr Roy C Spurling Louisville Intervertebral Disk Surgery
Dr Robert Cholsot New York Pediatric Allergy
Dr Hugh A Bailey Charleston Spontaneous Rupture of the Normal and Abnormal Spleen
Dr James M Hutcheson Richmond Va The Evolution of the Art of Medicine
Drs Ray M Bobbitt and Ivan R Harwood Huntington Some Observations on Renal Neoplasms
Dr William M Sheppe Wheeling The Place of Penicillin in the Treatment of Syphilis
Major Victor H Kugel M C Ashford General Hospital Clinical and Electrocardiographic Observations in Cardiac Surgery
Col James C Harding M C Washington D C Medical Care of Veterans
Dr Chevalier I Jackson Philadelphia Bronchoscopy as a Diagnostic Aid in Diseases of the Chest
Dr Arthur C Corcoran Cleveland The Advances in Treatment of Hypertension and Renal Disease
Col James F Ash Washington D C Filarial Infections
Dr Frank H Krusen Rochester Minn Physical Rehabilitation in Civilian Practice
Dr Thaddeus L Montgomery Philadelphia Abortion Etiology Prevention and Treatment
Dr John E Cannaday Charleston Hernia
Dr Andrew C Ivy Chicago The Physiology of Respiratory Diseases
Dr Ralph Adams Boston Recent Progress in Thoracic Surgery
Lieut Col Howard A Swart M C Newton D Baker General Hospital Reconstructive Surgery in an Army General Hospital
Dr John H Mitchell and Rev Fr Charles Curren Ph D Columbus Ohio Nondirective Psychotherapy

Governor Clarence W Meadows Charleston will address one session on Whose Responsibility and Dr George F Lull Secretary and General Manager American Medical Association Chicago another session on Trends in the Modern Practice of Medicine

## PUERTO RICO

**Industrial Hygiene Program**—Mr J J Bloomfield senior sanitary engineer industrial hygiene division U S Public Health Service Washington, D C recently left for Puerto Rico to survey the industries and make recommendations for an industrial hygiene program In connection with the proposed program the Insular Health Department has under scholarship at the University of Michigan a graduate civil engineer who will complete a year's training in June 1946 in the industrial hygiene aspects of sanitary engineering On completion of his training at Ann Arbor he will spend approximately one or two months with the Bureaus of Industrial Hygiene of the state of Michigan and the Detroit City Health Department before returning to Puerto Rico to serve in the proposed industrial hygiene program

**Bills Signed by the Governor**—The following bills of interest to the medical profession which form part of the vast public improvements program to be carried out in Puerto Rico during the next six years, were signed by Gov Rexford G Tugwell

Act No 28 an act to appropriate the sum of $518 000 out of any available funds in the insular treasury not otherwise appropriated so that the commissioner of the interior may construct in harmony with the recommendations of the commissioner of health new municipal hospitals and type C medical centers and reconstruct and extend municipal hospitals and urban medical centers now existing in Puerto Rico to direct the auditor and the treasurer of Puerto Rico to place the sum appro-

priated at the disposal of the commissioner of health and the commissioner of the interior of Puerto Rico to carry out the dispositions of this act

Act No 27 an act to appropriate the sum of $221 000 out of any available funds in the insular treasury not otherwise appropriated for the construction of rural medical health centers in Puerto Rico These rural medical centers shall pass on their construction to the jurisdiction of the Department of Health of Puerto Rico

Act No 38, an act to appropriate the sum of $2 100 000 for the construction of hospitals and medical centers in Puerto Rico to provide the manner in which the funds shall be expended and to accept federal aid for the hospitals facilities construction program

**West Indies Conference** —The West Indies conference called by the Anglo-American Caribbean Commission an international organization created by the late President Roosevelt during the war, ended March 12 at St. Thomas, Virgin Islands, after adopting a series of resolutions to recommend that the metropolitan governments of Great Britain, the United States, France and the Netherlands adopt measures to develop industrialization to increase employment and living standards of the people of some fifteen insular possessions of these nations in the Caribbean area One of the resolutions passed by the group calls for adequate measures to improve the health of the people on which prosperity to a great extent, depends on the West Indies Extension of minimum wage rates and enforcement of legal employment standards for both adult and child labor are also major policy recommendations A conference on industrialization plans will be held no later than February 1947, with the participation of delegates from Canada and those Latin American countries bordering the Caribbean sea When the sanitary instruction theme on the agenda was discussed at the conference it was revealed that the Caribbean possessions under the American flag are greatly interested in problems arising from venereal diseases, while the French islands in the Caribbean area, consider as their principal problems those of control of leprosy and smallpox Representatives of the French Guiana colony announced the existence of a leprosy school exclusively dedicated to instruction of boys affected with this malady, where about 45 students carry out experiments The school serves a population of about 24 000 inhabitants for which two hospitals are functioning in addition to several medical centers covering all the country Dr Raymond A Vonderlehr chief of the U S Public Health Service in Puerto Rico explained the program coordinated by his office and the Health Department of Puerto Rico and medical officials of the Virgin Islands established during the past two years This program also functions with the cooperation of the University of Puerto Rico, the department of labor and the planning board of this island Great progress has been attained in the venereal disease control methods The School of Tropical Medicine of San Juan serves as the training center for this organization

## GENERAL

**Rheumatism Association** —The American Rheumatism Association will hold its 1946 meeting at the Commodore Hotel, New York, May 24 25, instead of in conjunction with the annual session of the American Medical Association as has been customary

**Charles Parsons Honored** —The American Chemical Society at a dinner during its meeting in Atlantic City April 10, presented Charles L Parsons, Sc D, Washington, D C, with a gold medal for distinguished service to chemistry Dr Parsons has been secretary of the American Chemical Society since 1907 and for the last fourteen years has also been business manager

**Ten Year Index on Industrial Hygiene and Toxicology** —The *Journal of Industrial Hygiene and Toxicology* announced that a ten year index is in preparation It will cover volumes eighteen to twenty-seven running from 1936 to 1945 The index is priced at $15 but a discount of 10 per cent is allowed on all orders received before publication November 1 Additional information may be obtained from the *Journal of Industrial Hygiene and Toxicology*, Mount Royal and Guilford avenues, Baltimore 2

**Special Society Elections** —At the thirty-fourth meeting of the American Society for Pharmacology and Experimental Therapeutics in Atlantic City, March 11 15, Dr Maurice H Seevers, Ann Arbor, Mich, was elected president Other officers include Drs Harry B Van Dyke New York, vice president, Harvey B Haag, Richmond, Va. secretary, and McKeen Cattell New York, treasurer ——Dr Paul R Cannon, Chicago was elected president of the American Society for Experimental Pathology at its meeting in Atlantic City, March 12 and Dr Douglas H Sprunt, Memphis vice president Frieda S Robscheit-Robbins, Ph D, Rochester, N Y, is secretary-treasurer

**Medical Director for Glass Company**—Dr Charles F Shook M C, on terminal leave from service in the army, has been named medical director of the Owens-Illinois Glass Company, a newly created position Dr Shook graduated at Creighton University School of Medicine, Omaha, in 1916. During his army career he graduated from the Army Sanitary School the School of Aviation Medicine and the Army Industrial College He spent thirteen years in the military service as a flight surgeon and ten years in New York and Washington in procurement planning for medical supplies and equipment. Dr Shook was deputy chief surgeon to Major Gen Paul R Hawley for the European theater His most recent assignment was closing hospitals in France, England and Belgium and disposal of excess supplies

**A Hundred Thousand Dollars for Pediatric Study**—The Rockefeller Foundation has given more than $100,000 to the American Academy of Pediatrics to help finance a nationwide study of child health services Dr John P Hubbard, instructor in pediatrics (on leave), Harvard Medical School, Boston, has been appointed executive director of the study under the auspices of a specially appointed committee (THE JOURNAL, February 2, p 298) The two year survey will seek detailed information on pediatric care from all hospitals, including general pediatric, maternity and special hospitals such as convalescent homes and tuberculosis sanatoriums It will also examine existing health services such as child health conferences, school health services, child guidance clinics, immunization programs and public health nursing facilities Information will be gathered from individual pediatricians, general practitioners and specialists who care for children Each community will be studied as to the number of physicians it has and essential medical procedures, such as transfusions, administration of intravenous fluids and laboratory facilities, that are available. As part of an extensive evaluation of pediatric education in this country, a study will be made of the sixty-six medical schools to determine the quantity and quality of pediatric training Dr Hubbard pointed out that the factual data collected will be used by the American Academy of Pediatrics as a basis on which recommendations or medical care programs may be made.

**Research in Psychosomatic Problems**—The American Society for Research in Psychosomatic Problems will hold its 1946 meeting at the Hotel Pennsylvania, New York, May 11-12, under the presidency of Dr Roy G Hoskins Among the speakers will be

Brigadier Gen William C Menninger M C Psychosomatic Medicine Somatization Reactions
Dr Roy R Grinker Chicago Applications of Military Experience to the Theory and Therapy of Acute Psychosomatic States
Dr M Ralph Kaufman New York Health as an Expression of Anxiety in a Combat Unit
Dr Henry H Jordan New York Lower Back Pains
Dr Samuel A Sandler Jersey City N J Camptomia, or the Functional Bent Back
Dr Jack R Ewalt Galveston Texas The Phantom Limb
Roger G Barker Ph D, Stanford University Calif The Somatopsychologic Problem
Dr Brunhilde Bruch and Irma Hewlett M S Baltimore, Psychologic Aspects of the Medical Management of Diabetes in Children
Dr Walter W Hamburger Jr Cincinnati Psychosomatic Medicine in an Army Hospital in India
Comdr Meyer A Zeligs (MC) U S N R A Psychosomatic Study of Central Angiospastic Retinopathy in Military Personnel
Dr Edward Weiss Philadelphia Psychosomatic Aspects of Fibrositis
Drs John A P Millet Harold A Abramson and Sadie H Zaidens all of New York A Psychosomatic Evaluation of the Dermatoses

At the annual dinner the speakers will be Dr Bertram D Lewin, New York, on "New Advances in Psychosomatic Investigative Techniques" and Dr Carl A L Binger, New York on 'The Epic of Bclawolff or The Slaying of the Psycho Some"

**Fellowships Available by Medical Research Fund**—The Life Insurance Medical Research Fund announces postgraduate and student research fellowships In the first classification the fellowships are open to residents of the United States and Canada who possess an M D or Ph D degree or the equivalent Holders are expected to devote full time to research For the present preference will be given to those who wish to work on fundamental problems broadly related to cardiovascular function and disease The annual stipend varies, but as a rule is between $2 500 and $3 000 Larger amounts may be granted in individual instances for special reasons Fellowships are granted for one year but may be renewed for one or two years They may begin at any time Applications for grants to be held for the academic year 1946 1947 must be received before August 1 Such applications received before May 15 will be acted on in June, those received later will be acted on in September For subsequent academic years applications must be received before January 1, action will be taken in February Student research fellowships are open to residents of the United States and Canada who have completed at least one year of medical school but who are not

experienced investigators Holders are expected to devote at least three fourths of their time to research under the direction of an experienced investigator For the present, preference will be given to those who wish to work on fundamental problems broadly related to cardiovascular function and disease Students will necessarily spend an extra year in obtaining the M D degree The annual stipend varies but as a rule is between $1,500 and $2 000 Fellowships are granted for one year They may begin at any time Applications for grants must be made by a sponsor who is normally the investigator under whom the applicant will work Applications for grants to be held in the academic year 1946 1947 must be received before August 1 Such applications received before May 15 will be acted on in June, those received later will be acted on in September For subsequent academic years applications must be received before April 15 action will be taken in June Further information may be obtained from Dr Francis R Dieuaide scientific director Life Insurance Medical Research Fund 333 Cedar Street New Haven 11, Conn

**College of Physicians**—The twenty seventh session of the American College of Physicians will be held at the Convention Hall Philadelphia May 13 17, under the presidency of Dr Ernest E Irons Chicago Among the speakers will be

Drs George D Gammon and John H Stokes Philadelphia Penicillin in Neurosyphilis
Dr Roger I Lee Boston Geriatrics
Dr Edward Weiss Philadelphia Psychogenic Rheumatism
Dr Lester R Dragstedt Chicago Section of the Vagus Nerves to the Stomach in the Treatment of Peptic Ulcer
Drs Henry J Tumen James F Monaghan and Emil Jobb all of Philadelphia Hepatic Cirrhosis as a Complication of Ulcerative Colitis
Dr Edwin B Astwood Boston Use of Thiouracil in Hyperthyroidism
Dr Arthur L Watkins Boston Prescription of Physical Medicine by the Internist
Dr Francis G Blake New Haven Conn Tsutsugamushi Disease (Scrub Typhus) A Review of Recent Observations
Drs Ramon M Suarez San Juan P R Tom D Spies Cincinnati and Birmingham Ala and Ramon M Suarez Jr San Juan P R The Use of Folic Acid in Sprue
Drs Thomas Francis Jr and Jonas E Salk both of Ann Arbor Immunization Against Influenza

Morning lectures will be given on blood banks and storage of blood, the management of renal dysfunction nitrogen metabolism in chronic disease liver function in hepatitis schistosomiasis diverticula of the gastrointestinal tract coronary artery disease in 18 39 year age group and peripheral vascular disease There will be panel discussions on antibiotic therapy treatment of thyroid disease treatment of liver disease tropical medicine in general practice, medical viewpoints of cardiovascular surgery treatment of syphilis electrocardiography treatment of peptic ulcer treatment of hypertension diabetes allergy, peripheral vascular disease arthritis hematology blood transfusion and blood substitutes and vitamins The program also will include clinics at the various local hospitals and a symposium on plasma fractions

**Society of American Bacteriologists**—The forty-sixth general meeting of the Society of American Bacteriologists will be held at the Book Cadillac Hotel Detroit May 21-24 under the presidency of Dr James Craigie Toronto Canada and under the sponsorship of the Michigan branch of the society The first session will be devoted to the teaching of bacteriology at the graduate and professional levels with the following speakers

*William Burrows Ph D Chicago Basic Training in Bacteriology*
Dr Walter J Nungester Ann Arbor Bacteriologic Training for Professional Students
J Howard Meuller Ph D Boston Graduate Training in Bacteriology
Dr Francis B Gordon Chicago The Teaching of Viral and Rickettsial Diseases
Dr Donald S Martin Durham N C The Teaching of Mycology as a Part of Medical Bacteriology
Harry E Morton Sc D Philadelphia Enlivening and Clarifying the Instruction in Bacteriology by the Use of Audiovisual Aids

Among the numerous speakers on the general program are

Guy P Youmans Ph D Chicago and William H Feldman D V M Rochester Minn The Sensitivity of Tubercle Bacilli in Vitro to Streptomycin
Albert Kelner Philadelphia A Survey of Antibiotic Production by Representative Aspergilli Penicillia and Other Fungi from a Culture Collection
Miriam O Lipman A M James A. Coss M S and Ralph H Boots all of New York Changes in the Bacterial Flora of the Throat and Intestinal Tract During Prolonged Oral Administration of Penicillin
Robert M Pike Ph D Dallas Mucoid Polysaccharide Production Encapsulation and Colony Morphology of Carrier Strains of Group A Streptococci
John H Hanks Ph D Culion Philippines The Fate of Leprosy Bacilli in Tissues Cultivated from Leprous Lesions
Dr Charles A Evans Minneapolis, Intraocular Infection with the Viruses of Ornithosis and Feline Enteritis
Dr Charles F Pait Jr John F Kessel Ph D and Philip Grossman all of Los Angeles The Neutralization of the Mouse Adapted Poliomyelitis Virus by the Serums of Children
Isabel M Morgan Ph D Baltimore Allergic Encephalomyelitis in Monkeys in Response to Injection of Normal Monkey Cord
*Elizabeth W St John S D and Dr Francis B Gordon*, both of Chicago Studies on Antigenic Relationships Within the Psittacosis Lymphogranuloma Group of Viruses
MacDonald Fulton Ph D and Martha L Chilton both of Galveston Texas The Classification of Paracolon Bacilli Isolated from Man
Drs Sara E Branham and Karl Habel both of Bethesda Md Preparation and Evaluation of an Irradiated Toxoid from the Toxin of Shigella Dysenteriae
Albert Milzer Ph D and Dr Sidney O Levinson both of Chicago Production of Potent Inactivated Vaccines with Ultraviolet Irradiation V Active and Passive Immunization with Lymphocytic Choriomeningitis Vaccine
Dr Paul R Cannon Chicago Immunologic Aspects of Protein Metabolism
Joseph Hejna B S and Dr Leslie R Hedrick, Ph D both of Chicago Effect of Growth of Micro Organisms on Formation of Peroxid Free Fatty Acids Aldehydes and Ketones from Oils with Different Iodine Numbers
Reuben L Kahn Sc D Ann Arbor Studies on Biologically Universal Serum Reactions (Nonsyphilitic) with Liquid Antigens
Selman A Waksman Ph D Walton B Geiger I h D and S R Green all of New Brunswick N J The Inactivation of Streptomycin and its Practical Applications
Alexander Hollaender Ph D Bethesda Md The Use of Ultraviolet Radiation in Air Disinfection

**Support for National Science Foundation Bill**—On April 16 the Committee Supporting the Bush Report sent an appeal to Congress to enact S 1850 the National Science Foundation Bill, known as the Kilgore-Magnuson bill The appeal is on behalf of the 5 000 scientists and others who signed or endorsed a letter sent to the President dated Nov 24 1945 and reads as follows

For the reasons stated in the Bush Report and in the Report on Science Legislation of the Committee on Military Affairs we are in favor of Federal support for scientific research and education We are in favor of a National Science Foundation We are satisfied that given appointments *by the President to the National Science Board solely on the* basis of demonstrated capacity and fitness the Foundation described in S 1850 will promote and protect the interests of science and will thus serve the public welfare

While S 1850 is a compromise it is a compromise on which most scientists have agreed Most of the principles for which this Committee has consistently stood have been accepted Thus there is provision for a strong National Science Board Though the Administrator will be appointed by the President the President must consult with and receive the recommendations of the National Science Board concerning the appointment And the Administrator must consult and advise with the Board *on* all matters of major policy program or budget The Board has the power to make recommendations to the President and to the Congress independently of the Administrator The advice and approval of the Board are required for appointment to the Divisional Scientific Committees the chairmen of which will serve as members of the Board Except in the case of National Defense there is no provision for *ex officio* appointments either to the Board or to the Divisional Committees The Foundation will be endowed with powers sufficient to initiate and carry out an effective program in aid of scientific research and education

In endorsing S 1850 and appealing for its prompt enactment we recognize that many scientists doubt the wisdom of (a) the inclusion of the social sciences in *this* legislation (b) the provisions affecting the Government s patent policy, and (c) the arrangement for mandatory geographical distribution of funds to state supported and land grant colleges While many would be better satisfied if these provisions were dropped from the legislation we should regard protracted delay or failure to enact this legislation would be far more prejudicial to the public interest than the inclusion of the provisions objected to

We believe that the creation of a National Science Foundation to support fundamental scientific research and the education of scientists is of the utmost importance for the health security and welfare of the nation Moved by this conviction and recognizing the public responsibility of men of science in these matters we have to the full extent of our ability, endeavored to aid the Congress in the formulation of workable legislation Believing the matter to be of great urgency we recently joined with other non partisan groups in an appeal to the Chairman and members of the Senate Committee on Military Affairs to report a bill on which the majority of scientists could agree S 1850 is the result. We endorse this bill and appeal now to the Congress as a whole to create a National Science Foundation by the enactment of S 1850 before the end of the present session

Members of the committee include

Roger Adams Ph.D Urbana Ill
William P Anslow Jr Ph D New York
Boris A Bakhmeteff D E New York
George W Beadle Ph D Stanford University Calif
Dr Francis G Blake New Haven Conn
Isaiah Bowman L L D Baltimore
Detlev W Bronk Ph D Philadelphia
Dr William B Castle Boston
Alfred Chanutin Ph D Charlottesville
Walter C Coffey L L D Minneapolis
Robert E Doherty L L D Pittsburgh
Edward A Doisy Ph D St Louis
Lee A DuBridge Ph D Rochester N Y
F Malcolm Farmer M E New York
Dr Herbert S Gasser New York
Dr Ernest Goodpasture Nashville Tenn
Farnham P Griffiths San Francisco
Robert F Griggs Ph D Washington D C
Caryl P Haskins Ph D New York
Dr Andrew C Ivy Chicago
Chauncey D Leake Ph D Galveston
Dr Ewen M MacEwen Iowa City
Charles E MacQuigg E M Columbus Ohio
Dr Hyrum L Marshall Salt Lake City
Carl S Marvel Ph D Urbana Ill
John S Nicholas Ph D New Haven
Dr Alton Ochsner New Orleans
J Hugh O Donnell Ph D Notre Dame Ind.
Dr Walter W Palmer New York
Linus C Pauling Ph D Pasadena Calif
Alfred N Richards Sc D Philadelphia
Dr Homer W Smith Rochester N Y
Dr James J Waring Denver
Bethuel M Webster New York
Dr Lewis H Weed Baltimore

# Deaths

**Waid Edwin Carson** ⊕ Pittsburgh Johns Hopkins University School of Medicine Baltimore 1907, professor of ophthalmology at the University of Pittsburgh School of Medicine specialist certified by the American Board of Ophthalmology member of the American Academy of Ophthalmology and Otolaryngology Pittsburgh Academy of Medicine the Pittsburgh Ophthalmological Society and the Association for Research in Ophthalmology fellow of the American College of Surgeons served in the U S Naval Reserve during World War I on the staffs of Western Pennsylvania Hospital Eye and Ear Hospital Magee Hospital and the Presbyterian Hospital where he died April 10 aged 69 of heart disease

**Gerhard A Bading,** Milwaukee Rush Medical College Chicago, 1896 born in 1870 formerly on the faculties of the old Milwaukee Medical College and the Wisconsin College of Physicians and Surgeons and regent at the Marquette University served during World War I health commissioner from 1906 to 1910 at one time mayor, for many years United States minister to Ecuador formerly attending surgeon at the Johnston Emergency Hospital and consulting surgeon at the Milwaukee County Hospital served as resident physician at the Milwaukee Hospital where he died April 11, aged 75

**John Howard Acheson,** New York, University of Buffalo School of Medicine 1900 member of the American Medical Association served during World War I, formerly affiliated with the Manhattan Eye and Ear Hospital and the New York Polyclinic Medical School and Hospital died at his home in New Rochelle January 18 aged 70 of pulmonary embolism

**Rocco Marcus Antonelli,** Youngstown, Ohio Eclectic Medical College Cincinnati 1919, died in the Southside unit of the Youngstown Hospital January 2, aged 57 of cerebral embolism and cardiac fibrillation

**Russell S Beam,** Lumberton N C Jefferson Medical College of Philadelphia 1912 born in 1887, member of the American Medical Association fellow of the American College of Surgeons specialist certified by the American Board of Otolaryngology served in France during World War I, chief of the eye, ear nose and throat department Thompson Memorial Hospital served on boards of several state institutions president of the National Bank of Lumberton, died January 9 aged 58 of coronary thrombosis

**Charles Howard Bellamy,** Dallas Texas Physio Medical College of Indiana Indianapolis 1897 member of the American Medical Association on the staffs of the Baylor University Hospital and St. Paul's Hospital where he died January 9 aged 72, of coronary occlusion

**Martin W Bisson** ⊕ Charleston Ill Chicago Homeopathic Medical College 1902 past president of the Coles Cumberland Counties Medical Society on the staff of the M A Montgomery Memorial Sanitarium killed January 1 aged 68 when the automobile in which he was driving was struck by a train

**Barton Brewer Bridge,** Albert City Iowa Queen's University Faculty of Medicine Kingston Ont Canada 1900 past president of the Buena Vista County Medical Society, life member of the Iowa State Medical Society served as local town health officer and member of the school board died in Storm Lake December 23 aged 74, of cerebral hemorrhage following an automobile accident

**John I Brockbank,** Du Bois Pa Baltimore University School of Medicine 1886 member of the American Medical Association twice elected county coroner for eighteen years health officer of Du Bois and member of the school board charter member of the city public library commission on the staff of the Du Bois Hospital where he died January 9 aged 87 of anemia and arteriosclerosis

**Elmer E Burns,** Kirby Ohio Columbus Medical College 1890 served as mayor of Kirby and member of the board of education died in the McKittrick Hospital, Kenton, January 6, aged 80 of hernia

**Oscar Piece Chapman,** Port Royal Ky Hospital College of Medicine Louisville, 1902 member of the American Medical Association president of the Henry County Medical Society served during World War I, died in the U S Marine Hospital Louisville, January 8 aged 71 of cerebral hemorrhage

**Josiah Coborn** ⊕ Hopewell Junction, N Y McGill University Faculty of Medicine Montreal, Que, Canada 1907 served as health officer of the towns of East Fishkill and Beekman on the staff of the Vassar Brothers Hospital, where he died January 7, aged 68 of cerebral thrombosis

**James Bronson Conant,** Amsterdam, N Y Columbia University College of Physicians and Surgeons, New York, 1896 member of the American Medical Association, fellow of the American College of Surgeons, served as county coroner, past president of the staff of the Amsterdam City Hospital, on the staff of St Mary's Hospital, died January 5, aged 75, of cerebral hemorrhage

**Isaac Fory Crosby,** Pasadena, Calif College of Physicians and Surgeons of Chicago, 1889 member of the American Medical Association, past president of the Southwestern Iowa Medical Association member of the American Association of Railroad Surgeons, for many years surgeon for the Rock Island Railroad died December 19, aged 81 of bronchopneumonia, cerebral thrombosis and Parkinson's disease

**Howard Irving Davenport,** Auburn, N Y , Johns Hopkins University School of Medicine, Baltimore, 1905, member of the American Medical Association, past president of the Cayuga County Medical Society, associated with the Cayuga County Laboratory on the staffs of the Mercy Hospital and the Auburn City Hospital, where he died January 9, aged 67, of coronary occlusion

**Louis Belfair Derdiger,** Minneapolis, Maryland Medical College, Baltimore 1909 College of Physicians and Surgeons of Chicago School of Medicine of the University of Illinois, 1910 formerly affiliated with the Veterans Administration Facility died January 4, aged 58 of myocardial and renal insufficiency

**Gustave Adolf Everson** ⊕ Rolfe Iowa, State University of Iowa College of Medicine, Iowa City 1910, secretary of the Pocahontas County Medical Society, died January 6, aged 61, of coronary occlusion

**James Henry Flynn,** Troy, N Y Albany Medical College, 1899, member of the American Medical Association for many years health commissioner, past president of the Rensselaer County Medical Society, served as president and vice president of the New York State Health Officers Association on the staffs of the Leonard Troy and Samaritan hospitals, died January 9, aged 72 of coronary thrombosis

**Louis Bernard Goldberger,** New York Long Island College Hospital Brooklyn 1910 member of the American Medical Association on the staffs of the Community and Lincoln hospitals, died December 2, aged 56 of coronary disease

**Ernest Flint Green,** Seal Beach, Calif Gross Medical College Denver 1895, died December 31, aged 75, of cerebral hemorrhage and hypertension

**Alys Abigail Bixby Griff,** Portland, Ore University of Oregon Medical School Portland, 1902 died January 2, aged 65 of cardiorenal disease

**Henry Young Harper,** Oakhill, Ala , University of Louisville School of Medicine, 1933, began active duty as a first lieutenant in the medical corps, Army of the United States, in August 1942 relieved from active duty in January 1944, died in Birmingham January 13, aged 37

**Ernest Samuel Heilman** ⊕ Ida Grove Iowa College of Physicians and Surgeons of Chicago School of Medicine of the University of Illinois, 1901, died January 8 aged 66, of cerebral hemorrhage

**John Carroll Johnson,** Hamilton Ala Hospital College of Medicine, Louisville 1892 member of the American Medical Association, served as county health officer died in Louisville, Ky January 3 aged 84, of chronic interstitial nephritis

**Lewis C Jones,** Madison Station, Miss Louisville (Ky) Medical College 1886, died December 29, aged 84, of arthritis

**Grant M Kistler,** Lansford, Pa Hahnemann Medical College and Hospital of Philadelphia, 1889, last surviving member of the original board of directors of the Citizens National Bank, serving as its president for many years, died in the Coaldale State Hospital Coaldale, January 3, aged 80, of strangulated inguinal hernia

**Richard Maury Leake** ⊕ Laramie, Wyo , Memphis (Tenn) Hospital Medical College, 1901, served as health officer of Albany County, died in Denver, January 7, aged 67, of coronary occlusion

**Clarence Long,** Hurtsboro Ala , Chattanooga Medical College, 1901 member of the American Medical Association, died in the City Hospital, Columbus, Ga , December 13, aged 70, of heart disease

**Joseph Francis Long,** Brooklyn, Long Island College Hospital, Brooklyn 1895, served overseas during World War I and on the staffs of the Kings County and Brooklyn hospitals, died January 4, aged 71, of coronary embolism

**Francis McConaughy,** Somerville N J , New York Homeopathic Medical College and Hospital New York 1890, member of the American Medical Association past president of the Somerset County Medical Society on the staff of the Somerset Hospital died in Ridgewood January 13, aged 82, of chronic myocarditis

**Carl Ray McFarland,** Long Beach Calif Ensworth Medical College St Joseph Mo 1905, died in Pomona December 10 aged 65 of lateral sclerosis

**Edwin Bruce McKay,** Detroit, Detroit College of Medicine 1896, on the auxiliary staff of the Grace Hospital where he died January 17, aged 75 of hypertensive cardiovascular disease

**Gerald Stone McShane** ⊕ Spring Valley Ill Loyola University School of Medicine Chicago 1921 served during World War I at one time secretary treasurer of the Bureau County Medical Society, formerly chief medical director at the Green River Ordnance Plant, Dixon, formerly on the staff of St Margaret's Hospital, died January 11 aged 52, of coronary occlusion

**Virgil Elwood Massey** ⊕ Huntingdon Tenn , Vanderbilt University School of Medicine Nashville 1914 past president of the Tri County Medical Association and the West Tennessee Medical and Surgical Association alderman of the town of Huntingdon served overseas during World War I formerly member of the school board at one time affiliated with the Knoxville (Tenn) General Hospital past president of the Lions Club died January 13, aged 54 of coronary thrombosis

**Michael Bernard Milan,** Providence R I Bellevue Hospital Medical College New York 1892, member of the American Medical Association died January 20 aged 83 of arteriosclerosis

**Warren Jacob Miller,** Miami Fla Jefferson Medical College of Philadelphia 1901 at one time a medical missionary died in the Miami Retreat January 16 aged 75, of arteriosclerosis

**Andrew J Montgomery,** Resaca Ga Atlanta Medical College, 1897, died January 3 aged 73 of heart disease

**Felix Moraux,** Green Bay Wis Wisconsin College of Physicians and Surgeons Milwaukee 1898 died in St Mary's Hospital January 29 aged 71 of coronary occlusion

**Leroy Morris Jr,** Trenton N J , Howard University College of Medicine Washington D C 1925 served during World War I died in the Jersey City Medical Center January 8 aged 49 of carcinoma of the stomach

**Stanley Clifford Mulholland,** Santa Barbara Calif University of Minnesota Medical School Minneapolis 1923 member of the American Medical Association on the staffs of St Francis Hospital and the Cottage Hospital where he died March 4 aged 52 of malignant hypertension

**Julius Noerdlinger,** Chicago Julius-Maximilians-Universität Medizinische Fakultat Wurzburg Bavaria Germany 1915, interned at the Michael Reese Hospital died suddenly January 20 aged 56 of coronary occlusion.

**William Frederick Nolting,** Brooklyn Long Island College Hospital Brooklyn 1895 member of the American Medical Association served on the local draft board during World War I died January 25, aged 77 of arteriosclerosis

**William Scott Payne** Des Moines Rush Medical College Chicago 1889 died recently aged 83 of prostatic hypertrophy

**Alfred Potter** ⊕ Brooklyn, Long Island College Hospital Brooklyn 1902 emeritus professor of dermatology at his alma mater specialist certified by the American Board of Dermatology and Syphilology consulting dermatologist, Mary Immaculate Hospital, Jamaica Long Island College Kings County Norwegian, Swedish Lutheran Brooklyn Eye and Ear St Giles and Brooklyn State hospitals found dead December 27 aged 65

**Richard Otis Preston,** Topeka Kan Kansas Medical College Medical Department of Washburn College 1911 served during World War I, died December 30 aged 60 of coronary thrombosis

**Alva C Puckett,** Fairfield Ill Physio Medical College, Cincinnati 1880 died January 29 aged 93 of influenza

**Samuel Elmer Ralston,** Harlingen Texas Jefferson Medical College of Philadelphia 1889 died January 2 aged 83 of left ventricular failure

**Samuel Thompson Redgrave Revell** ⊕ Louisville Ga. University of Maryland School of Medicine Baltimore, 1905 past president of the Jefferson County Medical Society and the Sixth District Medical Society past vice president of the Medical Association of Georgia served during World War I died January 13 aged 65 of carcinomatosis

**Daniel W Relihan,** Smith Center Kan Rush Medical College, Chicago 1896 honorary member of the Kansas Medical Society member of the American Medical Association one of the original organizers charter member and past president of the Smith County Medical Society formerly county health officer served as United States examining surgeon Bureau of Pensions, died January 6 aged 91 of adenocarcinoma of the liver

**Eli Vestal Rice,** Polo Ill Kentucky School of Medicine, Louisville 1894, Hospital College of Medicine Louisville 1896, died in Sterling December 23, aged 86 of arteriosclerosis

**Edwin Rinear,** Traverse City Mich Medical College of Ohio, Cincinnati 1890 member of the American Medical Association in March 1922 joined the staff of the Traverse City State Hospital, where he served continuously until his retirement on Sept 30 1943 at which time he held the position of senior physician died in Mount Dora, Fla January 14, aged 79 of arteriosclerotic heart disease

**Albert W Rye,** Russellville Ark , Memphis (Tenn) Hospital Medical College 1900 died in St Mary's Hospital in December aged 70 of pneumonia

**Orris William Saunders** ⊕ Camden N J Jefferson Medical College of Philadelphia 1898 past president of the Camden County Medical Association served as city councilman coroner, county physician and member of the board of managers of the Camden County Tuberculosis Hospital Grenloch died January 13 in the Cooper Hospital aged 69 of virus pneumonia.

**John Curtis Sayers** ⊕ Reynoldsville Pa Medical Department of the Western University of Pennsylvania Pittsburgh, 1897, president of the school board and board of health, health officer formerly county coroner on the staff of the Maple Avenue Hospital Du Bois and the Adrian Hospital Punxsutawney, died December 31 aged 73 of coronary occlusion

**Arthur William Shaleen** ⊕ Hallock Minn University of Minnesota College of Medicine and Surgery Minneapolis 1902 served during World War I affiliated with the Kittson War Veterans Memorial Hospital died January 6 aged 67 of coronary thrombosis diabetes mellitus and hypertensive heart disease

**Martin Edward Staudenmayer,** Leachville Ark Georgia College of Eclectic Medicine and Surgery Atlanta 1914 died December 20 aged 60 of heart disease

**George Reimensnyder Teitsworth** ⊕ Kingston Pa Temple University School of Medicine, Philadelphia 1932 interned at the Wilkes-Barre General Hospital in Wilkes-Barre served a residency at the Hazleton State Hospital in Hazleton died December 31 aged 39 of acute cardiac failure

**George Hoy Tibbins,** Beech Creek, Pa Jefferson Medical College of Philadelphia 1890 member of the American Medical Association served during World War I died December 13 aged 77 of cerebral hemorrhage

**Eugene Wallace,** Norwich Kan College of Physicians and Surgeons of Chicago School of Medicine of the University of Illinois 1905 member of the American Medical Association owner and medical director of the Norwich Hospital, died January 10 aged 66 of coronary thrombosis

**Marcus Aurelius Weems** ⊕ East Columbia Texas University of Pennsylvania Department of Medicine, Philadelphia, 1890 died January 3 aged 78 of carcinoma of the prostate

**John Albert Welborn,** Glendale, Calif California Medical College San Francisco 1897 died in a local hospital December 27 aged 77

**Gottlieb Werley** ⊕ El Paso Texas Columbian University Medical Department Washington D C 1894 died December 27 aged 80 of generalized arteriosclerosis

**Thomas Dallas White** Orrstown Pa Medico Chirurgical College of Philadelphia 1893 member of the American Medical Association died December 16 aged 73, of coronary occlusion.

**Arthur Raymond Wilson,** Ingomar Pa University of Pennsylvania Department of Medicine Philadelphia 1892 died December 14 aged 81 of bronchopneumonia and arteriosclerosis

**John Samuel Wilson** ⊕ Monticello Ark University of Arkansas School of Medicine Little Rock 1913 specialist certified by the American Board of Radiology Inc , past president and secretary of the Drew County Medical Society, member of the Radiological Society of North America Inc., and the American College of Radiology secretary of the Arkansas Radiological Society served in France during World War I on the staff of the Mack Wilson Hospital where he died January 7 aged 66 of cerebral hemorrhage

**Charles William Yeck,** Pawnee Ill University of Louisville Medical Department, 1891 died in a hospital at Peoria January 15, aged 78 of cardiac decompensation

# DIED WHILE IN MILITARY SERVICE

**Morris Horn** ⊕ New York Fordham University School of Medicine, New York, 1921, interned at the Jersey City Hospital served on the staffs of Beth David Hospital and the Hospital for Joint Diseases and physician to the Columbia Grammar School for Boys began active duty as a captain in the medical corps, Army of the United States on July 14 1943 died in France, Dec. 9, 1945 aged 45, of coronary thrombosis

**Charles Frederic LeComte** ⊕ Passed Assistant Surgeon Lieutenant U S Navy, Madison Wis University of Oregon Medical School, Portland, 1932 U S Naval Medical School 1938 entered the U S Navy as a lieutenant (jg) on Aug 17, 1936 promoted to lieutenant interned at the Multnomah Hospital in Portland Ore died in Fukuoka Prison Camp in Japan Feb 3, 1945, aged 37, of acute enteritis

**George Maurice Lichtenstein,** Philadelphia, Temple University School of Medicine, Philadelphia 1936, interned at St. Joseph's Hospital began active duty as a first lieutenant in the medical corps, Army of the United States, on Dec. 5, 1940, promoted to captain, died Dec. 20, 1945, aged 32, of sarcoma

**William George McKay** ⊕ Colonel, M C U S Army Washington, D C Rush Medical College, Chicago, 1910, U S Army Medical School, 1922, served during World War I entered the medical corps of the regular army in 1920, died in the Brooke General Hospital Fort Sam Houston, Texas July 15 1943, aged 62, of carcinoma of the bladder

**William Henry Mathews,** Rochester N Y Harvard Medical School Boston, 1936 interned at the Strong Memorial and Rochester Municipal Hospitals where he served a residency, began active duty as a lieutenant (jg) in the medical corps of the U S Naval Reserve on Feb 7 1942, promoted to lieutenant and lieutenant commander, died on the U S S *Nashville* Dec. 13 1944 aged 33, following traumatic amputation of the lower extremities

**Walter Mauthe,** Whitefish Bay, Wis Marquette University School of Medicine Milwaukee, 1932 interned at St Mary's Hospital in Milwaukee, began active duty as a lieutenant in the medical corps of the U S Naval Reserve on Oct. 12, 1942 stationed for twenty-five months in the New Hebrides Islands as medical officer of a Seabee detachment promoted to lieutenant commander, died Nov 19 1945, aged 37, of coronary thrombosis

**Thomas White Meriwether,** Doddsville, Miss , University of Tennessee College of Medicine, Memphis, 1934 member of the American Medical Association, began active duty as a first lieutenant in the medical corps, Army of the United States, on March 9 1944, promoted to captain, went overseas in January 1945, served in three battles on Okinawa died in Seoul, Korea, Nov 24, 1945, aged 32, of spinal meningitis

**Louis Michaels** ⊕ Brooklyn, Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin Prussia Germany, 1935 served as assistant physician at the Unity Hospital began active duty as a first lieutenant in the medical corps Army of the United States in October 1942, promoted to captain, served in the medical gas division and lectured in England on the treatment of gas casualties, went to France shortly after the invasion and headed a surgical team in the Bastogne Bulge Battle won the Bronze Star died at Camp Upton, L I, Oct. 11 1945, aged 37

**Charles Marion Musso Jr,** Washington D C, Georgetown University School of Medicine, Washington, D C, 1935 served an internship and residency at the Georgetown University Hospital, diplomate of the National Board of Medical Examiners began active duty as a captain in the medical corps, Army of the United States (National Guard) on Feb 3, 1941, promoted to major, died in Mutzig France, Dec. 24, 1944, aged 37

**Francis Harold Needle,** Pontiac Mich , Wayne University College of Medicine Detroit, 1939 interned at the Highland Park (Mich) General Hospital served a residency at the Pontiac General Hospital, member of the American Medical Association, lieutenant, medical corps, U S Naval Reserve, stationed in the Aleutian Islands for eighteen months, sent to Texas for eight months before heading for the South Pacific in October 1944, killed in the Pacific area July 27 1945, aged 36, in a plane crash while serving as a flight surgeon with a rescue squadron.

**Vincent Carol Olshefski,** Mount Carmel Pa., Hahnemann Medical College and Hospital of Philadelphia 1939, member of the American Medical Association, interned at the Pottsville Hospital in Pottsville, began active duty as a lieutenant (jg) in the medical corps U S Naval Reserve, on Aug 12, 1942 promoted to lieutenant, served five months in the Pacific theater of war later navy physician for the V-12 unit at Bloomsburg State Teachers College, returned for reassignment in Norfolk, Va , where he died in the U S Naval Hospital, Sept. 2, 1945, aged 31 of acute myocarditis

**Joseph David Picciotti,** Rochester, N Y , Harvard Medical School Boston, 1928, member of the American Medical Association interned at St Mary's Hospital in Rochester began active duty as a lieutenant commander in the medical corps of the U S Naval Reserve on Jan. 18 1943 died in Cavite P I, Aug 29, 1945 aged 42

**William J Long Porcher** ⊕ Lieutenant Colonel, M C, U S Army, New York University of Minnesota Medical School Minneapolis, 1933, U S Army Medical School in 1937 interned at the City of Detroit Receiving Hospital in Detroit and University Hospital in Minneapolis, served a residency at the Northern Pacific Beneficial Association Hospital in St Paul, entered the medical corps of the regular army in 1936, died in England, Nov 24 1944 aged 35 of coronary occlusion

**Richard Martin Riley,** Albuquerque, N M , Northwestern University Medical School Chicago, 1935, member of the American Medical Association, interned at the Mercy Hospital in Chicago, began active duty as a captain in the medical corps Army of the United States National Guard on Jan 3, 1941, promoted to major died in the Southwest Pacific area July 9, 1943 aged 34, of amebic dysentery

**Jack Percy Scott** ⊕ Lieutenant Colonel M C U S Army Galveston, Texas, University of Texas School of Medicine, Galveston, 1935 entered the medical corps of the U S Army as a first lieutenant in May 1938, promoted through the various grades to that of lieutenant colonel, died near Ledo, India, March 4, 1945 aged 35, in an airplane crash

**Richard Edward Shea,** Willimantic, Conn., Yale University School of Medicine, New Haven, 1930 born in Willimantic Sept 28, 1906, member of the American Medical Association, interned at the Grace Hospital in New Haven and a residency at the Hartford Hospital in Hartford began active duty as a first lieutenant in the medical corps, Army of the United States on June 4 1943, served twenty-two months with the Army Air Force in India and Okinawa, where he was successively promoted to captain and major recently returned to the United States formerly affiliated with the Windham Community Memorial Hospital where he died Nov 6 1945, aged 39

**Irving Isadore Shure,** Bethel N C , Medical College of Virginia, Richmond, 1933, interned at the Trinity Hospital in Brooklyn, served a residency at the Beth Israel Hospital in Boston major, medical corps, Army of the United States, died near Port Patrick, Scotland, July 27, 1944 aged 35 in an airplane crash

**Barnett Solovioff,** New York, Marquette University School of Medicine, Milwaukee, 1942, diplomate of the National Board of Medical Examiners, interned at the Jewish Hospital in Brooklyn, began active duty as a first lieutenant in the medical corps, Army of the United States on Feb 17, 1943, promoted to captain died in Oneida Tenn May 6, 1944, aged 28, in an aircraft accident.

**Clarence Johnson Strand,** Amherst, Neb , University of Nebraska College of Medicine, Omaha 1932 interned at the Jennie Edmundson Memorial Hospital in Council Bluffs, Iowa, major medical corps, Army of the United States, serving at Bataan, where he was captured by the Japanese, died in the Philippine Islands Oct. 8 1944, aged 40, of heat exhaustion.

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

April 6, 1946

### Shortage of Physicians for the National Health Service

Addressing the Insurance Institute of London, Dr Charles Hill, secretary of the British Medical Association, said that there would not be enough doctors to provide at once the full service promised by the national health bill A statistical inquiry by the British Medical Association showed that the average person insured under national health insurance called on his doctor for more than five items in the course of the year For a considerable portion of the community there would be an increase in the demand for medical service comparable with that experienced on the introduction of national health insurance, which increased threefold the calls made on doctors by those who then came into insurance Dr Hill estimated that general practitioners alone would be called on to provide some 40 million extra items of service each year The shortage of consultants was likely to be even more serious Under the new service there would be a natural tendency for the public to ask for a consultant s opinion as a right, and it would be difficult for the general practitioner to refuse in all cases Bearing in mind that for certain branches of medicine and surgery no consultants were at present available, it could be concluded that for some time the promised service could not be provided

Another question was that of certification for sick benefit. The scheme was open to the whole community and the benefits were a substantial increase on those of the present national health insurance scheme At present a married man with a wife at home and one child received $3 50 a week sickness benefit, dropping to $2 disablement benefit after twenty-six weeks Under the national insurance bill the same man would receive $10 a week with no drop in rate with time Unless the individual patient could feel that the doctor would use his genuine and unbiased judgment in signing or not signing the certificate which the patient sought, there would be a good deal of discontent

### The Postgraduate Federation

A system of postgraduate teaching has been developed in recent years in this country In 1932 the British Postgraduate School was formed in connection with the Hammersmith Hospital in London Its object was to train prospective specialists, to instruct doctors needing advanced teaching and to provide short refresher courses for general practitioners This hospital could not provide full facilities for postgraduate education or make arrangements for training in special branches of medicine This is now to be corrected The school is to be reconstituted as a federal organization under the name of the British Postgraduate Medical Federation to include the Hammersmith Hospital and various institutes in special subjects Grants are to be made to the Institutes of Laryngology and Otology, Ophthalmology, Neurology and Child Health, and later to an Institute of Dermatology Other specialist hospitals have indicated their willingness to take part, but their teaching schools have not sufficient accommodation at present for the formation of specialist institutes. However, they may be associated with the federation and used for specialist training Increased demands by students from overseas have necessitated expansion of the clinical facilities in general medicine and surgery Some of the London county hospitals and the special hospitals have offered to take additional graduate students

Advanced courses in general medicine and surgery may soon be offered to specialists who require a short period of instruction to complete their training for a higher degree. Registrarships for trainee specialists are to be established at the specialist hospitals as well as at Hammersmith It is also hoped that traveling fellowships may become a feature of the training Fortnight refresher courses for general practitioners are to be replaced later by part time clinical assistantships, monthly meetings, annual intensive courses of one week and week end courses The director of the British Postgraduate Federation is the distinguished physician and teacher Sir Francis Fraser, late director general of the Emergency Medical Service which was formed to deal with casualties and diseases in Britain during the war

## PARIS

*(From a Special Correspondent)*

April 5, 1946

### Medical Research in France Under Nazi Occupation

Despite tremendous difficulties encountered by research workers in the Nazi occupied territories, French medical research during the occupation was far from negligible However, lack of personnel, morale and materials, especially laboratory animals, has restricted medical progress in France since 1940 French physicians paid heavy tribute to the Nazis Some committed suicide, like Thierry de Martel the brain surgeon the day the Germans entered Paris, and Jacques Charles Bloch, when the Gestapo came to arrest him The surgeon Bernard Desplats and others were arrested. Many were deported, including Charles Richet, Desoille and Weiss Of many who died in Germany or a few days after their return to France were Levy-Valensi, Hamburger and Leon Kindberg Some escaped from the Gestapo but were obliged to hide such as Vallery-Radot, Debre, Etienne Bernard and Haguenau

If one remembers the worries that nearly every Frenchman had concerning deported relatives and friends, coupled with anxiety for his immediate family and his own security (arrest was likely at any moment, followed too often by reprisal shootings) and particularly the most serious worry of all—that for the fate of his country in brief, the state of mind attendent on complete uncertainty even regarding one s immediate future it is easy to understand that even scientific problems of paramount interest seemed comparatively unimportant alongside the disappearance of all moral standards and social laws

The lack of animals for experimental purposes made it impossible for physiologists and experimental pathologists to carry on their work. This was due to shortage of food and heat. Some hospital laboratories were allowed to breed guinea pigs, mice and rats, which were fed on garbage It seemed irrational at that time to use rabbits for experiments instead of eating It was almost impossible to prevent theft of the rabbits, the thieves could hardly be blamed A sport current at the time was dog and cat hunting Some investigators specialized in hunting down animals belonging to the Germans Thus some physiologic experiments could occasionally be performed. Bacteriology and microscopic pathology suffered because of the impossibility of heating the incubators, since electricity and gas were cut off at irregular hours at night and day Shortage of glass impeded chemical research somewhat.

#### MEDICAL INVESTIGATIONS DURING THE OCCUPATION

1 Observations were made on haptoglobin, which is a blood protein which activates the peroxidase function of hemoglobin in a specific manner By studying the enzyme power of hemoglobin mixed with the patient s serum on the reaction of ethyl peroxide with hydroiodic acid one may measure accurately the quantity of haptoglobin in the serum. Increase of haptoglobin occurs in all infections and is a test of the activity of infectious processes The test is more accurate than the blood sedimentation rate. It is useful in many pathologic conditions, especially pulmonary tuberculosis, in which the degree of activity of a lesion can be measured.

2 First observations of the antithyroid action of aminothiazole were made in a factory where the substance was being handled by workers who subsequently developed symptoms of goiter and myxedema. This effect was confirmed by experiments on rats and rabbits Aminothiazole has been used for the treatment of toxic diffuse goiter and apparently is far less toxic but less effective than thiourea or thiouracil Further study is necessary

3 Lavollay and Parrot have isolated a compound named epicatechol, which has effects similar to those of vitamin P in diminishing capillary fragility Studies are now in progress to evaluate the use of epicatechol for certain types of purpura and edema

4 Dr B N Halpern has made extensive studies of synthetic antihistamine compounds More than thirty substances were investigated of which two were found to have a high antihistamine potency, one was a derivative of benzylaniline and the other a salt of benzylaminopyridine

5 J Reilly has done important research on the role of the sympathetic nervous system in many conditions, particularly nephritis

6 Other interesting work includes description by Brumpt of a rapid technic of seroagglutinin test for typhoid and typhus, Debre's observations of the neuroedematous' syndrome in infants (paralysis and edema of the legs), treatment of polycythemia by Duvoir by inoculation with Ancylostoma duodenale and radiologic studies of early cancer of the stomach by Gutman

Unfortunately French physicians have had opportunity to study many deficiency diseases widely as a result of the malnutrition of the French population, such as deficiency edemas, diarrhea beriberi, scurvy and amenorrhea

### Disorders of Water Metabolism

In the *Semaine des hopitaux* de Gennes and Wallet discuss 300 cases of young women and girls who, notwithstanding the food restrictions, increased their weight by 10 to 15 Kg during a few months This exaggerated deposit of flesh was mostly spread on the legs the hips the abdomen and the breast There was a deep and hard infiltration of the skin of the cellulitis type (subcutaneous infiltration without inflammation) Vasomotor troubles appear in the extremities, which are red and cold and often show chilblains even out of the winter season The patients suffer from constipation are susceptible to cold and lose their hair their nails break. They present menstrual troubles as the menses diminish even to complete amenorrhea The main factor is the retention of water, but the process is not the same as in nutritional edema There is no edema but a cutaneous and subcutaneous hardening Contrary to nutritional edema, the amount of protein in the serum and the blood chlorides are normal The basal metabolism is also normal whereas that of nutritional edema is reduced as well as the function of the heart and the activity of kidneys as stated by Mauriac in 'Food Disequilibrium and the Pathogenicity of Edemas" De Gennes and Wallet believe that the endocrine factor is obvious in the cases under study The authors find that estrogen, even in large doses, aggravates the situation, whereas corpus luteum extract improves endocrine insufficiency from time to time but never diminishes the increase of tissue The authors admit that the abnormal endocrine state in certain women creates a condition favorable to the mechanism of water retention and that the food factor appears to be the decisive one that sets the mechanism in motion

### "Medical Days in Paris"

An annual "Medical Days' conference on recent medical progress in France and abroad will be instituted by Pasteur Vallery-Radot May 17 to 19 at the Hopital Broussais 96 Boulevard Didot Paris Speakers and their subjects will include Louis Aragon medicine of today as seen by a writer, Varangot and de Gennes, recent progress in endocrinology, May, endocrinology of the thyroid, Justin Bezançon, avitaminosis, René Gutman, early diagnosis of the cancer of the stomach, Hamburger, Milliez Fauvert, Gibert, renal pathology, Cachera, hepatic pathology, Huriez, R Martin and Lemierre, sulfonamides and penicillin Tzanck, blood transfusion and reanimation, Halpern, synthetic antihistamine, Soulie, recent discoveries in electrocardiography

## OSLO

*(From a Special Correspondent)*

March 23, 1946

### Medical Activities During and After the War

The head of the Norwegian Public Health Service, Dr Karl Evang, and many other Norwegian doctors left Norway soon after the German occupation in April 1940 and established an efficient health service abroad with centers in London, Liverpool, Newcastle, Glasgow, Cardiff, Halifax, New York and Bombay Medical care was needed not only for the Norwegian army and navy stationed abroad constantly recruited by young Norwegians escaping from Norway, but also for the merchant service with its 45 000 seamen Every seaman was provided with a personal health card on which the most important data concerning his health could be entered In 1943 a central register for all the syphilitic was established in London and in due course over 3,000 Norwegian seamen were entered in this register which, it is hoped, will be kept up to date in the future Many other measures, including the detection of tuberculosis among seamen, were introduced during the war and will be continued with the modifications rendered necessary by peacetime conditions

The Norwegian medical profession has been busily putting its house in order during and after the war Before the war the head of the Public Health Service held a subordinate position in the government, with a layman between him and the cabinet minister responsible for health affairs Dr Karl Evang is now the administrative head of the service. He has returned to Norway to face many problems one of the hardest of which is the shortage of doctors Some 100 Quisling doctors have been removed from the medical register, and many of them have been locked up The closure of the university by the Germans has delayed the education of between 250 and 300 medical students Whole districts in Norway have consequently been robbed of all medical aid, and Dr Evang has been obliged, much against his own inclinations, to exercise dictatorial powers in effecting a redistribution of the doctors in Norway By the autumn of 1945 some 60 doctors had been directed to take up such special emergency duties A few months later, thanks to the qualification of a fresh batch of medical students this situation became somewhat eased. It now appears that the least obnoxious of the Quisling doctors will be allowed to return to the fold

### The Journal of the Norwegian Medical Association

The *Tidsskrift for den norske Lægeforening* is the counterpart of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION representing the Norwegian Medical Association, which an envious trade union official once described as the most powerful trade union in the country As the mouthpiece of the great majority of the Norwegian doctors, the *Tidsskrift* was promptly appropriated by the Germans in 1940 and run as a vehicle for German propaganda by Norwegian Quisling doctors Hence this little terracotta colored fortnightly publication became odious to the medical profession, whose members could and did withhold their subscriptions but could not prevent the continued delivery of the publication to their homes When the Germans were expelled and the old staff of the journal took charge of it again, a need was felt to give it a new form. The new version of the *Tidsskrift,* still fortnightly, is a great improvement with the upper third of the cover blue, the lower two thirds white, and the format considerably enlarged, 30 by 21 cm instead of the former 21 by 15 cm

### BCG Vaccination Against Tuberculosis

Soon after the German occupation of Norway in April 1940 the tuberculosis experts in the Norwegian Public Health Service concluded that there was every prospect of a serious rise in the tuberculosis morbidity and mortality Measures to counteract this anticipated rise were discussed and in view of the favorable observations by Heimbeck, Scheel and others on BCG vaccination since its introduction in 1927 it was agreed that this vaccination should be carried out on Pirquet negative persons on a large scale In Oslo alone about 13 000 persons were thus vaccinated by the health authorities and several times this figure in the whole of Norway Dr G Hertzberg of the tuberculosis department of the Oslo Municipal Health Service recently presented a study of the influence of this vaccination on the tuberculosis morbidity and mortality in Oslo With the aid of Dr Julie Backer chief of the Norwegian Central Bureau for Statistics he presents a statistical calculation showing that when the annual tuberculosis mortality in Oslo for all persons up to the age of 50 is placed at 100, the corresponding figure for BCG vaccinated persons is about 18 This comparison is even more favorable to BCG with regard to the number of infectious cases of tuberculosis the figures being respectively 100 and 10

## MEXICO CITY

*(From Our Regular Correspondent)*

April 5, 1946

### Epidemic of Meningococcic Meningitis

An epidemic of meningococcic meningitis occurred from August 1945 until March 1946 in San Luis Potosi, a city situated in an unprotected, semidesert valley at an altitude of 6 187 feet. It has a temperate climate Dust storms are frequent all the year round The estimated population is over 100 000 inhabitants The standard of life is low The northern and southern quarters of the city are overcrowded and it is common to find families of ten and twelve members living in a single, ill ventilated adobe built room Most of the streets in the town are unpaved The water supply is insufficient and the sewerage system inadequate Nevertheless San Luis Potosi is an important industrial and commercial center

The study of the statistical data of the last five years shows that only 1 case of cerebrospinal meningitis occurred in 1940 and another in 1943 Perhaps several cases which were registered later in 1944 and in the earlier months of 1945 and diagnosed as simple meningitis were of meningococcic nature The source of the outbreak has been attributed to a 'bracero, a farmer back from the United States or a tourist who acted as carrier The curve of the outbreak is typical of an epidemic of this kind, showing a rise in November 1945 and higher in December, reaching the highest peak in January of the present year Five cases were reported during the first week of August 1945, 6 in September 21 in November and 90 in December In January 211 cases were registered in February 82 and in March 54 The total number of cases since the beginning of the epidemic up to March 31 1946 has been 470 During the last week of this month the outbreak subsided.

From a clinical point of view all types of the disease were observed from the septicemic, fatal ones to the benign atypical and abortive forms In all cases Neisseria intracellularis was found in the spinal fluid Basic treatment consisted in the intrathecal administration of 50 000 units of sodium penicillin followed by intravenous and intramuscular injections of penicillin and oral administration of sulfadiazine at a dose of 0 1 Gm per kilogram of body weight for forty eight hours The low mortality rate is believed to be due to this method of treatment.

Based on previous experience, sulfadiazine was prescribed as a preventive measure to 90 per cent of the inhabitants For the two days January 16 and 17 approximately 75 000 people received the drug Generally a dose of 0 3 to 0 4 Gm per kilogram of body weight was given by a nurse one day each week The same amount was given to adult contacts and proportional amounts to children for three consecutive days Except for 4 cases, which probably were in the incubation period of the disease, not a single case was registered among the people treated with the sulfonamide Other cases of epidemic meningitis have been reported in Guadalajara, Jalisco, in the western zone Saltillo, Coahuila and Monterrey Nueva Leon, in the northern states and in Mexico City, but fortunately they have been of sporadic character

### Studies on Scorpion Venom

Dr Efren del Pozo, professor of physiology in the Polytechnic Institute, Dr Guillermo Anguiano Landin of the School of Public Health and Hygiene and Jose Gonzalez of the National School of Biologic Sciences have been performing a series of studies with the venom of the three most poisonous scorpions in Mexico Centruroides noxius Centruroides suffusus and Centruroides limpidus from the states of Durango, Colima, Nayarit and Guerrero where they are quite abundant The action of the venom on the vasomotor system was studied in cats, rabbits and mice The workers report that the venom of these scorpions causes a rise in the blood pressure a liberation of epinephrine and bradycardia The poison does not affect the vascular reflexes when central stimuli are applied to the sciatic and vagus nerves In the first studies the authors conclude that all the effects of the scorpion venom are due to the stimulation of the preganglionic neurons of the sympathetic nervous system. Professor Anguiano carried on further observations to determine the mathematical formula of scorpion venom neutralization He states that such a poison follows a trend very much like the one followed by snake venom The trend of neutralization under the conditions of the experiment, varies according to a linear function $y = a\ (x - l) - b$ By these studies the writer attempts to derive the basis for the correct titration of antiscorpion serums

### Mexican Association of Gynecology and Obstetrics

The National Association of Gynecology and Obstetrics was recently founded The following officers have been elected president Dr Isidro Espinosa de los Reyes, secretary Dr Carlos Guerrero and treasurer, Dr Manuel Urrutia Publication of a Revista de Ginecologia y Obstetricia,' which will appear sometime during this month, was approved at the first meeting

## Marriages

JOSEPH A GRADY Wakefield Mass, to Miss Grace M McFail of Tampa, Fla., in Washington D C March 18

HAROLD S SANDHAUS, Lancaster, Pa, to Miss Helen Marion Newmark of Jamaica Estates, L. I N Y January 20

MILLARD F HUDSON Capt (MC), U S Navy to Mrs Helen O Rourke Hanson in New York February 19

WAYNE P HYATT Tazewell Tenn to Miss Louise Windham of University, Miss in Berkeley Calif March 2

H HAMILTON COOKE, San Jose, Calif to Mrs Trudy Birch George of Carievale Sask, Canada, March 6

VINCENT J SCHILLECI Bessemer, Ala, to Miss Frances Amanti of New London Conn February 28

LIONEL T SERVIS to Miss Elizabeth Knickerbocker Wetherbee, both of Milwaukee, February 2

JEHU PATTERSON COOPER III to Miss Jean Post Tompkins, both of Metuchen, N J, recently

DAVID E ROSENGARD, South Boston, Mass, to Miss Thelma Gorvers of Lynn January 19

LEONARD CHATELAIN Cut Off, La, to Miss Janet Alma Stokes of Bunkie, October 22

F JOSEPH BRINIG to Miss Nancy Elizabeth Dwyer, both of Erie Pa, February 16

# Correspondence

## CHRONIC BRUCELLOSIS

*To the Editor* —In the February 9 issue of THE JOURNAL Henry M Benning, in his paper on 'Chronic Brucellosis," presents the totally unfounded thesis that a positive skin test to brucellergen indicates active infection with the disease This conclusion will certainly be challenged by many students in this field who feel that the intradermal test indicates only skin sensitization to a brucella antigen An unequivocal diagnosis of brucellosis is dependent on isolation of the causative organism in culture Many observers feel that a rapidly rising titer of specific agglutinins in the blood is strong presumptive evidence of active infection The mere presence of positive agglutinins in relatively low titer or of a positive skin test or of a high opsonocytophagic index is totally inadequate in establishing a definite diagnosis of the disease

The incidence of positive skin tests to various brucella antigens and of positive agglutinations for Brucella abortus, is surprisingly high among normal healthy people in many areas, and only the most sanguine observer will conclude that this high rate is an index of morbidity of chronic brucellosis For instance, 15 per cent of the healthy medical students of the University of Oregon Medical School show a positive skin test to brucellergen Over 5 per cent of all normal persons in this area show positive serum agglutinins of 1/80 or higher to Brucella abortus N B Wise (Evaluation of Brucella Opsono cytophagic Test, *Am J M Sc* **200** 521 [Oct] 1940) similarly studied a group of normal medical students at Duke University and found that 10 per cent showed positive skin tests and 20 per cent showed significantly high agglutinin titers for Brucella abortus in the blood. One must be very cautious in associating these incidental laboratory findings with chronic complaints of patients Such restraint is not shown in the numerous overzealous reports such as this one, which have appeared recently in the American literature

Dr Benning's paper illustrates the most disappointing aspect of many similar case reports of "chronic brucellosis', that is, the reliance placed on the notoriously misleading therapeutic test Patients with all sorts of chronic complaints are found to show a positive skin test for a brucella protein or to have agglutinins for the organism or a positive opsonic index and are promptly diagnosed as having chronic brucellosis The patients are then given one of the brucella antigens (vaccine, brucellin) and are reported to 'feel much better" or as "cured" These cures are then offered as proof of the original diagnosis Such *post hoc* reasoning is always open to serious question and has accounted for waves of uncritical enthusiasm for all sorts of therapeutic agents which in a large measure have retarded the advance of scientific medicine

The four protocols recorded by the author as textbook' instances of brucellosis are completely unconvincing Case 1, for instance, presents no evidence whatever of brucellosis in the data recorded other than a positive skin test and the fact that the patient felt like a million dollars' after his injections The patient admittedly had chronic gallbladder disease with recurring attacks of cholecystitis, and the attempt to explain his symptoms on the basis of brucellosis is patently redundant. The patient's gallbladder was ultimately removed No statement is made as to whether it was found to be a focus of brucella infection, but one can be certain that if it was the report certainly would have proclaimed it.

The second patient presumably recovered from symptoms of coronary artery disease following brucellin treatment! The diagnosis of brucellosis here is just as dubious as that of the coronary disease, which was apparently made on the basis of $Q_3$ $T_3$ inversion in the electrocardiogram. Such changes are often quite normal, and minor alterations in them may be due to respiratory variations in the position of the heart They are apparently presumed by Benning to be abnormal because he refers to "minor temporary improvements [sic] in $Q_3$ and $T_3$" In this case, as in the first, no valid proof of the diagnosis of brucellosis is offered other than the skin test. The other protocols are equally unconvincing and will not stand under any sort of critical analysis

At the present time we are having a brucellosis scare in this area Our 'epidemic" stems from the reports of two enthusiastic local practitioners who have supplied to the health department of the city of Portland almost all of the many hundreds of cases of brucellosis reported to that bureau in the past two years (Records of Department of Health Portland, Ore. [personal communication, Dr Thomas Meador, health officer]) Other clinicians, including all the competent internists associated with the University of Oregon Medical School, have been able to find practically no cases of brucellosis either verified or questionable. Furthermore in the University of Oregon Hospitals and Clinics we have had the opportunity of studying large numbers of patients who have been previously treated and "cured" or 'greatly improved' by injections of brucella vaccine by 'brucellosis specialists' These patients suffered recurrences of symptoms after a few months of treatment, and careful follow-up studies has revealed such maladies as carcinoma of the kidney, tuberculosis Hodgkin's disease leukemia and hyperthyroidism The large majority of them however were found to be suffering from clearcut psychoneuroses As might be expected temporary improvement in many of the psychoneurotics was usually noted for a short period following optimistic injection therapy, only to be followed by the inevitable recurrence of complaints The hypodermic needle, preferably a dull one, in the hands of a zealous clinician is a potent psychotherapeutic weapon The reported "cures' after vaccine or brucellin therapy must be interpreted in this light

There are many students of the subject who feel that chronic brucellosis in human beings is a great rarity A few incontestable cases have been reported in which the organism has been isolated from the oviduct, the gallbladder, joint fluid or the blood years after what was probably the initial infection (Evans, Alice C Studies on Chronic Brucellosis, *Pub Health Rep* **52** 1072 [Aug 6] 1937) However, any one who contends on the basis of positive skin tests that an appreciable percentage of the population is chronically ill as the result of harboring viable brucella organisms in the body certainly has the responsibility of marshaling more convincing evidence than that presented in this paper

There is clearly an urgent need for a cautious scientific approach to the whole confused problem of chronic brucellosis Dr Benning postulates for instance, with no proof whatever, that small splenic abscesses may be the focus of chronic brucellosis and then makes the astonishing statement that "possibly splenectomy should be contemplated as often as cholecystectomy" This is an alarming indication of the direction which may be followed next by enthusiastic brucellosis therapists

MORTON J GOODMAN, M D, Portland, Ore.

[In reply to this communication Dr Benning writes ]

*To the Editor* —It is of course to be expected that such criticism as that of Dr Goodman would arise, since this is at present a controversial subject Scores of letters commenting on the article have been received to date, and Dr Goodman's is the first unfavorable one

The isolation of Brucella abortus as Dr Goodman suggests is of course the ideal way to establish the diagnosis of chronic or acute brucellosis However, if the diagnosis of each case is to be made only on this basis, I feel that many cases of the disease will be overlooked In analogy, if it were still necessary to isolate the Koch bacillus in each case of tuberculosis or Treponema pallidum in each case of syphilis, treatment of many cases of these diseases during their most vulnerable phase would be omitted for the sake of absolute accuracy of records

A positive skin test to brucellergen means, as any skin test means, a reaction or conjunction of antigen and antibody It is not a question of whether the patient is infected or not but rather how, how much and when This is no place to belabor the argument that for skin sensitization a previous active infection possibly still active, must have occurred In addition to the reasons given in my article the best one being the failure of heat killed bacterins to immunize animals, I think it is interesting to take note of the fact that the brucella antigen complex is a huge molecule with a weight of about one million (Landsteiner, Karl The Specificity of Serological Reactions p 223, quoting Chargaff et al and Miles and Pirie, Cambridge Mass, Harvard University Press, 1945) Numbers of these molecules little short of virus size make up the living brucella cell If the bacterium lives it invades or is carried across the cell membrane of the host by macrophages or leukocytes and sets up infection plus antibodies If the bacterium dies the antigenic protein complex with the still large polysaccharide molecule is subject to the effects of digestive ferments and so never crosses the cell membrane Oral immunization by bacteria is extremely doubtful

Be that as it may the question of infection in skin positives finally is not qualitative but quantitative If one is surprised to find that 15 per cent of medical students of Oregon, assumed a priori to be normal and healthy, are skin positive, one need not deny the validity or the implications of the test but merely ask 'how healthy," then ask if treatment is demanded The clinician then listens to his patient's story, summarizes the physical findings and on the basis of his considered judgment, not on the basis of a positive skin test alone, he treats his patient.

Leopold Lichtwitz (Pathology and Therapy of Rheumatic Fever, New York, Grune and Stratton, 1944) has best summarized the problem when he states that "skin hypersensitivity is immunity arrested at a dangerous stage of imperfection An excellent discussion of hypersensitivity by Aikawa is found in the *Annals of Internal Medicine* (**23** 969 [Dec] 1945)

The cases will have to stand on their merits As a matter of fact patient 1, B L, though working steadily since his cholecystectomy a year ago, had a return of a few of his symptoms several months ago I make no claim to his having his brucella focus removed or to his eventual cure until he fails to react to brucellin and brucellergen

Since my paper was submitted for publication in August 1945 an interesting case of brucellosis has been reported from the Mayo Clinic (*Proc Staff Meet, Mayo Clin* **20** 455 [Nov 28] 1945) in which the spleen seems to have been the focus which maintained the active infection over a period of several months Splenectomy was finally performed, following which medical treatment apparently has produced a permanent cure. This finding lends considerable support to the idea, which so horrified Dr Goodman, that small splenic abscesses may be the focus in chronic brucellosis

Only careful clinical judgment and a wide experience with these skin positive patients will permit one to steer a course between ultraconservatism which sees no brucellosis without a positive culture, and excessive enthusiasm which requires only a positive skin test without clinical verification

H M Benning, M D, Santa Barbara, Calif

## SPRAINS IN ATHLETES AND PROCAINIZATION

*To the Editor* —I was interested in your reply in the March 9 issue of The Journal to the query of Dr D L Hollis of Biloxi, Miss, regarding the procaine injection of ankle sprains in football players

While procaine is useful in the treatment of certain minor sprains in nonathletes, the experience of this department for the past ten years, based on the treatment of approximately 75 ankle sprains a year in athletes, has led to the conclusion that it has no place in the treatment of any sprain sustained in contact sport

A sprain is a partial rupture of a ligament When the protective function of pain is eliminated by procaine and the ligament is subjected to the violent stresses and strains of football, the partial rupture might well become complete

Furthermore, it was found some years ago in a small experimental series that the contact athlete whose ankle ligaments had been anesthetized lost his sense of timing and coordination played badly and was more likely to sustain other injuries One varsity halfback, who played badly and briefly with a procainized anterior tibiofibular ligament sprain stated after return to the bench that while running he had no sense of the position of his ankle in space.

A complete exposition of this point of view regarding the diagnosis and treatment of sprains in athletes will be found in 'Athletic Injuries" by Dr Augustus Thorndike, Philadelphia Lea & Febiger, 1938

Thomas B Quigley, M D, Boston
Surgeon Harvard Athletic Association.

## AEROSOL PENICILLIN

*To the Editor* —Having read a laudatory article by H N Vermilye in The Journal, Sept 22, 1945 extolling aerosol penicillin in sinusitis and asthma, I studied this procedure in 74 cases of bronchial asthma Ages varied from 5 to 71 years the sexes being represented about equally The patients included physicians, nurses, teachers, housewives butchers, laborers and school children It was important to choose a type which I classify as asthmaticus persistans variously referred to as 'intrinsic or bacterial asthma" the intractable variety

Treatments were conducted in the patients homes under instructions from trained technicians for two to four weeks, using an oxygen tank to nebulize 20 000 units of penicillin through an attached atomizer every three to four hours

The results were strikingly disappointing, and almost with complete variance with Dr Vermilye's report. A number of patients grew worse as the result of irritation from the penicillin Some developed dermatitis and were unable to continue after two weeks' therapy Those that did continue for the full period of four weeks were divided into two groups 15 per cent who thought they may have been improved slightly and 85 per cent who were definitely not benefited. As compared with the regular procedure in bacterial allergy, such as iodides bronchodilators, sedatives vaccine therapy and general care, aerosol penicillin in its present status makes a comparatively poor showing Incidentally, oral and parenteral penicillin therapy in total doses of 500 000 to 1,000,000 units was without value in many of the cases of the asthmaticus persistans type.

My conclusion therefore at this time is that aerosol penicillin (also oral and parenteral penicillin) is of questionable value in a small percentage and of no value in the majority of cases of bacterial asthma and sinusitis

David Louis Engelsher M D, New York.
Attending Allergist, Morrisania Hospital and Bronx Eye and Ear Infirmary, Associate Attending Allergist, Union Hospital of the Bronx, Chief Allergy Clinic, Fordham Hospital

# Council on Medical Education and Hospitals

## ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

*Forty Second Annual Meeting Held in Chicago Feb 11 and 12 1946*

DR HERMAN G WEISKOTTEN, Syracuse N Y, Presiding

FEBRUARY 11—MORNING

### *IMPACTS OF THE WAR ON MEDICINE*

#### Development of High Educational Standards by the Medical Profession

DR RAY LYMAN WILBUR, Stanford University, Calif This paper appeared in THE JOURNAL, April 20 page 1055

#### Medical Progress and Medical Education During the War

DR PERRIN H LONG, Baltimore This paper appeared in THE JOURNAL, April 13, page 983

#### Medical Education in Europe

DR WILBURT C DAVISON, Durham, N C This paper was published in THE JOURNAL, April 6, page 921

#### Affiliation of Veterans' Hospitals with Medical Schools

DR PAUL B MAGNUSON Washington, D C. Less than four months ago there was announced a plan for affiliation of Veterans Administration hospitals with medical schools The plan was simple in its outlined form Basically it proposed that medicine be practiced in the Veterans Administration hospital as it is practiced in the university hospital and that medical education be coordinated so that the Veterans Administration hospital would become a postgraduate teaching unit of the university hospital group Personnel and methods of medical practice and methods of operation would be the same as those of the university group The Veterans Administration proposed to administer such a hospital and to assume its proper legislative responsibility of professional care the medical schools to assume the guidance of professional care and the operation of medical education

There have been established new part time groups of personnel for the Veterans Administration and through the medium of recommendation only by dean s committees, consisting of men of professional caliber supplied by the school locally, the proper professional qualifications are present in all personnel thereby afforded Conditions and compensation for employment are provided so that good medicine and good medical postgraduate education may be achieved by the acquisition of the highest type of personnel Residencies have been established and the conditions considerations and compensation for such employment for residents have been established to fit in each locale with the highest development of postgraduate education there present The principle of residencies to lead to specialty board qualifications has been adopted as a principle Provision is made for basic science training and the inclusion of basic science principles in the practice of medicine under the regulations of the bill that established a department of medicine and surgery

In four months we have received the acknowledgment of their willingness to cooperate of fifty of our approved medical schools This is a complete group of all those that are in near enough proximity to Veterans Administration hospitals to be applicable This affects seventy-six of our ninety-seven present hospitals and six of the seven army hospitals We expect to take over for temporary use on March 31 This affects over 60 000 Veterans Administration beds It is a stupendous job, but the cooperation of the schools and the medical profession has been constantly exhilarating

DISCUSSION OF DR LONG'S PAPER

DR C SIDNEY BURWELL, Boston In my judgment the coordination of research through the Committee on Medical Research and the other committee was a highly successful demonstration of the possibilities of coordinated research It was successful for two reasons which are important to us One is that the coordination was done by people who had first hand acquaintance with science and with investigators in their own right and, second, and the more important one, was that there were good investigators to do the research The programs that were successful were the programs that had the most successful investigators in them One of the demonstrations, it seems to me, to have come out of all this experience with research during the war is that there is no substitute for the first class man in medical research That leads me to point out the great importance of trying to keep from having a lost generation in medical research For six years almost no individual has had an opportunity to prepare himself for a life of teaching and investigation in medicine I think one of the major responsibilities of medical schools now, this moment, is to try to find in the men coming back from army and navy service the men with the kind of ability that can be developed into research ability and, having found it, to give them an opportunity not to do research for profit but to develop in themselves the capacity to go on I know of nothing that is more important to the long distance future of medicine than an attempt to restore what is now a sad lack of experienced people for academic medicine Dr Magnuson referred to a principle in medical education which perhaps he will permit me to restate. The representatives of the three schools in Boston that were discussing the formation of the dean s committee there were troubled by an implication in one of the earlier publications of the Veterans Administration that there was a separate responsibility for the teaching of residents and for the carrying on of clinical work and pointed out to Dr Magnuson their belief that there was a misconception in the idea that the training of residents could be dissociated from the carrying on of the clinical work in the hospital, because we pointed out that the most important influence in the training of residents is the quality of clinical work that is carried on in the hospital That goes not only for residents but for medical students and for men who are learning to do research

DISCUSSION OF DR DAVISON'S PAPER

DR. WILLIAM S MIDDLETON, Madison, Wis The deterioration of medical education and of medical practice in Germany was recognized, if not completely evaluated, before the invasion of Europe In the years of the activity of the Nazi ideology there had been a sacrifice of a considerable segment of the productive scholarship of these universities Furthermore, there had been an abbreviation of the medical course so that during the war one came to a period when the medical students attended nine to ten lectures or series of lectures of three months each, as opposed to the six months term of the prewar period—two and one half years of medical exposure largely on the benches as Dr Davison has pointed out. There then came a year of field service, and this field service was in the line, when the graduate served as a noncommissioned officer He thereafter was eligible for his rank of officer In this particular development apparently all medical advance in the area about and outside Germany was lost sight of The circumstance of level of practice could be judged on the basis of performance of the protected personnel that came to our lines, who were then given the responsibility for the care of the German prisoners of war The fact that they knew nothing about penicillin might have been anticipated They also had a very limited idea of the general principles of medicine In all my contact with these many installations there were only two that performed on a level that might be comparable to our mediocre hospitals in the European theater of operations These two were derived from the faculty of the University of Strasbourg It is quite apparent that the wide general principles of preventive medicine had not permeated the German army or high command The incidence of clinical diphtheria was extremely high There were

actual outbreaks of dysentery and typhus in their midst, and then the singular contrasting or controlled experiment they gave us in the incidence of tetanus in their unprotected troops Only the Luftwaffe and certain elements of the paratroops had received tetanus toxoid protection In the protected American forces there was but one instance and that a fatal one, among the protected soldiers, protected through the medium of tetanus toxoid The obvious answer is that they had not followed medical progress They had sowed the men and reaped the world I have been very much interested in the attitude toward medical education in France I was included in a group discussing with the dean's committee the advantages of graduate exposures in America The members of the committee were interested in the number of exposures, the types of exposures that represented developments of four years before 1945 the period of occupation They were not fundamentally interested in basic changes in their formula of medical education The veil that is drawn over Soviet medicine was keenly felt in the European theater of operations We had not close access to their developments We nevertheless realized that they were heading toward an ideal that had not yet been attained It would answer the mutual purposes of medicine in the Soviet Union and in the world at large if there were greater candor on the part of both contracting parties It is a circumstance of importance to bear in mind that the British have for over four years had an Anglo Soviet Union that has effectively first, initiated a one way movement of information, Britain to Russia, and now recently is obtaining a return lend-lease effect if you will Britain suffered primarily from the failure to envisage the effects of a reducation of graduate training and as early as Oct 8, 1942 General Hood, in one of his directorate meetings, stated that the R M C was the greatest consumer of medical manpower and until this demand decreased the supply would become increasingly insufficient At that early date the fall of 1942 it was quite apparent that the British were suffering from a depletion in their ranks of specialists that, if this continued the short term training would lead to a decrease in the efficiency of the services in these several specialties Obviously the American people, being independent of thought and action sacrificed the same end rather than profit by the example of the British I think that this particular commentary on our shortsightedness is beginning to show its effects in our tremendous concern for the future of graduate medical education

### Training in Medicine Under the Army Specialized Training Program

COLONEL FRANCIS M FITTS, M C Office, Director of Military Training A S F Between May 1943 and October 1945, 20 336 enlisted men were assigned to Army Specialized Training Units at seventy-six approved schools of medicine in this country These enlisted men—A S T P trainees—were there detailed for instruction in medicine in the standard curriculum of the institution. After successful completion of their medical studies 10 098 trainees have been discharged from their enlisted status in order to accept, with only negligible exceptions commissions in the Medical Corps of the Army of the United States Of the 8 049 enlisted men now in the program, 3 356 are scheduled to graduate before July of this year, when the A S T P will have become a thing of the past Shall I say another noble experiment ?

Over 4 500 of the medical officers currently in the Army completed their medical schooling under the A S T P After from nine to twenty seven months additional training in civilian hospitals they were ordered to active military service In the next five months 5 000 others, now in hospitals will enter on duties as medical officers Thereafter 3 900 other A S T P graduates will become available, at known intervals, as replacements for high score emergency officers who otherwise probably could not be released from the military service If the compulsion of the national emergency is continued these young officers trained by the government for this specific duty will serve a minimum of three years in the Medical Corps as have so many thousands of their predecessors

Approximately 897 enlisted trainees have been separated from the medical phase of the Army Specialized Training Program by reason of academic failure, 903 for reasons other than academic If physically qualified, they have been assigned to other military duties, practically all to units and installations of the Medical Department

Of the men now in training, 4 693 who will not graduate during the current fiscal year will be separated from the A S T P next month Those among them who plan to continue the study of medicine—and are acceptable to an approved school—will be placed in the Enlisted Reserve Corps and released from active military service to pursue their medical studies as civilians As reservists they will be subject to recall to active duty if they abandon the study of medicine

If any trainees do not plan to continue in medicine or are not considered so qualified they will be transferred to military duties other than in the A S T P They will of course, be eligible for discharge as are all other enlisted personnel

### Medicine in the Future

DR GEORGE F LULL, Chicago The Hill Burton bill, designed to give better hospital and clinical facilities to the public has the approval of the American Medical Association and has passed one of the houses of Congress Determination of location arrived at politically should be fought as this in many instances will defeat the purpose of the bill Hospitals cannot be run unless properly staffed

In the field of medical education the colleges are getting off the accelerated program and returning to the normal school year New schools are being formed and some of the two year schools have extended their courses to four years This will mean an increase in graduates, but the increase will not be apparent for a few years

The training of specialists has advanced to a remarkable degree in the past decade Better trained young men are being made available each year In addition more and more young graduates annually desire to continue training in some specialty This is a laudable effort as it means several more years of hard work as well as as a sacrifice of earning power The demands of the government services for doctors to fill their peacetime requirements will be greater than before the war The Navy Medical Corps has been increased over 200 per cent The Army Medical Corps has received a piecemeal increase of approximately 50 per cent pending definite legislation as to the size of the Army The Veterans Administration will undergo an enormous expansion and will require a large full time staff in addition to consultants and visiting staffs

Many advances have been made during the war which will reflect themselves in future medical practice One of these is the handling and treatment of the neuropsychiatric patient In the huge First Army in France there were at one time twenty-one neuropsychiatrists As a result of having these trained men available, 60 per cent of all neuropsychiatric casualties were returned to duty without leaving the army area This compares with 50 per cent of medical cases and 70 per cent of surgical cases Much of the difficulty that was encountered in handling this type of case in the armed forces was due to the fact that very few doctors had any training in treating these individuals

Preventive medicine has accomplished medical wonders in the present war In the largest army ever assembled there have been no serious outbreaks of infectious diseases The accomplishment of disease prevention in the Army is similar to that in civil life with the exception of the fact that in the Army, population groups are controlled However, one important factor has stood out in this war as to the results obtained in disease prevention, and that is health education The line commander as well as the individual soldier must be made health conscious and this can be done only by health education.

At the present time the United States is the medical center of the world. Better medicine is being taught and practiced in this country than in any other place. We should strive not to stand still but to improve and to retain our place as world leaders in medicine

FEBRUARY 11—AFTERNOON

## GENERAL AND SPECIALTY PRACTICE

### Problems in Specialty Practice

DR. PAUL TITUS, Pittsburgh Critics have charged that the American boards are responsible for the placing of hypervalues on certification, for creating "class distinctions" within the medical profession and for "discrimination" against general practitioners and uncertified specialists It has been charged that the boards and these activities of theirs have artificially stimulated specialization and that as a result the general practitioner may soon become extinct In the first place the American boards and the certifications granted by them actually work for and with the nonspecialist portion of the medical profession and by the rigidity of their standards for recognition of specialists, actually help to maintain the ranks of the general practitioners The boards have established levels of training requirements which make it impossible for any man to become a self styled specialist overnight with nothing to refute his claim What is the chief clamor about specialization we are hearing? It is a clamor for training! This training is wanted so that the applicant can eventually become certified by an American board, so that it must, therefore, be good training Levels of requirements have not been lowered by the boards during the war The Council and the American colleges are determined that standards of training shall not be lowered

Certification is formal recognition of qualification in a specialty based on actual training and experience The type and amount of training required by the American boards is not something that can be acquired easily or within a few weeks time Facilities for such training depend on the recognition of a hospital as an educational institution for the training of residents by competent and interested teachers with ample clinical teaching material "Refresher' courses of short duration are an entirely different matter, and these should and can easily be provided to meet all present demands Such courses have no standing before the boards for credits as training in a specialty

Without overexpansion some veterans now seeking residency training may be unable to begin training at once or perhaps at all but at least the matter of selection for places may still be based to some extent on ability and promise, while overextension of facilities might readily result in poorer training for all Moreover, fully meeting the demand is probably unnecessary because many veteran physicians who now think they want to tread the long road of required training have neither the aptitude to become specialists nor the fortitude to complete the journey even with help of government grants to veterans and hospital salaries to residents

It is the exceptional institution that has facilities, including staff, special services and clinical material, to warrant full approval in all the fifteen specialties represented by American boards Far more are able to acquire full approval in some of the specialties and limited approval in several or perhaps all of the other specialties This combination is good, however because fundamental requirements such as libraries, acceptable laboratories and a formal schedule of general clinical instruction and training in the basic sciences must be established and therefore are available to the weaker as well as to the strong departments Still other hospitals have such restricted but nevertheless good teaching facilities that they may not be able to have unlimited approval in any of the specialties although they do qualify for limited approval in some of the specialties These institutions are usually on their way to a better status and their ambitious efforts should be encouraged

### The Practice of General Medicine

DR WILLIAM A O'BRIEN Minneapolis If a medical graduate desires advanced training in a specialty he has the guidance of one of the American boards to help him plan his program but if he is undecided as to which specialty he prefers or if he wishes to become a general medical practitioner he receives conflicting advice or none at all Recent graduates are well aware of the need for general medical practitioners, but they also realize that only a few years training separates a general medical practitioner from a specialist, and as the latter enjoys a better social and economic standing, not only in his community but also in the profession, this may be another reason for his reluctance to enter the practice of general medicine following an internship

If the future practice of surgery and the surgical specialties is to be limited, then general medical practice will be built around a thorough knowledge of internal medicine, obstetrics, pediatrics, medical specialties and the medical aspect of the surgical specialties In well organized hospitals all patients now must pass through the hands of an internist for a complete medical check-up before they are seen by the surgical specialists, and this is the ideal relationship between the two groups (The practice of pediatrics is primarily internal medicine in a younger age group)

Systems in which general medical practitioners do not have hospital privileges if they are not specialists are open to serious criticism In our country this problem has already been met in departmentalized voluntary hospitals by placing the general medical practitioners in the medical service and giving them special privileges in the obstetric service and in the medical phases of some of the other specialties

The training of a general medical practitioner should start in his undergraduate days If internal medicine is the most important practical subject, then it should be given first place in the curriculum in the clinical years The medical specialties, obstetrics and pediatrics should be second, the medical aspect of the surgical specialties should be third while the technical aspects of surgery and the surgical specialties would be restricted to the graduate years

Opportunities should be provided for the continued training of general medical practitioners as well as other specialists if they are to continue to benefit from well conceived and directed undergraduate and graduate training programs The University of Minnesota has recognized three definite types of programs (1) undergraduate, which was started sixty years ago, (2) graduate, thirty years ago and (3) continuation study, ten years ago The program of the undergraduate and graduate years is well known, but continuation study has not received the recognition it deserves

At Minnesota we abandoned the "refresher" approach for the practitioner ten years ago, as we recognized there was a difference between instructing undergraduate students and practitioners There are some fields in education in which the "refresher" approach can be used as a basis for further development (mathematics) but not in medicine. Medicine, the medical specialties, obstetrics and pediatrics are ideal subjects for continuation study for general men, courses in surgery and the surgical specialties are best limited to specialists in these fields, and specialty courses can also be offered through continuation study to certified internists, obstetricians pediatricians and other medical specialists

Recent medical graduates who are trained either as specialists and recognized by one of the fifteen specialty boards or as general medical practitioners who are recognized by their board will enter practice in smaller communities if they have been properly trained, if they are provided with the proper facilities with which to practice and if they are given opportunities to keep abreast of developments in their field through properly arranged continuation study courses in medical centers

DISCUSSION

ALPHONSE M SCHWITALLA, S J, St Louis This argument between specialization and general practice is affecting every one of the areas of medicine, with the possible exception of research, perhaps even there it is being affected The whole argument is affecting even the progress of research It is affecting education because, if we are going to prepare a general practitioner and train him, perhaps we have to reorient ourselves to the meaning of general practitioner today At one time it was thought that the medical curriculum was nothing

more or less than a preparation for the internship, but the internship today and the internship of ten years ago or twelve years ago is a different thing altogether In the field of hospital practice we are again face to face with this same problem of the relations between general practice and specialization There are hospitals that are ambitious, that ambition restricting their practice. I am talking about hospitals not under university control, where there is, to some extent, a closed staff, but even there the same problem confronts us, because there are people who have said, as some medical societies have said that in certain areas there is no justification for a closed staff hospital and there is a good deal to be said for that point of view The question may be definitely raised as to whether any of our schools or any of our school hospitals have a right to a closed staff in the strict sense of the word A good deal could be said on both sides of that argument

DR A J CARLSON, Chicago I was impressed by this case report from northern Minnesota of Dr O Brien In my experience of fifty years that kind of man can t be produced by any kind of thing, internal or external There is something in that person from the start, and that is a bigger thing, in my judgment, than any training you give him, undergraduate or postgraduate.

DR PAUL TITUS, Pittsburgh I believe that better training of specialists in hospitals, where hospitals are established as educational institutions, properly established so that they can give better training for their residents, is automatically going to give better training for their interns Is it not equally true that, where the Council, in its wisdom, has established the limited periods of residency training, many of those will be available to men who never intend to go on with the full period of training in order to get certification, but they too will be made far better general practitioners because they did have some of these specialties? If that can be pursued, first make facilities for that sort of additional training available to these men, and then pursue the course laid out by Dr O'Brien groove them into the lines they should be grooved into I definitely insist it is going to improve the standards of practice in this country At the same time it carries out what I contend was the original contention of the boards, namely to improve the standards of the practice of medicine for the benefit of the public.

DR WILLIAM A O BRIEN, Minneapolis I think in our experience in continuation education, one of the best things we have learned is that, when the men who are highly specialized in their field instruct the general men, they not only show the general men how far they may go with safety but they also make them more critical persons in referring patients for more complicated procedures One of the things that our specialty group likes about instructing general men is that particular feature They work together much better afterward than before

## *MEDICAL EDUCATION AND RESEARCH*

### Federal Aid to Medical Research

DR. KENNETH B TURNER, New York The possibility that federal aid to medical research, which had been inaugurated as a wartime measure, might be continued after the war received official standing in November 1944 when President Roosevelt addressed his well known letter to Dr Vannevar Bush, director of the Office of Scientific Research and Development, asking for recommendations concerning a program of future federal aid to science.

To advise Dr Bush, four committees were appointed, including a Medical Advisory Committee with Dr Walter W Palmer of New York as chairman This committee began a three month study in January 1945 It held meetings in New York, Washington, Denver and Chicago It conferred with representatives from seventy-three of the seventy-seven medical schools of the United States, from the services, from various research institutes, from the pharmaceutical industry and from philanthropic foundations In addition it received written comment and advice from hundreds of other scientists throughout the country Based on this study a report was submitted to Dr Bush in April

The report recognized that government aid to medical research was necessary, stressed the importance of supporting long-term, fundamental research, advised that funds be made available as unrestricted grants, scholarships and grants-in-aid, and proposed the creation of an independent federal agency to be called the National Foundation for Medical Research

A few days after the submission of the Bush report two bills were introduced into the Senate, each designed to establish a national foundation for scientific research organized on the basis of a number of professional divisions with an overall authority One bill, introduced by Senator Magnuson, was based on the Bush report, the other, by Senator Kilgore, was a rewrite of an earlier bill that had been pending There were also a number of related bills, introduced about this time or somewhat earlier It is the Magnuson and Kilgore bills that have received the most attention and that have caused the controversial discussion which began with the introduction of the bills and has continued to the present

The importance of agreeing on a single bill in committee and thus avoiding the necessity of reporting two or more bills to the Senate floor has always been clearly in mind In the past few weeks there have been conferences among Dr Bush, Dr Bowman Senator Kilgore, Senator Magnuson and other interested senators in an attempt to reach an acceptable compromise measure I am happy to be able to report that this goal was achieved at a final meeting in Washington the day before yesterday At that time it was decided to drop both the Magnuson and the Kilgore bills and to write a new bill around the latter which will be reported out by the subcommittees under the joint sponsorship of Senator Kilgore, Senator Magnuson, Senator Saltonstall and others

To secure agreement on this new measure it was necessary to settle a number of important controversial points board vs administrator as top authority, method of appointing divisional committees, definition of their functions and the creation of new divisions, inclusion of the social sciences, patents, and the mandatory apportionment of funds One of the most difficult of these concerned the top authority Here it seemed that the opposing views were virtually irreconcilable The Kilgore bill had vested power in an administrator with a board acting only in an advisory capacity This form of "straight line" organization was strongly favored by President Truman, the director of the budget and the director of war mobilization and reconversion as promoting efficiency and defining responsibility It was strongly opposed by most scientists, who believed that one man in a position of such power was peculiarly vulnerable to political pressure, that few men were qualified for a job of such proportions and complexity and that the advisory board would become a rubber stamp The Magnuson bill, on the other hand had vested power in a board with the administrator appointed by and responsible to the board. The impasse has been broken by agreeing on an administrator as the top authority but with the safeguard that, before appointing him the President shall consult with and receive the recommendations of the board which will be composed of nine presidentially appointed members plus the chairman of the divisional scientific committees Furthermore the board is to have its own full time administrative staff, including an executive secretary, and is to be required to submit to the President and the Congress an independent report annually or at shorter intervals

This is a satisfactory and workable compromise The straight line type of organization is maintained, but there is also a strong board which has a hand in the selection of the administrator and which can act as a watchdog over the affairs of the foundation

Second in importance only to the advisory board are the divisional committees It is now agreed that the selection and appointment of scientists to these committees shall be made by the administrator but only with the advice and approval of the

board The functions of the divisions are to be defined by the administrator and new divisions created by him also only after receiving the advice of the board

When we have secured the passage of the bill, we must maintain unceasing vigilance to insure the appointment of the ablest citizens to the advisory board and the ablest scientists to the professional committees, and to insure further that the principles so ably set forth in the Bush report govern the conduct of the foundation Whether we like it or not, with federal aid to medical research, medicine is in politics

### Research in Undergraduate Medical Education

DETLEV W BRONK, PH D, Philadelphia The abstract of this paper has not been obtained

### Protection of Animal Experimentation

DR. A J CARLSON, Chicago Antivivisection bills are pending in Congress and in the legislatures of New York, Massachusetts, Maryland and other states Another bill has just been introduced in the New York state legislature at Albany This second bill puts scientific experiments on dogs under the authority of the state health department. The health department may license medical students and medical and biologic investigators to conduct such experiments on payment of an annual license fee of $1,000 and posting of a bond of $5,000 How, if such experiments are cruel and futile, will licensing by the state health department make them any less cruel and futile? And what about the state of New York charging medical students and medical and biologic investigators an annual license fee of $1,000 for doing their best to advance medicine and biology? To me it does not make sense.

The moral code of civilized man reads thus As between man and animals, man comes first This is the law of life. But when man uses or destroys animals for man's own protection, aid and other needs, such use must be conducted without cruelty Certainly it cannot be immoral to use animals humanely to mitigate human suffering due to disease, as long as we believe animals may be sacrificed for human food and clothing If man is not worth more than the dog, then our efforts to improve man is an error

We use animals, by common consent, for food, for clothing, for labor, for pleasure. How can it be wrong to use animals humanely to increase our understanding of life, our control of disease, both of which contribute to human happiness? We must retain a sense of proportion.

Obviously in some studies, such as those in nutrition, metabolism, kidney disease, stomach ulcer, cancer and pneumonia, anesthesia is not and cannot be used The animals suffer some discomfort but never more and probably less than a human being afflicted with such diseases The results of such studies are among those which are most immediately applicable to the mitigation of diseases in man and animals

Our efforts toward prevention and control of infantile paralysis would be hopeless except for the use of some species of monkeys and rodents in detecting and following the poliomyelitis virus And yet the Antivivisection League of Los Angeles publicly proclaims that "it does not support the March of Dimes campaign."

There were more than thirty years of intensive research on animals—mainly on the dog—before we had the substance insulin in sufficient purity to warrant its trial on persons sick with diabetes

The lowly mouse, not to mention many other species, has served man well in research on cancer Animal experimentation has been a great factor also in giving us better knowledge and control of anemia digestive and kidney disorders, glandular disturbances, nervous diseases, hookworm, scurvy, pellagra and malaria.

#### GENERAL DISCUSSION

DR. EWEN MACEWEN, Iowa City I have gone on record as favoring the Magnuson bill, not because I considered it the ideal bill but, as Dr Turner has so well shown, the least unsatisfactory We weren't in favor of this federal research because, as he has so well stated, certain conditions have changed our prewar vision. First, let me say, the gap which has taken place in the oncoming crop of scientists was due to draft necessity When one considers that of every hundred children that enter the fifth grade, only about forty-two graduate from the eighth grade and about 7 per cent finish college, and a small group of these ultimately go on to research, we realize how slow it is going to be to fill up this gap that has occurred during the past five years On the other hand, I realize that during the next few years, unless most of us are mistaken, there is going to be a tremendous drive, an international drive for scientific supremacy Certainly if we are to keep up with nations that are in competition, we need more funds than we did before the war Hence the only way is to get it through a federal research foundation, because I can see no hope at the state level or through local finances

DR. JOSEPH C HINSEY, New York The situation in New York is really an acute one If we had not prepared for the present campaign we would be in a bad position As a result of the activities of the state and county medical societies—and I may say they have been active—the Friends of Medical Research, the medical institutions of the state, the health department, excellent publicity has been obtained The state medical society has published a new bulletin which has been sent out to editors and to various members throughout the state This has been of great help in keeping up the progress of the campaign From organizations like the public health council, the state dental society, the state veterinary medical society and the Greater New York Hospital Association resolutions have gone to Albany not only from the organizations but from the membership The New York State pharmaceutical organization is placing literature in the hands of every druggist in the state The State Charities Aid Association has sent a special bulletin to sixty-two local county tuberculosis and health associations, warning of the danger of the law The medical students over the state have been working industriously not only among themselves but among people outside. Publicity has come from the finest papers in the state, the large papers in New York, with the exception of the Hearst press, the papers upstate and in the little local communities The beauty of the publicity has been that it has been excellently conducted Furthermore, it has encouraged people to write to Albany in protest of this bill Just to see how far our plans have gone, last week in New York an award was made at the American Museum, the Whipple Award sponsored by the American Museum of Natural History—the Friends of Medical Research It was an award given to two of Dr Whipple's dogs for their contribution to medical research This was beautifully dramatized in the papers of New York, with pictures, and had a real effect in certain quarters These dogs, Josie and Trixie, are descendants of the first dogs on which Dr Whipple did his work, starting in California Some people would argue that this problem can be met only on a local basis I am convinced that there is something much broader and more important and something that needs to be dealt with on a national basis I visualize that one of the main functions of a national commission of the type Dr Carlson has described is the development of better public relations and stressing the role that animal experimentation has played and will play in the progress of medical science We need an organization to do this on a national scale Furthermore, we need an organization to coordinate the activities of the local organizations

DR CHARLES GORDON HEYD, New York I should like to reenforce the remarks of Dr Hinsey All agitation and all bills against experiments on animals are a continuing and direct attack on the practice of scientific advancement of medicine. It is *no fight for the duration*, it is a continuous and never ending battle against the darkness, emotionalism and fanaticism that is inherent in human beings The opponents of animal experimentation are organized, backed by large sums of money and with an adequate if not too truthful press Therefore it is incumbent on all scientific bodies, not only medicine, to create a national organization that shall be the controlling influence, that will be the general staff from now on to the indefinite

future, to oppose and to contest with these groups the imposition of legislative slavery on the expansion of human research The meeting that Dr Hinsey referred to comprised every variety of individual associated with any of the disciplines in the sciences They organized spontaneously a group called the Friends of Medical Research The public relations department of the state society came into action, as did the sixty-eight constituent county societies of the medical society of the state They appointed an activated and organizing committee Funds were solicited The funds were forthcoming adequately and promptly I am delegated by the Academy of Medicine and the Medical Society of the State of New York to tell Dr Carlson that all the funds that we have collected, after our expenses are paid, are going to be given to his national organization, that this equipment can be boxed and sent to any state or territory in the United States and brought into action, that our forms for these thousands and hundreds of thousands of pieces of literature are at the disposal of the national group, that we do not wish New York State to set up any organization that has any national implications We want a separate body that shall be national in scope, with a central office, with expert people, so that every statement is incontestable and incontrovertible. We want a group represented by Dr Carlson to implement this national picture What we have developed in technics and which has been significantly successful we bring publicly here and make an offering of our appreciation for the efforts of Dr Carlson and his group and present it to him with the compliments of people who feelingly in New York State are prepared to go any distance that medical research, scientific research, shall not pass and perish from our country

DR E. I EVANS, Richmond, Va One point that seems to me very important, and that we are forgetting continually, is this matter of the elements of observation If ever there was a need for some real learning of principles it is to develop this matter of observation in clinical teaching Unfortunately, it is getting to be my impression in clinical matters that very few people who look at clinical facts or patients see anything It would seem to me that one of the real things we could do for students—I think it could be used as a research tool in undergraduate teaching—would be re-search, it won't be research simply to teach a young student to look at patients and decide from seeing certain facts

DR. JOHN B TRUSLOW, Washington, D C. During the last six months two groups of our society, government and science, who have traditionally regarded each other with a mixture of awe and fear and compensatory belittlement, learned enough of each other's language and became sufficiently convinced of each other's integrity and sincerity that today we have a bill admitted by both legislators and Congressmen and scientists to be a great improvement over either of the bills which originally embodied their respective positions These six months have been tough The two groups at times were poles apart. Each group *conducted its thinking* and activities at times as though the other group was not only unimportant to the passage of the bill but a menace to progress, democracy and the sacred traditions of science. The important thing therefore, is not only the production of this excellent bill but also the proof and, for medical legislation, the precedent, in my opinion, that national legislation can be written, as it always should be written, with a lot of thought, a lot of misunderstanding turning into understanding, a lot of education on both sides

A S HARRIS, PH D Cleveland I want to endorse what the last speaker just said about the National Science Foundation. I think that we who are friends of animal experimentation shouldn't talk too much of defense and protection but rather, take a more positive attitude and speak of advancement or promotion of science by animal experimentation We have to put on our educational program he talked about and for which he has *pointed the way It isn't a matter of hammer and* tong, I hope, but of real education and largely by interesting stories that can be written about the drama of science and as it has developed

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE *JOURNAL*, *April 27 page 1263*

### BOARDS OF MEDICAL EXAMINERS

ALABAMA Montgomery Jan 21 23 Sec. Dr B F Austin 519 Dexter Ave Montgomery 4

ARIZONA * *Examination* Phoenix, April 2 3 *Endorsement* Phoenix, April 6 Sec. Dr J H Patterson, 826 Security Bldg Phoenix.

ARKANSAS * *Medical* Little Rock June 6-7 Sec., Medical Board of the Arkansas Medical Society, Dr L J Kosminsky, Texarkana *Eclectic* Little Rock June 6 Sec., Dr C. H Young, 1415 Main St Little Rock.

CONNECTICUT * *Medical* Hartford, July 9 10 Sec. to the Board Dr Creighton Barker, P O Box 1438, New Haven *HOMeopathic* Derby July 9 10 Sec., Dr Joseph H Evans 1488 Chapel St New Haven

DISTRICT OF COLUMBIA * *Reciprocity* Washington June 10 Sec, Commission on Licensure Dr G C. Ruhland, 6150 E. Municipal Bldg, Washington

FLORIDA * Jacksonville June *24-25* Sec Dr Harold D Van Schaick, *2736* S W Seventh Ave., Miami *36*

HAWAII Honolulu, July 8-11 Sec, Dr S E Doolittle 881 S Hotel St, Honolulu *53*

IDAHO Boise, July 9 Dir Bureau of Occupational Licenses Miss Agnes Barnhart, *355* State Capitol Bldg *Boise*

KANSAS *Reciprocity* Topeka June *6* Sec Board of Medical Registration & Examination Dr J F Hassig 905 N Seventh St Kansas City 10

MAINE Augusta July 2 3 Sec., Board of Registration of Medicine Dr Adam P Leighton 192 State St Portland

MARYLAND *Homeopathic* Baltimore June 18 19 Sec, Dr J A Evans 612 W 40th St Baltimore. *Medical* Baltimore Dec 10 13 Sec., Dr J T O Mara, 1215 Cathedral St Baltimore

MASSACHUSETTS Boston, July 9 12 Sec. Board of Registration in Medicine, Dr H Q Gallupe 413 F State House Boston 33

MICHIGAN * Lansing Oct 9 11 Sec. Board of Registration in Medicine, Dr J E McIntyre 100 W Allegan St., Lansing 8.

MISSISSIPPI June. Asst. Sec. State Board of Health Dr R N Whitfield Jackson *113*

NEVADA Carson City, May 6 Sec. Dr G H Ross *215* N Carson St., Carson City

NEW JERSEY Trenton June 18-19 Sec, Dr E S Hallinger 28 W State St Trenton

NEW YORK Albany Buffalo, New York and Syracuse June 24 27 Sec., Dr Jacob L. Lochner, Education Bldg Albany

NORTH DAKOTA Grand Forks, July 2 5 Sec. Dr G M Williamson 4½ S Third St., Grand Forks

OHIO *Endorsement* May 7 Sec. State Medical Board Dr H M Platter, 21 W Broad St Columbus

OREGON * Special Examination May 22 24 Final date for filing application is May 8 *Examination*. Portland, July *24-26* Exec. Sec. Miss Lorienne M Conlee 608 Failing Bldg, Portland 4

SOUTH CAROLINA Columbia June 24-26 Sec, Dr N B Heyward 1329 Blanding St., Columbia.

SOUTH DAKOTA * Pierre, July 16-17 Sec., Medical Licensure, State Board of Health Dr Gilbert Cottam Capitol Bldg Pierre.

TEXAS Dallas, June 11 13 Sec Dr T J Crowe 918-20 Texas Bank Bldg Dallas 2

WASHINGTON * Seattle July 11 12 Sec, Department of Licenses Miss Nell Adams Olympia

WISCONSIN * June 25 27 Sec. Dr C A. Dawson, River Falls

WYOMING Cheyenne June 3 4 Sec Dr G M Anderson Cheyenne

* BASIC SCIENCE CERTIFICATE REQUIRED.

### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

COLORADO Denver June 5-6 Sec. Dr Esther B Starks 1459 Ogden St Denver

CONNECTICUT June 8 Address State Board of Healing Arts 250 Church St New Haven 10

FLORIDA Gainesville June 4 Final date for filing application is May 20 Sec. Dr J F Conn John B Stetson University, DeLand.

MICHIGAN Ann Arbor and Detroit May 10-11 Sec. Miss Eloise LeBeau 101 N Walnut St, Lansing

NEBRASKA Omaha May 7-8 Dir, Bureau of Examining Boards, Mr Oscar F Humble, 1009 State Capitol Bldg *Lincoln 9*

OREGON Portland July 6 Sec. Mr C D Byrne Univ of Oregon Eugene

SOUTH DAKOTA Probably Aberdeen, June 7 8 Sec. Dr G M Evans Yankton

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Workmen's Compensation Acts Evidence Held Sufficient to Show That Death Caused by Tetanus Arose Out of the Deceased's Employment**—The plaintiff employer filed this action to set aside an award of the Industrial Commission From a judgment affirming the award, the plaintiff appealed to the Supreme Court of Wisconsin

Quandt died of tetanus infection following an onset which started two and one-half days previous to his death An autopsy disclosed an abrasion on the tip of one finger of his right hand which had apparently healed The widow testified that the deceased dressed this abrasion several times just prior to his death and that it was an ugly jab caused by the slipping of a drill while he was remodeling a butcher shop about two weeks before he died In the course of his job he had to handle old lumber, animals were butchered in the room in which he worked, and there were hides in the same room which he had to move out of his way There was medical evidence that tetanus occurs frequently in the vicinity of animals, that manure is especially likely to contain tetanus germs, that unless the animals are kept clean the outside of the hides is apt to be so infested and that dirt is a frequent source of tetanus infection The evidence was sufficient, therefore, to warrant a finding that the repair job engaged in by deceased involved exposure to tetanus infection The wound on the deceased's finger showed no sign of local irritation or infection at the time of his death, but the medical evidence was to the effect that this was not decisive in cases of tetanus On the basis of the medical testimony, the court said that while some people have tetanus germs within their bodies, particularly their intestinal tracts, and it is possible for the germs to cause a tetanus lesion without an outside wound, nevertheless the probability is the other way and a wound is the most likely place for the germs to enter The history of this case, concluded the court, indicates the injured finger as the portal of infection and the hides as the source of the tetanus germs The plaintiff's objection that the commission resorted to standard medical textbooks to form and justify its conclusions as to the nature and likelihood of idiopathic tetanus was held to be immaterial We are hardly in a position, said the Supreme Court, to supervise the acquisition or use by the commission of expert learning in the various fields which call for administrative action on its part Accordingly the award was sustained and the judgment in favor of the defendant affirmed—*Gmeiner & Grearson et al v Industrial Commission et al, 20 N W (2d) 543 (Wis, 1945)*

**Drunkenness Results of Chemical Tests of Blood Taken from Unconscious Person—Use During Trial—Self Incrimination**—The defendant was convicted of manslaughter on a charge of operating a motor vehicle on a public highway while under the influence of intoxicating liquor From such conviction he appealed to the Supreme Court of Oregon

After the accident out of which the charge of manslaughter against the defendant arose, the defendant remained unconscious for a period of about forty-eight hours While unconscious he was arrested and taken into custody by a state police officer and treated for his injuries by Dr Manning At the request of the police officer, Dr Manning was induced to extract a sample of blood from the defendant for the purpose of having it analyzed to determine its alcoholic content This blood sample was taken by the officer to a physician in Portland, Ore, for analysis At the hearing the Portland physician testified that the sample "contained 260 milligrams of alcohol per one hundred cc's" The admission in evidence of this testimony was objected to primarily on the ground that the use of such testimony was a violation of the constitutional provision that no person shall be compelled in any criminal prosecution to testify against himself and that such testimony is to be taken as an admission or confession or as evidence of a physical examination

The only question before us for decision, said the Supreme Court, is whether the compulsory taking of the blood sample from the defendant and the admission of testimony disclosing its alcoholic content was a denial to the defendant of his constitutional privilege against self incrimination The protection from "testifying," from "furnishing evidence" or from "being a witness" was provided in order to place beyond the reach of ordinary legislative alteration the privilege against self incrimination Assuredly, the object of this protection is the employment of legal process to extract from the person's own lips an admission of his guilt which will thus take the place of other evidence. In other words, it is not merely any and every compulsion, but testimonial compulsion, that is the kernel of the privilege If the arrest of a prisoner is lawful, the officer making the arrest may search the person of the prisoner and take from him not only the instruments of the crime but also such articles as may be of use as evidence on the trial For purposes of identification, an accused may be required to do many things without having his constitutional rights against self incrimination invaded Accordingly, a defendant may be required to stand up in court, to put on a blouse to see if it fits, to place a handkerchief over his face, to stand up and remove his glasses, to remove his shirt and coat and permit the jury to see scars on his body and to don a shirt introduced in evidence, and to exhibit his arm so as to reveal tattoo marks thereon, which a previous witness has sworn were there. He may also be fingerprinted, photographed and measured under the Bertillon system

In the case at bar it was conceded that the defendant was in custody and under lawful arrest at the time the blood sample was extracted from his veins and that he was unconscious at the time However, prior to the trial both the defendant and his attorney were advised by the district attorney that the blood sample had been taken No motion was made for its return or suppression At the trial no objection was made to the admission of testimony as to the extraction of blood or the analysis thereof on the ground that the Oregon constitution prohibiting unreasonable search or seizure had been violated In fact, counsel for defendant stated on oral argument that he was not urging that the blood sample had been seized in contravention of the search and seizure provision In *State v Gatton*, 60 Ohio App 192, 20 N E (2d) 265, the court observed that such evidence was not required to be given by the defendant himself but was given by the deputy sheriff and by the doctor called to make the examination "We are unable," said that court, "to observe any merit in the defendant's claim that the introduction of such evidence violated his constitutional rights, and we believe, and hold, that the constitutional inhibition against self crimination relates only, as stated by Greenleaf, to disclosure by utterance No such disclosure was required of defendant in this case"

The defendant was not deprived of any of his constitutional rights by the admission of the testimony here in question, said the Supreme Court He was not compelled to testify against himself Evidence of the result of the analysis of the blood sample was not his testimony but that of Dr Beeman The blood sample was obtained without the use of any process against him as a witness He was not required to establish the authenticity, identity or origin of the blood, those facts were proved by other witnesses If the evidence here under attack is inadmissible, said the court, it is difficult to understand under what theory fingerprints procured under compulsion, or evidence concerning them, is admissible It is equally difficult to comprehend why a defendant is not denied his constitutional privilege against self incrimination by being required to do the many other acts previously referred to In holding that the testimony concerning the blood sample was admissible, the court concluded, we are not deciding that an accused can be forced to undergo a physical examination or to submit to a blood test The question of unlawful search and seizure is not involved Moreover, the defendant was under arrest at the time the blood sample was taken Accordingly the admission of the evidence in question was held to be proper and the defendant's conviction was affirmed—*State v Cram, 160 P (2d) 283 (Ore, 1945)*

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days Three journals may be borrowed at a time Periodicals are available from 1936 to date Requests for issues of earlier date cannot be filled Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested) Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order Reprints as a rule are the property of authors and can be obtained for permanent possession only from them

Titles marked with an asterisk (*) are abstracted below

### American Journal of Clinical Pathology, Baltimore

**15** 489 554 (Nov) 1945

Malarial Pigment Consideration of Mechanism of Elimination from Duck R H Rigdon —p 489
Malaria Transmitted by Bank Blood Transfusion Report of 2 Cases J G Sharnoff J Geiger and I Selzer —p 494
Improved Method of Examination of Feces for Diagnosis of Intestinal Schistosomiasis T H Weller and G J Dammin —p 496
Canine Histoplasmosis Pathologic Study of 3 Reported Cases and First Case Found in the Canal Zone W J Tomlinson and R G Grocott —p 501
*Acute Infectious Lymphocytosis. R F Birge and L. F Hill —p 508
Specific Types of Alpha Streptococci and Streptococcal Antigen in Unpotable Water and Water Supplies E C Rosenow —p 513
Relationship of So Called Giant Cell Tumor' to Frontal Bone Report of Case Elizabeth Ferrington and J A Mufson —p 529
Liver Abscess Due to Friendlander s Bacillus (K. Pneumoniae) Complicating Adenocarcinoma of Ampulla of Vater J K Norman and C H Binford —p 534

**Acute Infectious Lymphocytosis**—Birge and Hill report the occurrence of acute infectious lymphocytosis in a girl aged 4 This disease of children named by Smith in 1941 acute infectious lymphocytosis, is characterized by pronounced absolute lymphocytosis of three to nine weeks' duration Often it occurs without clinical signs or symptoms Occasionally it is accompanied by slight fever, symptoms of upper respiratory infection abdominal pain of short duration or signs of meningeal irritation with slight pleocytosis The cause is not known The prognosis is favorable The disease is communicable and occurs in all seasons It seems to be a specific entity and differs from infectious mononucleosis in many respects Lymphadenopathy and splenomegaly are not encountered, lymphocyte counts are higher, lymphocytes are normal in appearance the heterophile antibody test is negative. Bone marrow obtained from another recently studied case showed slight increase in small lymphocytes without other changes

### American Journal of Hygiene, Baltimore

**43** 1-90 (Jan) 1946

Bat Malaria R D Manwell.—p 1
Studies on Mosquitoes of Genus Hemagogus in Colombia (Diptera Culicidae) H W Kumm E Osorno Mesa and J Boshell Manrique. —p 13
Periodicity of Influenza Commission on Acute Respiratory Disease. —p 29
Studies on Specificity of Intradermal Tests in Diagnosis of Filariasis D L Augustine and Camille Lherisson —p 38
Effect of Immunization Against Lactobacilli and Acidogenic Cocci on Tooth Flora of Rat Elizabeth I Parsons E V McCollum and M Frobisher Jr —p 41
Epidemiologic and Experimental Observations of Poliomyelitis in New York City (1943 1944) C W Jungeblut and G Dalldorf —p 49
*Effect of Double Bunking in Barracks on Incidence of Respiratory Disease Commission on Acute Respiratory Disease —p 65
Differences Among Strains of Poliomyelitis Virus in Macaca Mulatta J F Kessel, F J Moore and C F Pait.—p 82

**Double Bunking in Barracks and Respiratory Disease**—According to the Commission on Acute Respiratory Diseases there are theoretical reasons for believing that double bunking without concomitant crowding may be a desirable method of quartering troops The procedure provides more available floor space for the men during off-duty hours and results in a greater separation between the men while sleeping If acute respiratory diseases are acquired largely in the barracks and if direct droplet spread is an important factor in transmission of infection it might reasonably be expected that double bunking would reduce the frequency of close contact and thereby result in a lowering of the incidence of disease If, however, either droplet nuclei or contaminated dust particles are the dominant factors, double bunking could not be expected to have an effect since the total cubic feet of air space available per man remains unchanged During an epidemic of acute undifferentiated respiratory disease significantly lower incidence rates were observed among men living in barracks equipped with double bunks than in control barracks There appears to be no objection to the general use of double bunks, provided overcrowding is avoided

### American J Obstetrics and Gynecology, St. Louis

**51** 1-150 (Jan) 1946

Carcinoma Subsequent to Radiotherapeutic Menopause J A Corscaden J W Fertig and S B Gusberg —p 1
Value of Physiologic Substrates in Sperm Migration in Selected Cases of Human Infertility Observations on a Series of 106 Patients S L Siegler —p 13
*Postmenopausal Endometrium and Its Relation to Adenocarcinoma of Corpus Uteri Study of 236 Cases G T R. Fahlund and A C Broders —p 22
Anovulatory Cycle and Menstruation R Meyer —p 39
Selective Treatment of Antepartum Hemorrhage W A Scott —p 48
Histologic Study of Effect of Irradiation on Adenocarcinoma of Endometrium L M Stowe —p 57
Management and Treatment of Late Toxemias of Pregnancy S A Cosgrove and L C Chesley —p 67
Oral Therapy with Ethinyl Estradiol in the Menopause H Wiesbader and W Filler —p 75
Pyridoxine Failure in Nausea and Vomiting of Pregnancy H C Hesseltine —p 82
*Sulfathiazole in Control of Epidemic Diarrhea of Newborn M Leff —p 87
Sulfanilamide and Sulfathiazole Absorption via Rectum and Vagina Further Studies G L Carrington and M A Hannah —p 90
Are Antihormones Formed During Pregnancy? J H Leathem and A E Rakoff —p 97
Ethinyl Estradiol in Treatment of Metrorrhagia. W Bickers —p 100
Puerperal Sterilization R Van Dyck Knight.—p 104
Panhysterectomy Without Vaginal Cleansing T Cianfrani and J H Zeigerman —p 109
Cesarean Section on Poliomyelitic Patient Confined to Respirator H Strauss and S S Bluestone —p 114
Double Uterus and Double Vagina Identical Doubles Demonstrated by Colpohysterosalpingography R R Killinger and H. B McEuen —p 121
Subperitoneal Baldy Webster Uterine Suspension M L McCall and E A Schumann —p 125

**Postmenopausal Endometrium and Adenocarcinoma**—The material studied by Fahlund and Broders consisted of gross and microscopic specimens of postmenopausal uteri, detailed descriptions of specimens and clinical and operative records of 236 cases of the Mayo Clinic The 236 cases included 86 cases in which the uterus had been removed because of adenocarcinoma 100 cases in which the uterus had been removed for other reasons and 50 cases in which routine necropsy had been performed In the 86 women with adenocarcinoma of the corpus uteri, all but 1 had vaginal bleeding or spotting as a presenting complaint. There was no appreciable difference in the percentage of cases of any given type of endometrium in adenocarcinomatous uteri as compared with nonadenocarcinomatous uteri except with regard to atrophic endometrium Thus 41 8 per cent of cases of uteri with cancer showed atrophic endometrium and only 16 per cent of cases of uteri without cancer showed atrophic endometrium. This suggests that adenocarcinoma of the uterine corpus is more likely to occur in cases in which there is atrophy of the endometrium than in cases in which there is no atrophy The percentage of cases with grade 3 and 4 cystic change and with grade 3 and 4 accumulation of secretion was roughly the same in the two groups of cases Approximately 42 per cent of adenocarcinomatous uteri showed no cystic changes, whereas 20 per cent of nonadenocarcinomatous uteri showed no cystic changes This lends evidence contrary to the view that the 'Swiss cheese endometrium' of Novak has features predisposing to the development of carcinoma Subbasal glands seem to have no causal relationship to adenocarcinoma of the uterus There was virtually no difference in average thickness of the endometrium in adenocarcinomatous uteri as compared with nonadenocarcinomatous uteri The incidence of endometrial polypi in uteri without adenocarcinoma was roughly eight times greater than their incidence in uteri containing adenocarcinoma However, previous curettage in

all cases of cancer might be partially responsible for the variation The general conclusion from this comparison is that atrophic endometrium was found more often in adenocarcinomatous uteri than in nonadenocarcinomatous uteri, while endometrial polypi were found more often in nonadenocarcinomatous uteri

**Sulfathiazole in Epidemic Diarrhea of the Newborn.**—Leff describes the procedure employed at the Central Maternity Hospital in New York for the treatment of epidemic diarrhea of the newborn. Nurses are instructed to be constantly on the alert for frequent or watery stools in the newborn Treatment is instituted early and consists of 1 grain (0 06 Gm ) of sulfathiazole every three hours administered with a medicine dropper or teaspoon directly into the baby's mouth (a stock solution of 0 06 Gm per 4 cc is used) After a few doses the diarrhea is usually controlled If the diarrhea does not subside, all food is withheld for twelve hours, and saline solution is given by clysis and the medication is continued Every baby in the nursery who has been exposed is given 1 grain of sulfathiazole as a prophylactic measure Sulfathiazole given promptly at the onset of epidemic diarrhea in the newborn infant cures the disease in less than twenty-four hours and prevents its spread in the newborn nursery

## Annals of Allergy, Minneapolis

3 401-478 (Nov-Dec.) 1945

Extraction of Nitrogenous Matter from Pollens R F E Stier A L McNeil and J Ernsdorff —p 401
Fatigue and Weakness of Allergic Origin (Allergic Toxemia) to Be Differentiated from "Nervous Fatigue" or Neurasthenia. T G Randolph —p 418
Introduction of Allergen into Skin by Inunction with "Intraderm" I Additional Experimental Data on Inunction Test. F Herrmann. —p 431
Passive Transfer of Experimental Contact Dermatitis with Urbach Koenigstein Technic L H Ballestero and A Manrique Mom —p 435
*Parenteral Use of Dihydroergotamine in Migraine M M Hartman —p 440
Successful Therapy of Dermatologic Syndrome with L Casei Factor (Folic Acid) Preliminary Report A F Coca —p 443
Sinobronchial Syndrome Complicating Atopic Asthma in Children Treatment by Roentgen Ray L O Dutton and J R Fuchlow —p 447
Combined Tyrothrycin Penicillin Therapy in Contact Dermatitis. M Vaisberg —p 451

**Dihydroergotamine in Migraine**—Hartman selected 20 patients with migraine for trial Seventeen of them had obtained relief from ergotamine tartrate and 3 had not. These same 17 obtained relief by dihydroergotamine, which did not cause uterine cramps in any of the 15 female patients, 1 of whom was pregnant and 3 of whom were menstruating Only 1 of the 20 patients suffered nausea ascribable to the dihydroergotamine. Nine had nausea ascribable to ergotamine tartrate. Dihydroergotamine used intramuscularly produced no demonstrable effects on pulse rate, blood pressure, pulsations of radial, dorsalis pedis and posterior tibial arteries or the temperature and color of the extremities

## Blood, New York

1 1-98 (Jan.) 1946

Blood Brief Survey of Its Chemical Components and of Their Natural Functions and Clinical Uses E J Cohn —p 3
*Primary Congenital and Secondary Acquired Splenic Panhematopenia C A. Doan and C S Wright —p 10
Megakaryocytes in Idiopathic Thrombocytopenic Purpura a Form of Hypersplenism W Dameshek and E B Miller —p 27
Value of Penicillin in Treatment of Agranulocytosis Caused by Thiouracil Mary Catherin Tyson, P Vogel and N Rosenthal —p 53
*Differentiation of Pernicious Anemia and Certain Other Macrocytic Anemias by Distribution of Red Blood Cell Diameters G A. Daland C W Heath and G R Minot —p 67
Diagnosis of Hodgkin s Disease by Aspiration Biopsy Lucile Loseke and L F Craver —p 76

**Splenic Panhematopenia.**—Doan and Wright observed in certain general constitutional disease states involving the spleen more extensively than other organs an instability in the functional balance of the spleen, which in extreme instances resulted in an absolute lack of discrimination between senile and mature circulating elements, with excessive phagocytosis of all essential cells passing through this organ They report 3 cases 1 A girl aged 14, with congenital splenic panhematopenia, experienced excessive splenic sequestration of normal circulating blood elements, which had probably commenced a few weeks after birth and had persisted until splenectomy at 14 years of age. Almost complete cellular and physical reequilibration followed the operation immediately and has been maintained for two years 2 The second case demonstrates that splenic panhematopenia may occur as a relatively acute fulminant medical crisis 3 A woman with Gaucher's disease is an example of the indiscriminate sequestration of all circulating cellular elements by a spleen, enlarged and engorged secondary to a generalized constitutional disease.

**Differentiation of Anemias by Distribution of Red Blood Cell Diameters**—Deland and his associates studied 35 cases of pernicious anemia, 17 of refractory macrocytic anemia, 33 of macrocytic anemia secondary to a variety of causes and 10 normal persons The authors conclude that below the level of about 2,500,000 red blood cells per cubic millimeter the degree of anisocytosis as revealed by the standard deviation and the coefficient of variation of the red cell diameters serves as a fairly accurate criterion for distinguishing addisonian pernicious anemia from many other types of macrocytic anemia Below the level of 3,000,000 red blood cells per *cubic millimeter the asymmetrical skewness of the distribution* curve of the red cell diameters in pernicious anemia is an aid in distinguishing these cases from certain other types of macrocytic anemia

## California and Western Medicine, San Francisco

64 1-62 (Jan ) 1946

Sickness Insurance in Relation to California Medical Association J Cline —p 7
The Army Doctor R V Lee —p 9
Comparative Pathology of Native Chinese and Americans Some Observations C L. Dale.—p 13
Crushing Injuries with Renal Failure W Birnbaum —p 15
Phlebothrombosis, Thrombophlebitis and Pulmonary Embolism—present Concepts L J Kleinsasser —p 18
X Ray Examination of Chest in County Hospital Routine Examinations in County Hospital in California. H Bauer H R Goldsmith and A B Steele —p 29
Sjogren s Syndrome Treated with Stilbesterol Report of Case B Friedman and H Gernand —p 31

## Endocrinology, Springfield, Ill

37 389-496 (Dec.) 1945

Experimental Production of Exophthalmos in Fundulus by Means of Anterior Pituitary Extracts A Albert —p 389
Interruption of Ovulation in Hen by Subcutaneously Administered Non specific Substances R M Fraps and B H Neher —p 407
Relation Between Ovulation Frequency and Incidence of Follicular Atresia Following Surgical Operations in Domestic Hen I Rothchild and R M Fraps —p 415
Succinic Dehydrogenase Activity of Ovarian and Lutein Tissue R K. Meyer W H McShan and Wilma F Erway —p 431
Influence of Urinary Cortin like Material on Sodium and Potassium Metabolism Mary L. Feil and R. I Dorfman —p 437
*Relation of Carbohydrate Deficient Diets to Effectiveness of Hormones of Adrenal Cortex W J Eversole —p 450
*Further Studies on Chemical Nature of Compounds Which Inhibit Function of Thyroid Gland E B Astwood A Bissell and A M Hughes —p 456

**Carbohydrate Deficient Diets and Effectiveness of Hormones of Adrenal Cortex**—Eversole states that a low carbohydrate diet greatly reduces the effectiveness of desoxycorticosterone acetate, less so than it does whole extract of the adrenal cortex. This was demonstrated in treated adrenalectomized rats fed carbohydrate deficient diets for periods of ten and twenty days The effectiveness of the preparations was partially dependent on the method of administration Cortical extract 0 5 cc. was more effective in the drinking water than when injected thrice daily and much more effective than when injected once daily Desoxycorticosterone acetate 0 5 mg was more effective when injected in an alcohol water suspension than in oil, but regardless of the method of administration it was inferior to cortical extract given in drinking water A possible explanation of these results is the conversion of fed protein to carbohydrate under the influence of adrenal cortex hormones

**Chemical Nature of Compounds Which Inhibit Thyroid Functions**—Astwood and his associates investigated the relative antithyroid activities of a variety of compounds in rats by administering various doses in the diet for periods of ten days

The degree of thyroid enlargement and the decrease in thyroid iodine concentration thus induced were used to compare the activities of new compounds with thiouracil, which was considered to have an activity of 1. Of the 220 substances investigated 115 were found to possess detectable activity and 25 proved to be as active as or more active than thiouracil. The most potent substances were derivatives of thiouracil. Two types of chemical structure were found to be associated with antithyroid activity. The more active class possessed a thiocarbonamide grouping; the less active an aminobenzene group. Of the latter the most effective substances were 4,4'-diaminodiphenylmethane, its tetramethyl derivative and 2-amino 5-sulfamylthiazole. These were approximately one fourth as active as thiouracil.

## Gastroenterology, Baltimore

5: 449-556 (Dec.) 1945

*Transmission of Infectious Hepatitis by Blood Transfusion: Report of 2 Cases. H. M. Murphy.—p. 449
Prophylaxis of Peptic Ulcer. A. Winkelstein.—p. 457
The Pancreas: Contributions of Clinical Interest Made in 1944. R. Elman and M. D. Hatch.—p. 463
Tuberculosis of Stomach with Special Reference to Its Incidence in Children. L. Binder, V. M. Ruby and B. J. Shuman.—p. 474
Methyl Group and Some of Its Relations to Liver and Kidney Damage. Mary Adelia Bennett.—p. 491
Action of Vitamin D2 on Experimental Peptic Ulcer Produced by Cinchophen. J. Nasio.—p. 496
Pepsin Method: Role of Dilution in Determination of Peptic Activity. G. R. Bucher, M. I. Grossman and A. C. Ivy.—p. 501
Effect of Alumina Gel on Absorption of Vitamin A from Intestinal Tract. W. S. Hoffman and Hattie A. Dyniewicz.—p. 512

**Transmission of Infectious Hepatitis by Blood Transfusion.**—Murphy reports the accidental transfusion of 2 patients with blood containing the virus of infectious hepatitis and the subsequent reproduction of the disease in the recipients. The blood was drawn from the donors and given to the recipients shortly before the donors developed hepatitis. The incubation period in the recipients from the time of transfusion to the onset of illness was twenty-four days and forty-seven days respectively. Infectious hepatitis is probably transmitted by transfusion of blood or plasma much more frequently than is realized. It appears impossible to prevent such occurrences in military personnel in overseas areas where hepatitis is epidemic and transfusions are used frequently. Persons with a history of hepatitis should not be used as blood donors.

## Illinois Medical Journal, Chicago

88: 273-322 (Dec.) 1945

Compound Fractures: First Priority Emergency: Plea for Adequate Plan for Definitive Treatment. E. L. Compere.—p. 289
Medical Care for Veterans. P. R. Hawley.—p. 294
Thrombosis of Deep Veins of Lower Extremities. D. I. Abramson.—p. 296
Ganser's Syndrome: Case Study. A. A. Lieberman.—p. 302
Action of Shock Therapy in Light of Clinical Observation. B. Kovitz.—p. 306

89: 1-84 (Jan.) 1946

*Paraurethral and Periurethral Infections of Female Urethra. E. H. Roeser and H. L. Kretschmer.—p. 16
Sterility. W. C. Scrivner.—p. 19
Clinical Evaluation of Serologic Tests for Syphilis in 8,000 Cases. J. M. Lubitz.—p. 20
Classification of Strabismus. A. J. Strich.—p. 25
Bismuth Subsalicylate in Oil the Treatment of Choice in Vincent's Angina. H. D. Grossman.—p. 28
Hemochromatosis: Clinical, Chemical and Pathologic Study of Case. H. R. Fishback and F. H. Fowler.—p. 30

**Infections of Female Urethra.**—Roeser and Kretschmer report 41 unselected cases of chronic infection in Skene's glands and in the periurethral glands. The authors emphasize that these lesions are a frequent but overlooked cause of urinary symptoms. In the group studied frequency of urination was the chief symptom. The authors point out that good illumination is important for the examination of Skene's glands. When infected the openings of Skene's glands are red sometimes appear larger than normal and often appear elevated. Pressure may show pus exuding from them. The openings of the periurethral glands, when infected, are red and sometimes swollen. Aid in localization can be obtained by a small wire meatal speculum or a pair of bent hairpins to retract the external urethral orifice or by gentle stripping of the urethra. Urethritis is often present. Occasionally there is temporary relief by instrumentation with sounds or a cystoscope as the result of pressure of these instruments on the infected glands, causing the expression of retained discharge. Treatment consists in the destruction of the infected glands by means of the high frequency current with a fulguration electrode inserted into the bottom of the infected glands. In some cases this may be up to ½ or ¾ of an inch. The most distal glands are treated first. Following fulguration, a warm sitz bath is taken three or four times a day. The relief of symptoms is prompt. Reexamination is indicated in eight to ten weeks. Hospitalization is not necessary. Associated infection elsewhere in the urinary tract should be eliminated.

## Journal of Bone and Joint Surgery, Boston

28: 1-212 (Jan.) 1946. Partial Index

*Iliac Bone Transplantation: Preliminary Observations. I. L. Dick.—p. 1
Use of Cancellous Chips in Bone Grafting. S. L. Higgs.—p. 15
Method of Treatment of Chronic Infective Osteitis. I. M. Robertson and J. N. Barron.—p. 19
Pyogenic Osteomyelitis of Spine: Differential Diagnosis Through Clinical and Roentgenographic Observations. J. Puig Gurí.—p. 29
*Osteochondromata of Pelvic Bones. R. K. Ghormley, H. W. Meyerding, R. D. Mussey, Jr. and C. A. Luckey.—p. 40
Late Rupture of Extensor Pollicis Longus Tendon Following Colles's Fracture. F. M. Smith.—p. 49
Orthoroentgenography as Method of Measuring Bones of the Lower Extremities. W. T. Green, G. M. Wyatt and Margaret Anderson.—p. 60
Ligaments of Knee Joint: Relationship of Ligament of Humphry to Ligament of Wrisberg. O. C. Brantigan and A. F. Voshell.—p. 66
Treatment of Fracture Dislocation of Interphalangeal Joints of Hand. R. C. Robertson, J. J. Cawley, Jr. and A. M. Faris.—p. 68
Position of External Hip Joint in Above the Knee Prosthesis with Pelvic Suspension: Experimental Approach to Problem. A. R. Buchanan and B. E. Robinson.—p. 71
Mutational Dysostosis (Cleidocranial Dysostosis). A. B. Soule, Jr.—p. 81
Arthrodesis of Hip Produced by Internal Fixation. J. J. Niebauer and D. King.—p. 103
Vertical Traction in Early Management of Certain Compound Fractures of Femur. B. E. Obletz.—p. 113
Resection of Clavicle in Vascular Surgery. D. C. Elkin and F. W. Cooper, Jr.—p. 117
Transverse Sacral Folds. Mildred Trotter and R. D. Heath.—p. 120
*Bacteriologic Examination of Gastric Contents in Diagnosis and Management of Tuberculosis of Bones and Joints. A. L. Banyai and A. V. Cadden.—p. 137
Fracture of Medial Epicondyle with Displacement into Elbow Joint. J. Patrick.—p. 143
Trichinosis as Cause of Meralgia Paresthetica. H. H. Cohen.—p. 153

**Iliac Bone Transplantation.**—Dick reports 8 cases and shows that cancellous chip grafts are of value in the arthrodesis of joints, in the repair of bone defects and in some forms of nonunion or delayed union of fractures. A cortical graft may be needed to preserve the shape of a bone, but, if stability of the fractured bone can be maintained by means other than the use of a cortical graft, cancellous chips alone will produce union. The main disadvantage of a tibial bone graft is that it usually has to be cut from an intact tibia. Plates and screws of absorbable plastic material used with cancellous chips from the ilium, would appear to be the ideal method of osteosynthesis.

**Osteochondromata of Pelvic Bones.**—Ghormley and his associates report 40 cases of osteochondroma of the innominate bone in which operation was performed at the Mayo Clinic during the years 1910 to 1943 inclusive. In each case the diagnosis was verified by microscopic examination. A total of 69 operations were performed on these patients. Nine of the patients are known to have died, and 8 are known to have had one or more recurrences. In 2 cases not all of the tumor was removed at the time of operation. In 4 of the 40 patients malignant changes were later found. In 16 patients (not included among the 40) microscopic examination revealed that the lesions were malignant at the time the patients were first operated on. The authors have seen 2 cases in which the symptoms continued and ultimately a chondroma was revealed.

**Examination of Gastric Contents in Tuberculosis.**—Banyai and Cadden during the past seven years have studied 22 cases of bone tuberculosis in which an attempt was made to corroborate the clinical diagnosis by bacteriologic examination of the fasting gastric contents. In 7 of these 22 patients with various forms of orthopedic tuberculosis tubercle bacilli were found in the fasting gastric contents. In the presence of an

orthopedic involvement of obscure origin the presence of tubercle bacilli in the fasting gastric contents, though not absolute proof of the tuberculous nature of the disease, should be looked on as important presumptive or circumstantial evidence.

## Maine Medical Association Journal, Portland

**37** 1-20 (Jan.) 1946

Medical Aspect of Disease of Thyroid Gland J. O. Piper—p. 1
Cesarean Section as Adapted to Physician P. A. Millington—p. 6

**37** 21-44 (Feb.) 1946

Diagnosis and Primary Surgical Treatment of Injuries of Hand. W. E. Browne—p. 21
Cancer of Skin and Orificial Mucosae L. Babalian—p. 29

## New England Journal of Medicine, Boston

**234** 71-102 (Jan. 17) 1946

*Progress in Treatment of Subacute Bacterial Endocarditis. C. B. Favour, C. A. Janeway, J. G. Gibson and S. A. Levine—p. 71
Acute Obstruction of Small Intestine. Report of 118 Cases. W. R. Moses—p. 78
Epistaxis. H. H. Amsden—p. 81
Cardiovascular Disease Among Veterans of World War II. Survey of 19,870 Cases. A. H. Traum and Blanche B. Wilcox—p. 82
Symposium on Medical Sociology: Health Insurance Plans. N. W. Faxon—p. 86
Subacute Bacterial Endocarditis: Portal Cirrhosis of Liver—p. 90
Tuberculosis of Spine—p. 94

**Subacute Bacterial Endocarditis**—Favour and his associates reviewed the 347 proved cases of subacute bacterial endocarditis treated at the Peter Bent Brigham Hospital from 1913 to 1945. There were no known recoveries among 237 cases seen between 1913 and 1937, during which time a great variety of therapeutic procedures were employed. Of the 90 patients observed from 1937 to 1943, 55 received adequate treatment with a sulfonamide. Sixteen of the latter patients were given simultaneously fever therapy. Of these, 1 treated with infra-red radiation and 3 treated with typhoid vaccine recovered and have remained well for two to four years. None of the other sulfonamide treated patients recovered. Of 20 patients studied since January 1944, 17 were given large doses of penicillin. The infection of 11 patients has been cured or arrested and they are now alive. The follow-up periods vary between six and eighteen months. In 2 others the infection was bacteriologically arrested but death occurred some weeks later because of complications. Congestive heart failure may follow recovery from the infection. Dental sepsis, extraction of teeth and dental manipulations were found to be related to the onset of this disease in a surprisingly large number of cases. Infected teeth should be removed before treatment is completed as a prophylaxis against subsequent reinfection of the heart valves. Although penicillin appears to be a promising cure for subacute bacterial endocarditis, patients who recover from this disease are left with the same or further valvular deformities which continue to predispose them to reinfection or to subsequent congestive heart failure.

## New Jersey Medical Society Journal, Trenton

**43** 1-34 (Jan.) 1946

Neurosyphilis: Its Diagnosis and Treatment. H. S. Read, L. I. Kaplan and F. T. Becker—p. 5
Clinical Experiences in Treatment of Low Back and Sciatic Pain Associated with Disorders of Intervertebral Disk. H. Briggs and S. Keats—p. 13

**43** 35-76 (Feb.) 1946

*Thrombosis of Basilic, Axillary and Subclavian Veins of Undetermined Origin. L. A. Eigen—p. 45
Treatment of Diarrheas. J. Gerendasy—p. 50
Two Cases of Ozena Cured by Pickrell Solution. R. J. Vreeland—p. 52

## Physiological Reviews, Baltimore

**26** 1-168 (Jan.) 1946

Histochemical Contributions to Physiology. E. W. Dempsey and G. B. Wislocki—p. 1
Coronary Circulation. D. E. Gregg—p. 28
Recent Experimental Studies on Leukemia. J. Furth—p. 47
Neural Mechanisms of Cutaneous Sense. G. H. Bishop—p. 77
Absorption of Triglyceride Fat from Intestine. A. C. Frazer—p. 103
Use of Isotopically Marked Carbon in Study of Intermediary Metabolism. J. M. Buchanan and A. B. Hastings—p. 120
Yawning and Associated Phenomena. A. Price Heusner—p. 156

## Radiology, Syracuse, N. Y.

**46** 1-106 (Jan.) 1946

*Superficial Burns of Skin and Eyes from Scattered Cathode Rays. L. L. Robbins, J. C. Aub, O. Cope, D. G. Cogan, J. L. Langohr, R. W. Cloud and O. E. Merrill—p. 1
Roentgenology of Draining Bronchi from Tuberculous Cavities. M. R. Camiel—p. 24
Study of Ureters in Bladder Neck Obstructions. F. H. Squire and H. L. Kretschmer—p. 32
Diagnosis of Pes Planus by X-Ray. W. L. Bonnet and D. R. Baker—p. 36
Pneumonoconiosis Due to Cotton Dust (Byssinosis): Case Report. P. V. McCarthy and W. R. Akenhead—p. 46
Unusual Case of Multiple Chondromata. R. Gurney and L. Cohen—p. 48
Roentgenographic Demonstration of Concretions in Submandibular Glandular Duct by Use of Intraoral Films. G. D. Monardo—p. 53
Protection Against X-Rays and Gamma Rays: Tolerance Dose or Tolerance Intensity. E. H. Quimby—p. 57
Id: Radiation Injury. R. S. Stone—p. 59
Id: Genetic Injury. P. S. Henshaw—p. 62
Id: Human Factors. R. B. Taft—p. 65
Id: X-Ray Protection in Industrial Fluoroscopy. G. C. Henny—p. 66
Id: Materials and Methods of X-Ray Protection. G. Singer and G. C. Laurence—p. 69

**"Burns" of Skin and Eyes from Scattered Cathode Rays**—Robbins and his associates report injuries received by 6 men in the department of radiology at the Massachusetts General Hospital as a result of a few seconds exposure to scattered electrons from a 1,200 kilovolt electrostatic generator. The exact dosage could not be determined but was probably between 1,000 and 2,000 "tissue roentgens." The lesions had the unusual characteristic of appearing in three phases, the last one becoming manifest approximately four weeks after the exposure. Except for a mild injection of the conjunctiva in 3 men, coming on within a few hours after the exposure, no ocular signs occurred during the first two phases of reaction. Severe ocular signs developed in 1 man in the tertiary phase and consisted of punctate epithelial lesions accompanied by severe photophobia, lacrimation and foreign body sensation. The cathode ray burns were analogous to, but different from, thermal burns and roentgen ray reactions. The primary reaction resembled an intense sunburn and lasted about the same length of time but was not followed by tanning. The secondary reaction was characterized by edema with bleb formation. At the same time 3 of the men showed new areas of involvement, appearing at varying intervals in parts which had been protected by clothing. These areas also showed superficial edema and deep plum colored pigmentation characteristic of the primary reaction. Some went on to bleb formation and even to destruction of the full thickness of the skin. Several areas that had healed broke down for the second time. None of the lesions involved tissues deeper than the dermis. In 1 man permanent injury occurred in areas of maximal destruction. Epilation was not apparent until complete destruction of the superficial layers of the skin had occurred, and only in those areas severely injured. Six months after the exposure, the hair appears to be returning even in areas where the injury was extensive and relatively deep. Pigmentation is absent or irregular in the areas of deep burns in 2 men. Telangiectasis has developed in 1 man to a greater extent than that seen in thermal burns. In comparison with severe roentgen ray reactions, the cathode ray reactions became manifest much sooner and caused decidedly less pain. The rate of recovery seemed to be much more rapid than would have been the case in lesions of similar extent caused by roentgen rays. The late effects are somewhat similar, but there seems to be considerably less atrophy in those burned by the cathode rays, and the tanning which usually follows roentgen ray reaction is not seen. Pigmentation is seen as small freckle-like areas separated by nonpigmented skin.

## South Carolina Medical Assn. Journal, Florence

**42** 1-28 (Jan.) 1946

A History of the Case' in Franklin D. Roosevelt's Own Words—p. 1
Primary Cysts of Omentum. D. L. Maguire and A. J. Buist.—p. 2
Use of Curare (Introcostrin) in Reducing Convulsive Effects of Tetanus. C. B. Hanna—p. 5

**42** 29-52 (Feb.) 1946

Use of Histamine Compound in Treatment of Infantile Eczema. G. D. Johnson—p. 29
National Health Program: Message from President of the United States—p. 31

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below Single case reports and trials of new drugs are usually omitted

### British Journal of Ophthalmology, London

30 65 128 (Feb) 1946

Ocular Cysticercus Cellulosae Report of Case of Parasite in Vitreous C Cockburn —p 65
Tangential Displacement of Iris in Chronic Glaucoma W J B Riddell —p 74
*Temporary Cataracts in Diabetes R D Lawrence —p 78
Solar Eclipse—Burn of Macula E C Zorab —p 82
Case of Eclipse Blindness N A Jevons —p 84
Case of Siderosis Bulbi J E L. Bendor Samuel —p 85
Effect of Operative Alterations in Height of External Rectus Insertion J Foster and E C Pemberton —p 88
Meningioma of Tuberculum Sellae with Bitemporal Hemianopia W R. Matheweon —p 92
Dacryocystorhinostomy T K Lyle A G Cross J F Simpson and G A Fraser —p 102

**Temporary Cataracts in Diabetes** —Lawrence observed the development and disappearance of cataracts in 2 men aged 39 and 45 with diabetes mellitus Both patients had myopia but with otherwise normal eyes when first seen for diabetes Both had a high blood sugar but no ketosis and no signs of dehydration The cataracts of the first patient commenced about the sixteenth day of insulin treatment and lasted three weeks, of the second patient about the third day of diet and lasted four to five weeks The two were similar in their dark rosette appearance and in occupying the central and upper quadrant of the lens The process seems quite different from the common transient myopia and hypermetropias, which occur respectively at the acute onset and subsequent control of the diabetes and last usually a few days to two weeks for during even intense refractive changes the media remain quite clear

### British Medical Journal, London

1 117-154 (Jan. 26) 1946

Social Medicine M Greenwood —p 117
Irregular Hemagglutinins After Transfusion Sheila T Callender —p 119
Clinical Diagnosis of Lumbar Intervertebral Disk Protrusions with Indications for Their Operative Removal J E A O Connell —p 122
Surgical Treatment of Dysenteric Lesions of Bowel Among Allied Prisoners of War in Burma and Thailand E E Dunlop —p 124
*Streptococcal Miliary Infiltration of Lungs Description of Case P Ellman —p 127
Hereditary Clubbing of Digits in Two Families E Davis —p 128

1 155-192 (Feb 2) 1946

Psychologic Reactions in Soldiers to Loss of Vision of One Eye and Their Treatment. P M Duke Elder and E Wittkower —p 155
Occurrence of Flagellate in Sputum of Case of Bronchiectasis G D Lehmann and J T Prendiville —p 158
Abacterial Pyuria D O Peters —p 160
Two Cases of Amebic Granuloma G Howells —p 161
Crush Syndrome and Plasma Jaundice in Pregnancy R W Danziger —p 162
Bacteriology of Septic Fingers B P Le Quesne.—p 163

**Streptococcic Miliary Infiltration of Lungs** —Ellman encountered a number of nontuberculous pulmonary infections closely simulating in their clinical and radiologic appearances pulmonary tuberculosis but healing by natural resolution within a relatively short period. In some such cases the streptococcus has undoubtedly been a causal organism The author presents a case of simple achlorhydric anemia complicated by the sudden onset of acute streptococcic septicemia with miliary pulmonary localization A dramatic response to penicillin therapy (aided by transfusions and iron therapy for the anemia) resulted in complete resolution of the lung lesion In the reported case the sputum was collected on a laryngeal mirror and precautions were taken to avoid contamination by mouth organisms A heavy growth of hemolytic streptococci was repeatedly found and, in view of the severe toxemia and the clinical and radiologic lung aspects there was undoubtedly a hematogenous lung infection of streptococcic origin. Miliary infiltrations of the lung, apart from those of a tuberculous nature, may occur as a miliary carcinomatosis in silicosis, in bronchiolitis (particularly following influenza and measles), in Hodgkin's disease as a lymphadenomatosis, in leukemias, in certain pulmonary mycoses, in bilharziasis, in Boeck's sarcoidosis, in miliary amyloidosis of the lung and in miliary stasis of the lung with mitral stenosis The term miliary was used in the reported case because the radiologic appearance of the lung simulated a miliary tuberculosis

### Journal of Hygiene, London

44 227-306 (Jan) 1946

Quantitative Aspects of Antigen Antibody Reactions I Theory and Its Corollaries T Teorell —p 227
Id II Some Comparisons Between Theory and Experimental Results T Teorell —p 237
Studies in Dynamics of Disinfection V Temperature Coefficient of Reaction Between Phenol and Bact Coli Derived from Data Obtained by Improved Technic R C Jordan and S E Jacobs —p 243
Id VI Calculation of New and Constant Temperature Coefficient for Reaction Between Phenol and Bact. Coli R C Jordan and S E Jacobs —p 249
Warm Stage Observations on Development of Pseudomycelia in Cultures of Avian Tubercle Bacilli Grown in Dilute Embryo Extract E M Brieger and H B Fell —p 256
Differentiation of Streptococcus Cremoris and Streptococcus Lactis by Means of Bacteriophage Action G J E. Hunter —p 264
Thermolabile Substance of Shigella Dysenteriae Shiga L. Olitzki M Shelubsky and P K Koch —p 271
Fluorine Alopecia L Spira —p 276
Enteric Fevers in Egypt G N Cossery —p 284
Three Rapid Tests for Estimation of Tropical Fitness of Fabrics W Koch —p 286
Routine Method of Bacteriologic Analysis and Grading of Ice Creams with Records of Eleven Years Application A Compton and G Youssef —p 289
A L 63 Original British Army Louse Powder H J Craufurd Benson and J Macleod —p 294

### Lancet, London

1 113-148 (Jan. 26) 1946

Tetanus in African and European Theaters of War 1939 1945 J S K Boyd —p 113
Tuberculous Rheumatism W Sheldon —p 119
Difficulties in Diagnosis of Rheumatic Fever H S Barber —p 122
Continuous Epithelization on Large Denuded Areas J E Sheehan and J Jenney —p 123
Erysipeloid S Singer —p 124
Erysipeloid of Rosenbach Response to Penicillin Mary Barber and M Nellen —p 125
Nongreasy Jelly Base for Penicillin J Spencer E J Bishop and A Ricks —p 127

1 149-184 (Feb 2) 1946

Care of the Aged Observations Based on Experience in Glasgow Out door Medical Service M Curran J S Orr J Hamilton W Poole and E N Thompson —p 149
Dust in Surgical Theaters as Possible Source of Postoperative Tetanus D T Robinson and J W McLeod —p 152
Determination of Blood Groups Use of Rabbit Immune Serum S G Ramsford and W T J Morgan —p 154
Hippuric Acid Synthesis Test of Liver Function Some Difficulties in Interpretation Sheila Sherlock —p 159
Comparative Value of Tuberculin Tests E H. W Deane —p 162

### Medical Journal of Australia, Sydney

2 417-448 (Dec. 15) 1945

Gastroenteritis and Dysentery in Children Bacteriology of Cases Caused by Salmonella and Dysentery Organisms F Draper —p 417
New Guinea Campaign F K Norris —p 425
Prescribing in the Metric System H Finnemore —p 431
Fluid Balance in Scrub Typhus R Andrew —p 432

2 449-480 (Dec. 22) 1945

Some Laboratory Findings Pertaining to Clinical Use of Penicillin S D Rubbo and Marjorie E Davey —p 449
Prickly Heat F R Fay and E Susman —p 453
Physiotherapy in General Practice B G Wade —p 456
Hirst's Hemagglutination Phenomenon Exhibited by Rickettsia Orientalis (Syn Tsutsugamushi) J L O Conner —p 459
*Syndrome in Vivax Malaria Probably Due to Spontaneous Subcapsular Hemorrhage of the Spleen R Andrew —p 460
Hemopericardium as an Autopsy Finding C Duncan —p 464

**Acute Abdominal Syndrome in Vivax Malaria** —Andrew describes an acute abdominal syndrome which was observed in 10 of about 6 000 patients with vivax malaria The syndrome is characterized by sudden severe pain in the left upper quarter of the abdomen, usually referred to the tip of the left shoulder It is accentuated by deep breathing and lasts for periods varying from a few days to many weeks Tenderness is present in the left hypochondrium, but no true rigidity The onset of the syndrome was in no case related to trauma It is usually

closely related to an overt attack of malaria but may occur three months later All patients recovered with conservative treatment. Spontaneous subcapsular hemorrhage of the spleen is thought to be the most likely cause of the syndrome

## Semana Medica, Buenos Aires

**52** 841-874 (Nov 29) 1945 Partial Index

*Pregnancy and Parturition in Women with Pelvic Abnormalities Due to Poliomyelitis F A Uranga Imaz and R Dubrovsky —p 854
Kinesic Orthopedic Treatment in Volkmann s Ischemic Retraction A R Viviani and V R. Marino —p 860

**Pregnancy and Parturition in Women with Poliomyelitic Pelvis** —In a period of ten years 15 pregnant women with pelvic asymmetry due to poliomyelitis were observed by Uranga Imaz and Dubrovsky in a group of 100,000 women who had antepartum examinations and who were delivered in the Beneficent Maternity Hospital of Buenos Aires The group included 10 primiparas, 4 secundiparas and 1 tertipara. Pelvic asymmetry of the oval pseudo-oblique type was encountered by roentgen examination in all these pregnant women *The pelvic lesions due to mechanical factors were found on the* side of the pelvis which corresponded to the normal leg When the whole leg was partially or completely paralytic, pelvic atrophy of the affected side and mechanical changes of either or both sides were encountered The pelvic changes due to mechanical factors were more complicated when crutches were not used. Parturition was normal in all women except 2, who had dystocia and uterine hypertonicity respectively These women were delivered of living normal infants by cesarean section

## Acta Medica Orientalia, Jerusalem

**4** 363-402 (Nov ) 1945

Ascaris Lumbricoides Review of Its Most Important Facts G Witenberg —p 363
*Surgical Complications of Ascariasis H Milwidsky —p 370
Ascariasis of Duodenal Bulb (with 3 Case Reports) A Druckmann and S Schorr —p 385
Pharmacologic Basis of Anthelmintics in Ascaris Therapy L Schindel —p 387
Postarsphenamine Jaundice in Pregnancy (with Case Report) A. Sadowsky and Y M Bromberg —p 391

**Surgical Complications of Ascariasis** —In this report Milwidsky is concerned with the surgical complications to which ascariasis may give rise. Discussing ileus due to Ascaris, he reviews 10 cases of his own and shows that there are five different types (1) mechanical obstruction by worm convolutes, (2) a paralytic type of ileus, (3) a spastic ileus, (4) invagination by ascariasis and (5) volvulus by ascariasis Milwidsky has observed perforations of the bowel, postoperative disturbances due to ascaris, appendicitis and diverticulitis as well as ascariasis of the stomach and duodenum, bile ducts and liver The 17 cases mentioned in this paper were encountered in the course of six years The most effective method to forestall surgical complications of ascariasis is its prevention by an antiparasitic prophylaxis and early anthelmintic treatment if an infestation has taken place. As soon as the acute abdominal symptoms appear, anthelmintic treatment may be dangerous At that stage surgical intervention becomes imperative.

## Acta Medica Scandinavica, Stockholm

**122** 479-580 (Dec. 12) 1945

Rare Form of Cold Agglutination W F van Eck.—p 479
*Cause of Postsyncopal Oliguria C Brun E O E. Knudsen and F Raaschou —p 486
Occurrence in Human Serum of Yellow Substances Different from Bilirubin and Carotenoids T K. With —p 501
Bilirubin and Urobilinoid Contents of Human Bile T K. With —p 513
Prognosis of Late Syphilitic Cardiovascular Lesions H Buch —p 529
Prognostic Significance of Electrocardiogram in Late Syphilitic Cardiovascular Lesions H Buch —p 540
Psychogenic Increase in Blood Pressure War Hypertension M Ch Ehrstrom —p 546

**Cause of Postsyncopal Oliguria** —Brun and his associates in this report endeavor to demonstrate that postsyncopal oliguria is due to the increased supply of antidiuretic hormone from the posterior lobe of the pituitary gland The following experiments support this hypothesis 1 Transfusion of blood from recently collapsed subjects with postsyncopal oliguria to water loaded subjects causes a distinct fall in their diuresis 2 The changes in the chloride concentration in the urine and the absolute output of chloride in the urine during postsyncopal oliguria correspond to the changes observed after administration of pituitary injection 3 Circulatory collapse in 2 patients with moderate diabetes insipidus is followed by postsyncopal oliguria of much shorter duration than in normal persons.

## Nordisk Medicin, Gothenburg

**26** 891-928 (April 27) 1945 Partial Index

### Norsk Magasin for Laegevidenskapen

Gold Treatment of Chronic Polyarthritis Investigation to Illuminate Question of Its Justification W L Orange.—p 893
Intoxication from Eating Tunny A Strøm and W Lindberg —p 903

### Hygiea

Pathogenesis in So-Called Catarrhal Jaundice E Bergenfeldt —p 907
Investigations on Transperitoneal Resorption of Erythrocytes S Hedenstedt —p 912

**26** 1257-1292 (June 22) 1945

Graphologic Diagnosis Recent Development of Graphology and Its Value in Diagnosis and Prognosis O Bruel —p 1257

### Hospitalstidende

*Bleeding Nipple S Kaae —p 1261

### Hygiea

Operative After Treatment in Cases of Amputated Hand and Arm. E Severin —p 1279
Ruptured Vein in Ectatic Myoma —Fatal Abdominal Hemorrhage O Robertsson —p 1283

**Bleeding Nipple** —Of 73 patients with bleeding nipple treated at the Copenhagen Radium Station from 1931 to 1944, 36 had cancer of the breast, in the others there was usually intracanicular papilloma or fibroadenomatosis In 6 of the cases without palpable tumor or localized firmness on the first examination a cancerous node developed later The safest treatment is removal of the entire breast.

**27** 1341-1386 (July 6) 1945

*Porphyria Diseases Review of Recent Points of View Together with Case with Quantitative Porphobilinogen Determination and Provocative Tests with Barbiturates J Jørgensen and T K. With —p 1341
Way of Transporting Cultures from Throat in Suspected Cases of Diphtheria I Rantasalo —p 1345

### Hospitalstidende

Case of Thrombophlebitis Saltans Treated with Dicumarol for Three Fourths of Year J O Feilberg —p 1347

### Hygiea

Experiences in Prophylaxis Against Tuberculosis E. Forsgren —p 1355
Treatment of Gangrenous Loop of Small Intestine H Wahren —p 1359

### Svenska Läkarasällskapets Forhandlingar

Treatment with Artificial Fever H Malmros —p 1365
Remarks on History of Psychiatric Fever Therapy in Sweden B Jacobowsky —p 1369

**Porphyria Diseases**—Jørgensen and With state that the so-called acute porphyria is inherited as a dominant character and is a permanent disorder of the pyrrole metabolism, which may remain latent or lead to acute attacks of abdominal pain with or without neurologic symptoms Attacks may last hours or days They may terminate spontaneously or be fatal A tendency to spontaneous recovery is observed when barbiturates are withheld A special pyrrole substance, porphobilinogen, is converted into uroporphyrin III and the red pigment porphoben, which are specific for acute porphyria The barbiturates can apparently provoke attacks of acute porphyria and aggravate existing attacks The grave prognosis of the disease is ascribed to the extensive use of barbiturates (Waldenstrom) Chemical diagnosis is simple. If the urine is alkaline the colorless porphobilinogen will not cause formation of pigments, and acute porphyria may be present although the urine is of normal color In the 2 cases of latent porphyria reported the excretion of porphobilinogen was demonstrated by Vahlquist's method

# Book Notices

**Manual of Diagnosis and Management of Peripheral Nerve Injuries** By Robert A Groff M D Lieutenant Colonel M C A U S and Sara Jane Houtz R S With an Introduction by I S Ravdin M D Brigadier General M C A U S Cloth Price $6 Pp 188 with 111 Illustrations Philadelphia London & Montreal J B Lippincott Company 1945

This short manual on peripheral nerve injuries is divided into two major portions In the first division the authors present a conventional review of most of the facts known about the anatomy and physiology of peripheral nerves, the reactions of injured nerves, the surgical repair of nerve injuries and the details of nerve recovery and regeneration This portion is well written and useful but adds nothing to the existing literature on peripheral nerve injuries, at the same time it is felt that important subjects such as causalgia and the regeneration of nerves following repair are too briefly dismissed In the discussion of electrical reactions following nerve repair no mention is made of the important contribution of Pollock and his co-workers on cathode tetanus ratios The second part of the manual, however, is highly useful and original It is a graphically illustrated, page by page presentation of the functions of all the peripheral nerves, with an easily understood visualization of the technics used in the testing of the involved muscles There are in addition a number of clear and accurate illustrations showing surgical dissections in the more commonly encountered areas of peripheral nerve injuries This portion of the book is a true contribution to the literature on peripheral nerves and may be recommended to surgeons general practitioners medical students and physical therapists as a valuable aid in the diagnosis of peripheral nerve injuries

**The Tissues of the Body An Introduction to the Study of Anatomy** By W E Le Gros Clark F R S Dr Lee's Professor of Anatomy in the University of Oxford Oxford Second edition Cloth Price $7 Pp 388 with 120 Illustrations New York & London Oxford University Press 1945

The author concedes that anatomy is a difficult subject for the beginner, therefore he has been accustomed to introduce the subject by a series of lectures dealing with the organization of living tissues He speaks of 'the fundamental problems of anatomy and the application of experimental methods in the study of structural organization' He quotes Alexis Carrel concerning tissue culture as 'the most important event in the history of anatomy' By interesting the student in the problems of anatomic research the author hopes to stimulate his intellect and open new pathways of inquiry Medical students in the first and second years do not have "the graduate student outlook" but are concerned with soaking in as much dissection and descriptive anatomy as possible. The proper way to study anatomy is to recognize it as a difficult yet basic factor in the life of the doctor and to buckle down to the mastering of these difficulties There is no royal road, no short cut, no Berlitz method The author's style seems rather dry and heavy instead of achieving the 'stimulation" desired

**Jobs and the Man A Guide for Employers Supervisors Interviewers Counselors Foremen and Shop Stewards in Understanding and Dealing with Workers—Veterans or Civilians** By Luther E Woodward Ph.D Field Consultant Division on Rehabilitation National Committee for Mental Hygiene and Thomas A C Rennie M D Associate Professor of Psychiatry Cornell University Medical College New York. Fabrikoid Price $2 Pp 132 with 2 Illustrations Springfield Ill Charles C Thomas 1945

Today proper placement of workers in industry is being more successfully achieved than ever before because of the development of new technics In this informative book the principles of job placement are clearly stated. Many are concerned in the problem of understanding the worker and assigning him to suitable tasks, and this book is written so that foremen, shop supervisors, employees and counselors can read it with profit and understanding Attention is directed to the difficulties of handling returned veterans in industry, and a thoughtful solution is offered to the problem of rehabilitating the man with a neuropsychiatric history Physicians will find much of interest in the discussions on interviewing workers who have returned from military service and will learn something of their difficulties in resuming a place in industry A brief summary of the likely obstacles encountered by some veterans in learning the ways of peace in the home, in society and in a new job is succinctly stated Proper placement of the worker is of benefit both to the individual worker and to industry Job satisfaction is an important part of every one's life, and it assumes a major role in the development of a healthful mental attitude toward life The family doctor can be helpful in guiding the maladjusted to seek and secure work that will make them good workers with a happier view of life. Estimates indicate that 10 per cent of the population have serious emotional difficulties and that 20 per cent would derive benefit from counseling and guidance It is regretted that the authors did not fully recognize the help given patients by many family doctors in the solution of perplexing problems of proper placement and the derivation of work satisfaction The book is a valuable guide to all who deal with workers in the present complex industrial life.

**Arteriosclerosis A Chemical and Statistical Study** By Jóhannes Björnsson Denne Afhandling er af det lægevidenskabelige Fakultet antaget til offentligt at forsvares for den medicinske Doktorgrad Kjøbenhavn The translation into English by Robert Fraser Paper Pp 249 with 4 illustrations Copenhagen Einar Munksgaard 1942

This work presented as a thesis for a doctor's degree, attempts to support or refute the clinical impression obtained from postmortem examinations that arteriosclerotic disorders are much rarer in Iceland than in Denmark. The first third of the book is devoted to a critical review of the earlier reports of the prevalence of arteriosclerosis in various previous series The author points out that wide discrepancies between different series are due to variations in age and sex distribution and environmental factors such as city and country life, which in turn affect materially the opportunity or desirability for hospitalization and for postmortem examination Patients with arteriosclerotic conditions are likely to die suddenly or after a short illness and are therefore much less likely to be hospitalized in rural districts than in city areas, in Iceland than in Denmark. Statistics based on postmortem examination cannot be accepted as reliable because the incidence of arteriosclerosis depends on many unrelated factors Furthermore, diagnosis and severity of involvement often depend on personal judgment, which is difficult or impossible to standardize. Other criteria for diagnosis such as blood pressure measurements, x-ray examinations and palpation of arteries are not reliable or comparable from one series to another

The author attempted to develop a quantitative chemical method of evaluating and classifying arteriosclerosis depending on correlation of chemical with anatomic findings He examined 382 nonsyphilitic aortas from Vienna and found no consistent agreement between the macroscopic and the chemical involvement. The latter was judged by the cholesterol and calcium content of dried and powdered aortas after removal of the adventitia. He also studied the mortality statistics from Iceland and Copenhagen After complicated corrections and analyses he concludes that deaths from arteriosclerotic diseases are just as common in Iceland as in Copenhagen Any apparent differences seen in crude death rates are due to different facilities for and conditions of hospitalization in the two communities

The thesis was originally written in Danish The translation is somewhat awkward but is quite understandable The book contains tables of 200 cases from Copenhagen and Vienna and 130 from Iceland giving the age height, weight, blood pressure, diagnosis and cause of death, macroscopic description of the aorta and cholesterol and calcium content of each aorta. The volume describes a tremendous amount of work. One wonders whether the same conclusions might not have been justified and reliable after a smaller number of determinations

**The Principles and Practice of Rectal Surgery** By William B Gabriel M S F R C S Surgeon to St Mark's Hospital for Cancer Fistula and Other Diseases of the Rectum London Third edition Cloth Price 45s Pp 432 with 248 Illustrations London H K. Lewis & Co Ltd 1945

In this book, which is the third edition since 1932, there are 17 chapters with 237 illustrations and 11 colored plates Chapter II contains a short and incomplete discussion of "proctitis," and chapter XVI is entitled "Carcinoma of the Anus and Anal Canal" These chapters are new and apparently are the reason why a new edition was considered necessary because, with few other exceptions, the remainder of the book is identical with the second edition, which appeared in 1937

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT, HOWEVER REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## HYPERTENSION

*To the Editor* —Is there anything specific for hypertension?

Lena A. G Miller M D Napa Calif

ANSWER.—There is no specific medication curative of hypertension Nor are there any specific curative surgical procedures Hypertension per se is not a disease but a symptom or biologic response to continued and excessive arteriolar stimulation The sources of such stimulation or irritation differ in each and every instance of the disorder Therefore no 2 cases of hypertensive arterial disease should be treated identically curative therapy invariably is dependent on eradication or amelioration of etiologic factors, and these are extremely variabl It can be predicted that no one will ever find the cause of hypertension, simply because there are many causes Similarly it is highly improbable that any 'specific" curative therapy generally applicable to all or most cases of the disease will be discovered in the future

This discussion does not imply that there are no useful drugs effective in the treatment of hypertensive disease There are many medicaments which have great usefulness in the control of hypertension, each with specific and limited indications These drugs may be classified under several headings

1 Sedatives, to reduce central nervous system tension
2 Vascular antispasmatics including
   (*a*) Soluble nitrites (amyl nitrite, sodium nitrite) and soluble organic nitrates (glycerol trinitrate, erythrol tetranitrate, mannitol hexanitrate)
   (*b*) Insoluble nitrates (bismuth subnitrate)
   (*c*) Potassium thiocyanate
   (*d*) Certain tissue extracts
3 Cardiac drugs
   (*a*) Digitalis and allied substances
   (*b*) Theophylline and allied derivatives
4 Antianemia medications

Certain surgical procedures, particularly the Smithwick operation, designed to sever the vasomotor trunks and thus reduce the vascular hypertonia, are effective in certain instances However, these operations admittedly are only palliative. The neurosurgical approach fails in that it does not take cognizance of the primary etiologic factors responsible for the disease, it merely destroys one of several physiologic mechanisms concerned with the maintenance of vascular tone. A few, but only a few, instances of hypertension are secondary to unilateral renal disease, and a still smaller number are due to tumors of the adrenal gland. Surgical, like medicinal, therapy must be guided by etiologic analysis

## EFFECT OF IRRADIATION OF OVARIES ON SUBSEQUENTLY CONCEIVED OFFSPRING

*To the Editor* —A woman was operated on for a cystic ovary two and a half years ago She had a chocolate cyst with endometrosis A year later she had six x ray treatments which stopped her menstrual periods for nine months She has been menstruating at twenty four day intervals for the past nine months What are the possibilities of her having a deformed or mentally deficient child if she becomes pregnant now? How long after x-ray treatments over the ovaries before such treatments will have no effect on the child? John T Murchie, M D, Portsmouth Ohio

ANSWER.—At present, proof that irradiation of the ovaries before conception takes place has any effect on the children born subsequently to the irradiated woman is lacking In animals, on the other hand, the matter of irradiating the ovaries has been subjected to experimental study J P Greenhill (Year Book of Obstetrics and Gynecology, 1940, p 681) says "The question of the safety of irradiation of the ovaries is by no means settled Many of those who use this form of therapy to overcome amenorrhea and sterility are enthusiastic about their results and claim the procedure is harmless If we can apply experimentation in lower animals to human beings, then irradiation of the ovaries may be of distinct harm" Muller in 1926 subjected both male and female fruit flies to varying doses of x-rays The treated flies were then bred to untreated males, and at the same time numerous control matings of the same genetic type consisting of untreated males crossed with untreated females were carried out for comparison Muller said "The results in these experiments were startling and unequivocal—it was found that the heaviest treatment had increased the frequency of mutation about 150 times, an increase of 15,000 per cent" Muller emphasizes that if human beings are affected by x-rays in the same way as flies, one cannot expect to find much evidence of a mutational effect of x-rays on them from data derived only from the first or even the second and third generations But such a negative result will therefore by no means indicate a lack of significant genetic effect. Muller pointed out that all the principles of heredity so far described in the fruit fly have proved applicable to animals and plants in general

However, in the 1943 Year Book of Obstetrics and Gynecology page 508, Greenhill says "In the past I, among others have urged great caution with low dosage irradiation because of the reports in the literature, chiefly those of Muller, of serious harm to the offspring in the third and fourth generations in various species of animals In human beings the offspring have been normal, but as this treatment is less than 20 years old no one knows what will happen to the third and fourth generations However, in a personal communication William Snow writes he calculated that according to Muller all life should have been destroyed by cosmic irradiation since in a million years about 50,000 roentgens of such energy reached the earth's surface, as judged by the Geiger-Muller readings We must conclude therefore that there must be a recovery of the genes Gordon and Sang have prevented with niacin fruit fly mutations induced with irradiation According to Snow, this is practical proof that the genes can recover from radiation injury'

The conclusion to be reached from these statements is that harm has not appeared in the first generation of children born after irradiation of the ovaries, but irradiation during pregnancy often results in malformation of the child in utero

## COAGULATION TEST BEFORE CIRCUMCISION

*To the Editor* —Is there any value in doing a routine coagulation test on infants prior to circumcision? Is this procedure routine in the majority of our best hospitals? Harvey G Bland M D Newport News Va

ANSWER.—It is well worth while. Preferably a coagulation test should be done on every patient before any operative procedure even minor surgery, is done. As far as is known coagulation tests are not done as a routine measure prior to circumcision in the majority of hospitals

## ASCENDING PARALYSIS AND UREMIA

*To the Editor* —In a case of uremia due to chronic nephritis there developed terminally an acute ascending paralysis and a motor paralysis with varying degrees of pain over the entire body and neck preceding this there was some fever of about 100 to 102 F There were no convulsions, and the patient was conscious until a few minutes before death The question is Is this rather typical Landry's paralysis a frequent occurrence in uremia? Could there have been the two disease entities either or both producing death? I can find nothing in the literature relative to this relationship Kindly elucidate if possible M D South Dakota

ANSWER.—An acute ascending paralysis of the Landry type as a terminal event in a patient with uremia from chronic nephritis is practically unknown. There seems to be in this case, however, no reason to doubt the diagnosis, for the absence of sensory loss excludes acute ascending myelitis, and acute poliomyelitis or acute toxic polyneuritis is untenable as a diagnosis Landry's paralysis is encountered in influenza, typhoid, pyogenic infections, food poisoning, tick bites, postvaccinal and postexanthematous disease, rabies and diphtheria The etiologic agents are indeed varied Toxic uremia of chronic nephritis may well be added to the list, if other causes can be excluded by a complete study of the case.

## REACTION TO PENICILLIN

*To the Editor* —I wish to report a personal experience with the use of penicillin Having read of the use of a fine spray of the solution in the treatment of infections of the respiratory tract, I decided to try it for laryngitis The solution was made up of 0 1 Gm of the sodium salt in 50 cc. of isotonic solution of sodium chloride It was used in a nebulizer Probably 2 cc. was used for the first and only treatment On the following morning my lips were swollen and red Later in the day fine vesicles developed accompanied by considerable burning and itching There was desquamation on the third day The appearance was similar to dermatitis venenata. There is a possibility of developing angioneurotic edema involving the pharynx and larynx if treatment is continued The symptoms might be confused with those of progression of the original disease process John C Urbaitis M.D Warren Pa

# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL 131, NO 2 — CHICAGO, ILLINOIS — MAY 11, 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

## SOME CONTRIBUTIONS FROM THE SISTER SCIENCES

KARL T COMPTON, PH D
Cambridge Mass

No branch of science or art furnishes a more striking example than does medicine of the fact that increasing specialization is necessarily accompanied by increasing interdependence and cooperation among the specialized fields In the early days all the sciences were combined together, frequently in the same individual Later the various specialties had a tendency to run their separate courses Now we find them coming together again for mutual support It is something like the story of the prodigal son, who, after the adventures of an independent career, is glad to come back again to his family

This is well illustrated by the development of the significance of the word "physics," which in the original Greek meant "that which pertains to nature" It was used to designate those phenomena of the natural or material world as contrasted with things mental, or moral, or spiritual, or imaginary Originally the word referred to all living things, including the human body, as well as to phenomena of the inanimate world Later it took on more specialized meanings but always retained this twofold aspect, on the one hand relating to the inanimate world and on the other to the human body We still find in Webster's dictionary two definitions of a physicist The first definition given is "one versed in medical science" The second definition is "a specialist in the natural sciences" One who follows my profession of physicist is in France called a physicien, while in English the word "physician" means a medical practitioner Similarly in Germany I would be called a physiker, whereas in English-speaking countries a physicker is one who administers a physic But whereas those words which have the same original root have followed these two lines of continually narrowing significance, the progress of modern science is in many ways bringing the two together because on every hand the natural scientist is bringing more and more to the service of the physician his increasing knowledge and control of the materials and forces of nature

The contributions of the sister sciences to medical science and art have in part been in the nature of tools and materials and in part been a better understanding of the fundamental structure and functioning of the human body From physics, for example, have come such tools as the thermometer, stethoscope, electrocardiograph x-ray, and a host of other devices ranging all the way from mere gadgets to highly complicated instruments From the chemist have come such materials as most of the ordinary medicines and drugs in enormous variety, radium and synthetic vitamins From the physiologist and biologist has come the more detailed knowledge of the structure and functioning of the human body The psychologists are contributing their share in untangling the complicated relationship between mind and body

The past history of the Rockefeller Foundation offers a good illustration of the importance which thoughtful students of medical science attach to the sister sciences This foundation has always attached the greatest importance to the advancement of medical science About twenty-five years ago, just after World War I, it came to the conclusion that a very important method for the long-term advancement of medical science was the more adequate support of research in the physical and biologic sciences, and this decision was implemented by the great program of National Research fellowships and of grants to support research in the various sciences This and similar programs by various agencies have paid dividends in a large way for out of such activities have come, in the past decade, such things as the sulfonamide drugs, DDT, synthetic vitamins, high voltage x-rays, various forms of radiation therapy, radioactive tracer studies and many other medical applications

Out of this great variety of new contributions to medical science I would describe in brief detail just a few examples which seem to me to illustrate some of the more important trends and developments These examples are chosen from activities with which I have had some direct or indirect contact, and I make no claim that they are selected with any priority of importance among many other illustrations which some one else would be better qualified than I to describe However, they are certainly important and are indicative of the trend of things to come

### ARTIFICIAL LIMBS

To the uninitiated there would seem to be nothing new about artificial limbs The genial ruffian John Silver in Robert Louis Stevenson's "Treasure Island" thumped around on an artificial leg The more modern artificial legs are more shapely and are likely to have articulated joints However, they have been far from adequate replacements for the functioning of the natural limb

During the past war for the first time in history, so far as I know, there has been mobilized a cooperative organization composed of medical men manufacturers of surgical equipment, physiologists, physicists, skilled instrument makers and inventors in an effort to bring all available knowledge and art to bear on the problem of

Read before the New England Hospital Assembly March 12 1946

creating artificial limbs which will as nearly as possible permit a crippled person to move, act and manipulate in normal fashion Organized under the Office of Scientific Research and Development, this group is headed by Dr. Paul E Klopsteg, a physicist, formerly head of the Central Scientific Company and now in charge of graduate study and research in the Technological Institute of Northwestern University One problem has been the design of artificial legs which have joints with the proper combination of flexibility and stiffness at the appropriate angles to permit walking upstairs or downstairs Another problem is the design of artificial hands which can be turned and whose fingers can be manipulated through cords attached to muscles in the stump It is already evident that this combined effort is bringing about a very decided advance in the design of artificial limbs Though instigated to meet one of the unfortunate conditions resulting from the war, it is a fact that the number of annual amputations resulting from accidents in peacetime considerably exceeds the number of similar war casualties, and it may therefore be said that the focusing of expert attention on this problem at this time should be reckoned as one of the useful results of the war

### SOME PROSPECTS IN BIOLOGY

My colleague Professor Francis Schmitt likens the present prospect in biology to that which faced the physicists and chemists in the early days of this century when it had been discovered that the atom, hitherto believed to be indivisible and in fact so named, had been proved to have a structure of electrical components held together by complex forces First the exterior electronic structure of the atom and then the inner nucleus of the atom itself have been explored, and all the modern knowledge of spectroscopy, ionization, isotopes and atomic energy has developed with startling rapidity to usher in a new era of physical science Similarly, the development of new experimental tools such as the ultracentrifuge, the electron microscope and the use of radioactive tracer materials is making possible a new type of quantitative biology far more powerful than the older descriptive biology and beginning to yield significant information regarding the ultimate constitution and fine structure of living matter There is every reason to believe that these developments of quantitative biology are ushering in a new era for the understanding and ultimate control of fundamental life processes Let me give a few illustrations which are suggestive of things to come

Dr Avery and his co-workers at the Rockefeller Institute have isolated nucleic acid from the capsule which surrounds the pneumococcus There are several dozen strains of pneumococci and they seem to owe their specific characteristics to substances in the capsule The capsule can be removed, leaving an organism which, though still alive, is avirulent until a new capsule is formed If purified nucleic acid which has been isolated from one strain is added to the decapsulated cocci of another strain, the resulting bacteria show the genetic and pathogenic properties of the strain from whose capsules the nucleic acid was prepared A predictable genetic mutation appears to have been produced Geneticists have sought in vain to accomplish this in higher organisms This is a model of the action of genes, which are also supposed to contain nucleoproteins However, in the case of the capsule nucleic acid the material is a purified compound The ability of viruses and cell constituents to reproduce themselves is closely correlated with the presence of nucleic acid This experiment of Avery suggests that the nucleic acid, possibly in combination with a specific protein, acts like a gene

In the last century it was supposed that enzymes could never be isolated in active form from living cells Now we know that enzymes are protein molecules which can be isolated, purified and studied, physically and chemically Will this history repeat itself in the case of genetic determiners, the genes? Will it be possible to determine genetic characters of forms higher than bacteria by administering isolated "genes" or gene activators representing such characters?

As another example, consider substances which have antibiotic action There are certain substances which have no toxic effect on body cells but which inhibit the reproduction of micro-organisms. Under such conditions the organisms may increase in size but they do not reproduce This has already had immense medical significance Moreover, when the structure of a few antibiotics is known, as, for example, penicillin or streptomycin, the organic chemist may alter various groups in the molecules and hope to produce synthetic antibiotics for various diseases for which no natural antibiotic has yet been found

Another example is the competitive inhibition of enzyme reactions An enzyme has chemical groupings by which it can cause specific alterations in certain substrates If a substance closely related to the specific substrate is added to the enzyme, the active groups of the enzyme combine with the substance and the enzyme is effectively poisoned If the specific substrate itself is added, no reaction occurs For example, there is an enzyme (cholinesterase) which splits acetylcholine, a powerful nerve stimulant and the hormone which produces smooth muscle contraction If a tissue is treated with physostigmine, which contains a chemical group similar to that of acetylcholine, the enzyme is poisoned Physostigmine has been used pharmacologically for years, but the mechanism of the action has only recently been discovered Along this line a number of investigators have been trying the effect of a variety of compounds closely related chemically to the normal food substances used by bacteria in the hope that they may, by competing with these substances for the enzyme molecules, starve the bacteria to death

A final example in this field is the development of new technics in the use of the electron microscope which make this instrument even more powerful in the study of biologic material Fine structure in certain fibrous proteins has already been discovered and many protein molecules, such as the albumins, globulins and fibrinogen, in blood may soon be visualized directly In the past these molecular shapes had to be deduced by indirect methods Now that it is possible to visualize these molecules directly, a whole new era is opened up for the discovery of various biologic entities such as viruses responsible for certain diseases By this means during the war the viruses of influenza were isolated and photographed, and their chemical composition has been determined

Enzymes and chromosomes can now be observed directly with the electron microscope, and it appears possible thus to determine the physical basis of the gene mechanisms determining heredity

By these illustrations I would not wish to imply that all these problems have been solved What I wish to point out, however, is that new and very powerful technics of investigation have been developed sufficiently to offer a strong feeling of optimism that we are now on the threshold of a period in which knowledge of a most fundamental and important character will be secured in the realm of fundamental biology with applications to medicine

It is this type of fundamental knowledge which probably forms the most promising basis of the great cooperative attack on cancer which is now being organized A considerable portion of the funds collected by the American Cancer Society are scheduled for administration by the Committee on Growth of the National Research Council to mobilize all the resources of physics, chemistry and biology for this investigation It is fortunate that those directing the use of the cancer money realize the importance of fundamental research if there is to be any hope of securing a really significant answer to the cancer problem or to any of the other complicated and obscure problems of disease and health

### SOME EXAMPLES FROM PHYSICAL SCIENCE

I have already mentioned important medical tools like the thermometer, stethoscope and x-ray, which have been contributed from the physical sciences and which are so widely used as to have become commonplace However, there are new contributions at hand or in sight of great significance of which I shall give only a few illustrations

Radium and x-ray therapy of cancer have been practiced for several decades It is only about one decade, however, since the more penetrating x-rays produced at voltages of a million or more have become available for use as a by-product of the physicist's development of high voltage generators for experimentation on the artificial transmutation of atoms There is still another exceedingly promising prospect involving a modification of this x-ray technic, however, namely the therapeutic use of the high speed electrons, or cathode rays themselves, instead of the x-rays which they would produce on striking the target of an x-ray tube In other words, the proposal is to shoot the high speed electrons directly into the living tissue instead of irradiating this tissue with x-rays In either case the biologic or therapeutic action is produced by the same mechanism, namely by the bombardment of the living cells by the secondary electrons produced within the tissues As far as this therapeutic action is concerned, it makes no difference whether the secondary electrons have been set in motion by x-rays or by high speed cathode rays However, it may make a great deal of difference to the patient because of a very curious characteristic of cathode rays as they pass through matter

Cathode rays produce relatively few secondary electrons when they are moving with high speed, and they produce most of the secondary electrons after they have been slowed down and just before they have stopped in passing through the absorbing material The significance of this fact in cancer therapy is suggested by the following example Suppose that it is desired to treat a cancer which is located about 1 inch beneath the surface of the abdomen Electrons or cathode rays produced by a 5 million volt machine are able to penetrate the body to a depth of about 1 inch If these therefore are directed into the abdomen in the direction of the cancer to be treated, they produce few secondary electrons and therefore little biologic effect near the surface where they enter, but they produce the maximum number of secondary electrons and therefore deliver their maximum therapeutic dose at the depth of about 1 inch, just before they come to rest This gives a method of concentrating a dose of therapy at any desired depth within the body with a minimum of erythema or biologic action in the path of entrance and with no biologic action in the region deeper than the desired location The traditional method of x-ray therapy, on the contrary, has a disadvantage, as far as depth dosage is concerned, in that the maximum dosage is greatest at the point where the x-rays enter the body, and the dosage decreases with depth

Of all the new physical-chemical tools, however, the one which seems to me to have the greatest promise in the medical field is the use of artificial radioactive substances, either as tracers or as therapeutic agents, and I would give two examples which are suggestive of a wide variety of applications on these matters

Some ten or a dozen years ago Dr Means and his colleague Dr Hertz of the Massachusetts General Hospital and the Harvard Medical School became interested in the possibility of using radioactive iodine for the localized therapy of the thyroid gland, especially in cases of such a disorder as toxic diffuse goiter They did this work in collaboration with Professor Robley Evans, who is in charge of the Massachusetts Institute of Technology cyclotron program and the outstanding scientist in this country in the use of radioactive tracer materials and the quantitative measurement of minute quantities of radioactivity

Some experiments were first made to see how much iodine would be absorbed into the thyroid gland from the blood stream and how fast it could get there The radioactive iodine was prepared with the cyclotron, and the early experiments were carried on by injection into rabbits It was found that within about five minutes all the iodine that could be absorbed by the thyroid gland had been thus absorbed and that, in proportion to the size of the thyroid gland, from twenty to two hundred times as much iodine went to the thyroid gland as to any other organ or tissue of the body If the rabbit had been on an iodine starvation diet, or if the rabbit had a case of spontaneous goiter, or if it was a pregnant female the higher values of iodine absorption in the thyroid gland were observed All the quantitative measurements were made with the use of the Geiger counter, that marvelously sensitive instrument which, through ionization of the surrounding air, can detect the presence of radioactive iodine and measure its amount, atom by atom

Later, similar experiments were carried on with human beings and they have been continued by Dr Chapman, in collaboration with Drs Means and Evans since Dr Hertz entered the Navy early in the war Having determined the quantities of iodine absorbed in the thyroid gland, the next step was to introduce quantities of radioactive iodine of sufficient amount to have localized therapeutic value because of the radioactive radiations admitted locally from the iodine right in the thyroid gland itself I understand that upward

of two dozen patients have been thus treated with good results

This is one illustration of the several possibilities which have been envisaged for the therapeutic use of radioactive materials which can be manufactured with the cyclotron and which have the characteristic of specifically large absorption in certain organs or tissues of the body

My other illustration has to do with the use of radioactive chemical elements as tracer materials, in which their radioactive properties and their resultant capability of detection by a Geiger counter make it possible to determine accurately and quantitatively the location of these materials at any subsequent time If, for example, one takes a drink of water containing a little ordinary salt whose sodium has been made radioactive in a cyclotron, it is possible with a Geiger counter to determine how soon this salt has passed through the walls of the stomach into the blood stream and reached any part of the body

The most interesting recent example of this technic was in the studies of surgical shock and the development of technics for the preservation of whole blood for transfusion during the war This work was carried on under a basic contract between the Committee on Medical Research of the Office of Scientific Research and Development and the Massachusetts Institute of Technology and was a cooperative enterprise involving also the Massachusetts General Hospital, the Harvard Medical School and the Peter Bent Brigham Hospital The work was in charge of Dr John Gibson, Dr Joseph Aub and Professor Robley Evans The program was supplemented by work also by Dr Ross of the Evans Memorial Hospital, Dr Denstedt of McGill University, Dr Strumia of the Bryn Mawr Hospital and others, all of them utilizing the materials produced by the Massachusetts Institute of Technology cyclotron and the radioactive measurements by Professor Evans and his colleagues

Radioactive iron was the material used because of its importance as a constituent of hemoglobin Two types of radioactive iron were used, one manufactured with the cyclotron by bombardment of cobalt, and the other by the bombardment of manganese, and the two types could be distinguished in subsequent measurements by the fact that the former lost its radioactivity at the rate of one half in five years, and the other at the rate of one half in forty-seven days

When experiments on blood transfusion were carried out, one of these radioactive forms of iron was injected into the recipient of the blood transfusion so as to tag his own red corpuscles and the other type of radioactive iron was injected into the blood donor so as to tag the red corpuscles of the blood used in the transfusion By this means one type served as the control and the other type served as the experimental blood donor source

By these technics several extremely important investigations could be carried out One had to do with the reaction of the various blood types on one another It was possible, for example, to find out whether blood from a group O donor with a high anti-A titer, when transfused into a recipient with a different blood type, lost its potency in the presence of the second type, or vice versa By this method some new discoveries were made regarding the interaction of blood types which greatly safeguarded blood transfusion and which have been proved to have application in certain situations in childbirth as well as in surgery

But the greatest wartime contribution of this method was for determining the best methods for preservation of whole blood and for setting up the technical standards for the great blood donor program By the device of using the tagged iron atoms in the donor's blood, direct evidence could be obtained regarding the potency of this blood after various durations of storage at various temperatures when admixed with various suggested preservatives All that it was necessary to do at the end of any given storage period was to transfuse this blood into a recipient and shortly thereafter determine the amount of the donor's blood which still remained active in his blood stream It was by this method that there was established the national standard specifying that after twenty-one days of storage at least 70 per cent of the transfused red cells must remain in circulation of the recipient for at least twenty-four hours

## GENETIC CHANGES

During the past decade or two an increasing amount of interest has been focused on the genetic changes which can be produced by x-ray or neutron radiations The best known example is that of the drosophila or fruit fly, which, after exposure to x-rays, has a certain probability of producing new species characterized by red eyes or other new characteristics One of the most interesting illustrations has been the production of new species of plants by strongly irradiating the germinating seeds with x-rays In this way a new type of tobacco plant with a 13 foot leaf has been produced, as one of many examples of agricultural possibilities

To the medical profession this phenomenon is of interest because of the possibility that by action of x-rays, neutrons or other high speed particles new types of biologic materials may be produced These may be new types of dangerous germs, as, for example, new variations of influenza, or conversely they may be new types of beneficial medical material, derived, like penicillin or herb extractions, from living matter Experiments have gone far enough to prove that there are possibilities along these lines and to suggest that there may here be an enormous field of importance to medical science of which we are just on the threshold

This field was opened up by x-rays and cyclotrons Probably the great uranium piles which have been designed in connection with the atomic bomb development and which give off enormous quantities of radiation may supply a new radiation tool for medical science It may be possibilities of this general type which are suggested when we hear that the new developments in the production and control of atomic energy have potentialities in agriculture and medicine as well as in mechanical power and warfare

## CONCLUSION

I hope that these illustrations, selected more or less at random, may serve to suggest the possibilities which apparently lie ahead in the near future as goals for those scientists in the various fields who would cooperate with medical science in advancing our knowledge of living processes and developing still more powerful arts of medical science

# RADIOACTIVE IODINE IN THE STUDY OF THYROID PHYSIOLOGY

## VII The Use of Radioactive Iodine Therapy in Hyperthyroidism

SAUL HERTZ, M D
Boston
and
ARTHUR ROBERTS, Ph D
Cambridge, Mass

In previously published experiments of this series [1] radioactive iodine was used as an indicator in the study of animal and human thyroid physiology and iodine metabolism Much of this preliminary work was done with a view to the discovery of the conditions under which radioactive iodine might be administered with maximum radiational effect in the pathologic thyroid of patients ill with hyperthyroidism The present paper is a progress report on our early experiences (1941-1946) with such "internal irradiation" in the treatment of 29 cases of hyperthyroidism It is, indeed a three to five year follow-up report on these cases

### PROCEDURE

Patients were selected who had had no previous iodine treatment and who were judged clinically to have hyperthyroidism The usual clinical tests were made and the patients were presented to the Thyroid Clinic of the Massachusetts General Hospital for discussion and determination of their suitability for this type of treatment In each instance a dose of radioactive iodine, which had been made by the cyclotron at the Massachusetts Institute of Technology or by the Harvard University cyclotron, and separated chemically as sodium iodide, was then orally administered

The samples of radioactive iodine used were obtained by deuteron bombardment of tellurium and at the time of administration consisted of a mixture of different radioactive isotopes of iodine Over 90 per cent of the activity at this time consisted of the 12 6 hour isotope $I^{130}$ and most of the remainder of the 8 day isotope $I^{131}$ The total activity administered varied between 0 7 and 28 millicuries In 19 cases the total dose was administered to the individual patients as one dose, in 10 cases divided dosages were employed

From the data already obtained from tracer studies it was considered desirable to keep the total amount of iodide administered below 2 mg of iodine in order to insure maximum collection by the thyroid

Urinary iodine excretion was determined during the first seventy-two hours after the administration of radioiodine. An indirect estimate of the thyroid retention of radioactive iodine was thereby obtained, since an approximate balance exists between administered iodine on the one hand and the sum of thyroid iodine retention and urinary excretion on the other

Urinary studies were carried out on aliquot portions of carefully collected twenty-four hour specimens, which were kept iced and corked during the collection periods

It was early found [2] that significant amounts of the original dose were to be found only in the first three days' specimens Fecal excretion was tested and was found to be so low as to be negligible for the purpose of these experiments

In a few cases external gamma ray counter measurements were made of the activity of the thyroid of patients following the administration of radioactive iodine Such measurements are difficult, for obvious reasons, to evaluate quantitatively However, day to day measurements of this type can give good data on the variation of thyroid iodine content They were performed in order to follow the loss of iodine from the thyroid following the initial uptake and to evaluate the effect of routine iodinization following the administration of radioactive iodine

External counter measurements were roughly calibrated against actual direct measurements on the thyroid glands at operation and after chemical separation [3] in 2 patients, previously scheduled for surgery, who received therapeutic amounts of radioactive iodine

Following the administration of radioactive iodine routine iodine (nonradioactive) in the usual dosage of saturated solution of potassium iodide 5 minims (0 3 cc ) twice a day was begun at periods varying from one day to several weeks after the radioactive iodine dose

The basal metabolic rate of the patients treated was tested frequently both before and after the radioactive iodine administration Basal metabolic levels were taken prior to treatment to establish a measure of the degree of thyrotoxicosis present In addition to the basal metabolic rate, weights, pulse rates and physical findings were recorded and the total clinical picture was used to evaluate the effects of treatment No adverse effects, such as fever, nausea or irradiation sickness, were noted in this series of patients No complaints were recorded regarding the taste of the medicament (since it is tasteless), nor were any local effects, either in the oral cavity or over the thyroid, encountered at the dosage levels used No increase in the degree of thyrotoxicosis following the radioactive iodine treatment, per se, was recorded, although several test patients were kept uniodinized for three to four weeks prior to routine iodinization

In most cases, after a period of two to four months following the radio-iodine administration, routine iodine therapy was stopped when an essentially normal basal metabolic rate had been maintained on iodine for a few weeks or months Such basal metabolic rate response was taken to be indicative of good control of

---

A report to March 15 1946

From the Thyroid Clinic and Metabolism Laboratory of the Massachusetts General Hospital and the Radioactivity Center Massachusetts Institute of Technology This material was presented in part to the American Society for Clinical Investigation in May 1942 (see abstract of proceedings Physiol Rev 62 4 1942) The work was aided by a grant from the John and Mary R Markle Fund in the names of Professors J H. Means and Robley D Evans and was accomplished by close cooperation of the Radioactivity Center of the Massachusetts Institute of Technology Cambridge Mass and the members of the medical staff of the Massachusetts General Hospital Boston.

This work was performed at the Massachusetts General Hospital and the Massachusetts Institute of Technology under a grant from the John and Mary R Markle Fund Cooperation and assistance in this work were given by Professor J H Means Professor J W Irvine, Dr Wendell C Peacock, Professor M Stanley Livingston Professor Robley D Evans Drs R W Rawson and Jacob Lerman the technical assistants Mrs. Phyllis Brown Shattuck Miss Ann Gaurdo and Miss Mary Lennon as well as the nursing surgical and medical staffs of the Massachusetts General Hospital The speech of President Karl T Compton of the Massachusetts Institute of Technology before a Harvard Medical School colloquium in the fall of 1936 served to inspire the senior author in the initiation of this investigative program

1 Hertz S , Roberts A., and Evans R D Radioactive Iodine as an Indicator in the Study of Thyroid Physiology Proc. Soc Exper. Biol & Med 38 510 (May) 1938 Hertz S Roberts A Means J H, and Evans, R. D Radioactive Iodine as an Indicator in Thyroid Physiology II Iodine Collection by Normal and Hyperplastic Thyroids in Rabbits, Am J Physiol 128 565 (Feb ) 1940 Tr Am A. Study Goiter, 1939, p 260 Hertz S Radioactive Iodine as an Indicator in Thyroid Physiology III. Observations on Rabbits and on Goiter Patients, Am J Roentgenol. 46: 467 (Oct ) 1941 Hertz S and Roberts A Radioactive Iodine as an Indicator in Thyroid Physiology VI Application of Radioactive Iodine in Therapy of Graves Disease J Clin. Investigation 21: 624 (Sept ) 1942 Hertz Roberts and Salter Hertz and Roberts

2 Hertz, S Roberts A and Salter, W T Radioactive Iodine as an Indicator in Thyroid Physiology IV The Metabolism of Iodine in Graves Disease J Clin Investigation 21 25 (Jan ) 1942

the thyrotoxicosis at that time Failure of the basal metabolic rate to rise on the cessation of iodine treatment was then interpreted as positive evidence of remission of the disease A rise of the basal metabolic rate on cessation of iodine therapy was considered evidence of failure of the regimen of internal irradiation A lowered basal metabolic level, with weight gain, symptomatic relief and lowered pulse, were considered indicative of a decrease of the severity of the disease

As with other forms of treatment for hyperthyroidism, a prolonged follow-up of six months to one year (or more ideally two to five years) following, clinical evidence of remission was required before classification of cases as "cures"

## CALCULATION OF RADIATION DOSAGE

In order to obtain a basis of comparison among patients and between radioactive iodine on the one hand and x-ray therapy on the other, the probable values of radiation dosage delivered in the thyroid were calculated Such calculations are based on the following data

1 Fractional uptake of radioactive iodine by the thyroid

2 The known energy of the radiations from $I^{130}$ and $I^{131}$

3 The clinical estimation of the weight of the thyroid of the patient.

4 The known pattern of uptake and retention of radioactive iodine [3] by the hyperplastic thyroid gland of hyperthyroidism [2]

By using the known values of ionization produced by 1 millicurie of radiation and the properties of $I^{130}$ and $I^{131}$ the following formulas can be derived for the total radiation delivered in decaying to zero

$$\text{Radiation (in roentgen units)} = \frac{10\,000 \text{ (dose of } I^{130} \text{ in mc) (fractional uptake in thyroid)}}{\text{weight of thyroid in grams}}$$

For $I^{131}$ the constant 10,000 is replaced by 117,000 Thus for $I^{130}$ a net collection of 3 millicuries in a 30 Gm thyroid will give a total of 1,000 roentgens in decaying to zero [4]

The effectiveness of radiation therapy is known to depend on the rate of delivery, especially at low rates In the case of $I^{130}$ the initial rate of delivery of a 1,000 roentgen dose is 55 roentgens per hour For $I^{131}$ it is only 3 6 roentgens per hour Thus, while in these experiments the total radiations delivered by the two isotopes are comparable, the rate is so much slower for the long-period isotope that its effectiveness is at least open to question Furthermore, an appreciable fraction of the activity leaves the thyroid during the decay of the long period iodine [2] We shall assume throughout that it is the $I^{130}$ radiation which is most effective

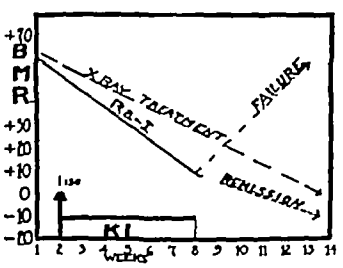
Calculations of the type described are subject to large errors These arise mainly in the estimate of the thyroid weight, in the determination of thyroid iodine uptake and in the assumption of a uniform picture of iodine retention - Errors of 50 per cent or more in the estimate of the thyroid radiation are therefore to be expected

## RESULTS

The accompanying graph is a schematic representation of the expected course of the basal metabolic rate in successfully and unsuccessfully treated cases The upper broken line represents the course of the basal metabolic rate of a patient treated successfully by means of orthodox external x-ray therapy The latter is given as a basis for comparison of the time interval required for obtaining a remission by the internal and external forms of thyroid irradiation in typical cases of hyperthyroidism

The results obtained with 29 patients are summarized in tables 1 and 2 Table 1 affords an analysis of 9 cases in which cure was not obtained by the radiational effect of radio-iodine Table 2 gives an analysis for 20 cases considered to be cures These cases are so classified after follow-ups and examinations extending to March 1946

*The excretion studies and the external gamma ray* counter measurements showed early in these experiments that there is no peak in the excretion of iodine in any of 14 cases tested, nor is there any sudden drop in the radioactive iodine content of the thyroid when a patient who has been given radioactive iodine is started on routine iodinization. On the contrary, these experiments showed that iodinization either has no effect on the normal slow loss of iodine from the thyroid or tends to "freeze" the radioactive iodine collected by the gland, i e to foster its longer retention therein As much as 25 per cent of the initially collected radioactive iodine may remain in the thyroid twenty-five days after an initial collection and subsequent iodinization [2] It is clear that such prolonged retention is advantageous from the standpoint of efficient use of the radioactive isotopes administered Urinary studies in a typical case gave the results recorded in table 3




Course of the basal metabolic rate in successfully and unsuccessfully treated cases of hyperthyroidism solid line treatment by radioactive iodine upper broken line treatment by external x irradiation The arrow indicates the point at which $I^{130}$ was administered to the patients treated with radioactive iodine The lower rectangle indicates the administration of ordinary iodides A rise in the basal metabolic rate on omission of iodide therapy is significant of continued thyrotoxicity and failure of the therapeutic program the absence of any such rise in any case is interpreted as evidence of remission of the disease as a result of the type of treatment received by the patient.

The reasons for adopting the procedure of full iodinization following the radioactive iodine dose were, in the main concern, that if the radioactive iodine was not effective the patients might be injured by uncontrolled thyrotoxicosis In addition, no adequate control was possible of the iodine intake of patients (from extraneous sources) while ambulatory and awaiting the radiotherapeutic effect

In spite of the fact that the interpretation with regard to cure might be rendered slightly less unequivocal with the use of this procedure, one can depend on the familiar fact that routine iodinization, per se, has been known for years to be a rather unsatisfactory sole treatment for the great majority of unselected thyrotoxic patients [5]

3 This pattern was determined by the use of tracer quantities of radioactive iodine It is not strictly correct to assume as we have that the pattern will be the same when quantities of activity sufficient to have a biologic irradiation effect on the thyroid are present. However in the absence of other data we have assumed that the pattern is the same If this is in error it will introduce another error into the calculation, already admittedly approximate of the dosage delivered to the thyroid

4 The millicurie values of activities cited in this paper are absolute values based on the number of disintegrations occurring in the radioactive substance determined by methods like those described by Deutsch M, Downing J R, Elliott, L. G Irvine J W, Jr and Roberts A Physiol Rev 62 4 1942.

5 Thompson W O Toxic Goitre The Present Status of Treatment Canad M A J 42 224 (March) 1940

### COMMENT ON RESULTS OF TREATMENT

A total of 29 patients were given radio-iodine in quantities which might be presumed, a priori, to have a therapeutic effect As might be expected, in the earlier cases the dosage administered was not uniformly effective At the time of starting these experiments there was no accumulated experience as to the possible adverse general effects of the administration of radioactive isotopes of iodine on the internal human economy As our experience became extended, the total activity administered was increased from values in the vicinity of 1 millicurie to a maximum of 28 millicuries in 1 case without the occurrence of even temporary immediate reaction As the series was followed, no clinical evidence has appeared to make us consider that there are any such undesirable effects or dangers in the range of activities used No case of cancer of the thyroid has occurred, it appears unlikely that any such condition will arise from the internal irradiation involved in this form of treatment at the activity levels used

Although the error in the estimation of the actual dosage delivered to the thyroid on the basis of the method of estimation used is necessarily large, it is possible, from the clinical behavior of the latter part of our series, to select the region near 1,000 roentgens (of the 12 hour isotope) as the minimum biologically effective range of dosage In case 2 four separate doses of 1 4, 0 9, 2 4 and 0 8 millicurie were given to a patient with an uniodinized thyroid, with a frank failure of this regimen The total dose in this case was 5 5 millicuries and the thyroid irradiation 500 roentgens (of 12 hour radio-iodine)

### FAILURES

In case 10 (0 7 millicurie), in which operation was performed, the failure of the regimen may be attributed to the use of subminimal doses of radio-iodine In cases 1, 5, 14, 16 and 19 of table 1 operations were performed following the administration of 3 3, 5 7, 15, 10 and 28 millicuries respectively These were the only cases in the series in which operations were performed, and in every 1 of these 5 cases postoperative myxedema or hypometabolism ensued In case 14 the basal metabolic rate was —15 the day before operation, it was essentially normal in the others (on iodides)

The occurrence of postoperative hypometabolism in 100 per cent of patients exhibiting essentially normal basal metabolic rates preoperatively is suggestive of a radiational effect on the thyroid tissue remaining after operation For example, Mrs R, patient 5 who was operated on after receiving 5 7 millicuries (1,000 roentgens) in a planned experiment for another purpose, developed myxedema despite the fact that one of us was present to advise the surgeon to leave 6 to 7 Gm of thyroid (a nonradical subtotal thyroidectomy) in view of the previously demonstrated high radio-iodine uptake by this patient's thyroid It is reasonable to surmise that hypometabolism might not have ensued in such a large percentage of the patients had they not received the radio-iodine prior to operation

An analysis of preoperative basal metabolic rates of the patients operated on indicates that all 5 so treated were adequately controlled on iodides at the time of operation despite the long period of observation of these patients in a nonoperated state

TABLE 1.—*Analysis of Nine Cases of Hyperthyroidism in Which Cure Was Not Effected by Administration of $I^{130}$ with Therapeutic Intent*

| Number | Patient | Basal Metabolic Rate Level Prior to $I^{130}$ | Dose of $I^{130}$ and Dates of Administration | Basal Metabolic Rate Prior to Subtotal Thyroidectomy | Postoperative Basal Metabolic Rate | Thyroid Weight Gm | Histologic | Total Thyroid Irradiation (Roentgens) 12 Hr $I^{130}$ | Total Thyroid Irradiation (Roentgens) $I^{131}$ 8 Day | Estimated Thyroid Weight | Percentage of Dose of Radio Iodine Excreted 72 Hours |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Elizabeth D | +30 | 2 1 mc. 3/31/41<br>1.3 mc. 4/10/41<br>3 4 mc | (—5) (—7) | (—29) | 34.5 | Involution | 470<br>220 | 660<br>240 | 30 | 20<br>28 |
| 5 | Lillian R. | +30 | 5 7 mc 7/10/41 | Planned experiment | (—20) | 31.8 | Hyperplasia no involution | 1 000 | 1 150 | 40 | 27 |
| 10 | Gladys B | +50 | 0 7 mc 2/2/42 | Controlled through pregnancy (+3) (12/30/43) | (—26) | 26<br>30<br>56 | Hyperplasia + moderate involution | 120 | 90 | 60 | 38 |
| 14 | Wilfred B | +50 | 15 mc. 7/15/42 | (—15) (8/17/43) operation (8/18/43) | (—24) | 55 | Hyperplasia + involution | 650 | | 60 | 71 (?) |
| 16 | Carmella D | +20 | 10 mc 8/11/42 | (—8) | (—24) | 28 | Involution | 1,800 | | 45 | 6 |
| 19 | Peter C | +60 | 15 mc 8/25/42<br>8 mc 3/6/43<br>5 mc. 3/9/43<br>28 mc. | (+8) to (+13) | (+36) to (—18) | 35 | Slight hyperplasia + involution | 2 000 (?)<br>1,500 (?) | | 60 | 9<br>15 (?)<br>7 |
| 2 | Margaret B | +35 | 1 4 mc. 5/10/41<br>0.9 mc 41<br>2 4 mc 42<br>0.8 mc. 42<br>5 6 mc. | Persistent thyrotoxicosis another radio-iodine dose proposed | | Not operated on | | 160<br>110<br>120<br>100 | 140<br>100<br>120<br>100 | 40 | 54<br>48<br>78<br>? |
| 4 | Camille Sch * | +30* | 3 6 mc. 7/14/41<br>2.2 mc. 7/31/41<br>5.8 mc | Eyes better no goiter basal metabolic rate 4 yrs off all medication | (+2) | Not operated on | | 270<br>170 | 390<br>180 | 60 | 55<br>56 |
| 3 | Ruth M | +50 | 3 4 mc 6/6/41<br>20 mc. 1/9/46 | Remission of one year's duration following hemithyroidectomy (6/25/41) (Recently for true recurrence) | | | | 450<br>4,300 | 410 | 45<br>30 (recurrence) | 45<br>35 |

* Case classified as special ophthalmopathic type of hyperthyroidism (Low intake of $I^{130}$)
Eight day isotope figures assume no loss of iodine from thyroid during decay they are therefore excessive They were not measured for cases 13-20

Mrs M B, patient 2, has been taken off iodine in preparation for a 20 millicurie dose of radio-iodine She has remained fairly well, at work, on full iodinization but remains chronically thyrotoxic

Miss R M, patient 3, who had 3 4 millicuries, was subjected to hemithyroidectomy in June 1941 She was in remission off iodides for twelve months but during the past one and one-half years developed a definite recurrence of hyperthyroidism, for the treatment could have been by subtotal thyroidectomy, since the probability of recurrence is distinctly higher following pregnancy in the postoperative follow-up of surgically treated cases

One patient (4, Mrs C S) should, in our opinion, be excluded from the series on the grounds of failure to present a picture of typical toxic diffuse goiter As our experience developed it became evident [6] that patients in the "special ophthalmopathic group" [7] char-

TABLE 2—*Analysis of Twenty Cases of Hyperthyroidism Successfully Treated with Therapeutically Sufficient Dosage of $I^{130}$ Followed by Ordinary Iodide Administration*

| Number | Patient | Dose of $I^{130}$ and Date of Administration | Basal Metabolic Rate Before $I^{130}$ | Basal Metabolic Rate Level Off Iodides | Time Off Iodides | Thyroid Size 1946 | Estimated Thyroid Weight, Gm | Percentage of Radio-Iodide Excreted, 72 Hours | Estimated Thyroid Irradiation (Roentgens) 12 Hour | Estimated Thyroid Irradiation (Roentgens) 8 Day |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 | Michael K. | 2 3 mc. 7/24/41<br>1 7 mc 7/30/41<br>4 0 mc | 45+ | 12/—/42 (— 0)<br>5/—/43 (—16)<br>1/—/46 (— 7) | 4 yrs + | N | 45 | 35<br>22 | 320<br>280 | 390<br>300 |
| 7 | Allison D (aged 9) | 1 4 mc 9/19/41<br>1 5 mc 9/21/41<br>2.9 mc. | 60+ | 1/ 8/46 (— 6) | 4 yrs | N | 45 | 9<br>20 (?) | 260<br>260 (?) | 230<br>230 (?) |
| 8 | Naomi K (aged 9) | 1.5 mc. 9/24/41 | 30+ | 7/17/45 (— 3) | Months | Firm 2 × N | 40 | 15 | 300 | 250 |
| 9 | Mildred G | 4 9 mc. 11/26/41 | 30+ | 5/ 8/45 (—10) | 4 yrs | N | 60 | 17 | 650 | 470 |
| 11 | Frances H | 5 8 mc 4/ 9/42 | 37+ | 7/ 9/42 (—12)<br>2/24/44 (+ 9)<br>2/ 3/46 (—21) | 3.5 yrs | N | 60 | 17 | 700 | 350 |
| 12 | Ferdinand L | 7.5 mc. 5/15/42 | 55+ | 45 (+11)<br>2/ 3/46 (—13) | 3 yrs | Hard 1.5 × N | 60-75 | 26 | 950 | 500 |
| 13 | Dorothy P | 12 mc 6/ 9/42 | 30+ | 5/—/43 (+ 6)<br>2/ 3/46 (—10) | 3 yrs | N | 40 | 71 | 750 | |
| 15 | Mary M. | 6 mc. 8/11/42<br>4 mc 8/11/42<br>10 mc | 55+ | 4/—/45 (— 6)<br>2/ 3/46 (+ 2) | Months | N | 40 | 10 | 2 000 | |
| 17 | George T | 13 mc 8/13/42 | 50+ | 44 (—15)<br>1/ 6/46 (— 9) | 3 yrs + | N | 60 (50-75) | 14 | 1,300 | |
| 18 | Jeanette G | 10.5 mc 8/15/42 | 55+ | 8/22/44 (+11)<br>2/10/46 (+ 5) | 3 yrs + | N | 30-40 | 15 | 2 000 | |
| 20 | Anne D | 10 mc 11/14/42 | 50+ | 4/ 3/45 (— 1)<br>2/10/46 (— 5) | 2 yrs + | N | 45 | 20 | 1 600 | |
| 21 | Richard T | 14 mc. 11/30/42 | +45 | 1/ 8/46 (—13) | 3 yrs + | N (Dr H L Blumgart) | 50 | 15 (?) | 2 000 | |
| 22 | Esther R | 13 mc. 3/ 9/43 | +20 | 6/30/43 (— 8) | 2 yrs + | "? N" (L M D) | 35 | 33 | 2,900 | |
| 23 | Margaret D | 8 mc 3/15/43<br>10 mc. 3/10/43<br>18 mc | +55 | 6/ 9/43 (—11)<br>2/10/46 (— 3) | 2 yrs + | Firm 1 5 × N | 75 | 76<br>67 | 500 | |
| 24 | Jane Anne F | 10 5 mc. 3/26/43<br>4 5 mc 3/27/43<br>15 mc | +40 | 1?/—/45 (— 5) | 2 yrs + | N (Dr J C Aldhardt) | 50 | 57 (?)<br>31 ( ) | 1 000 approximately | |
| 25 | Sophie R | 10 mc 4/ 2/43 | +44 | 9/28/44 (— 7)<br>4/27/45 (+ 0) | 2 yrs + | N (Dr J C Aub) | 50 | 20 6<br>63 0 | 750 approximately | |
| 26 | Bessie W | 12 mc 4/ 6/43 | +39 | 45 (— 8)<br>1/10/46 (+ 2) | 2 yrs + | N | 45 | 80 | 300 | |
| 27 | Winifred K | 13 mc 4/12/43 | +40 | 7/17/45 (—16)<br>2/15/46 (—10) | 2 yrs + | N | 50 | 33 | 1 600 | |
| 28 | Margaret H | 10.5 mc 4/13/43<br>11.0<br>21 0 mc | +50 | 12/—/45 (—10)<br>2/ 3/46 (+ 6) | 2 yrs + | N | 75 | (*) | 2 000 approximately | |
| 29 | Julia Laf R | 8 mc 3/29/43<br>4 mc 5/30/4<br>12 mc | +50 | 2/—/46 (+ 5) | 2 yrs + | N | 50 | 10<br>53 (?) | 1,200<br>250 | |

Light day isotope figures assume no loss of iodine from thyroid during decay they are therefore excessive They were not measured for cases 12-29

of which she received 20 millicuries of radio-iodine on Jan 9, 1946

In case 10 a temporary control of the disease was achieved, but a true recurrence of the disease following an uneventful pregnancy occurred for which surgical treatment was given at the United States Naval Dependents' Hospital Boston As this patient did not remain "cured" for over a year she is not included in the series of cures In comparing her case with others in which routine surgical treatment was administered, she might be considered as at least having been temporarily benefited to the same extent by radio-iodine as she acteristically had lower thyroid uptakes of radioactive iodine than patients with typical hyperthyroidism Although this patient has done well without operation her improvement cannot be ascribed to the radioactive iodine treatment In our experience this group does well on medical therapy in any event [8] and rather poorly

6 Hertz S and Roberts A Radioactive Iodine as an Indicator in Thyroid Physiology V The Use of Radioactive Iodine in the Differential Diagnosis of Two Types of Graves Disease J Clin Investigation 21:31 (Jan) 1942

7 Hertz S Means J H and Williams R H Graves Disease with Dissociation of Thyrotoxicosis and Ophthalmopathy West J Surg. 49 493 (Sept) 1941 Tr Am A Study Goiter 1941

8 Means J H The Eye Problems in Graves' Disease Illinois M J 80 135 (Aug) 1941

by rapid cure of the thyrotoxic element by operation It is conceivable, however, that by giving larger dosages of radioactive iodine radiotherapeutic advantage could be obtained even in this class of cases

In summary, therefore, there were 9 cases which comprise this series of "failures"

In 1 case (10), in which there was a recurrence, the dosage of radio-iodine is known to have been probably inadequate (120 roentgens) for biologic effect One, patient 4, is grouped in this list because she was a "special ophthalmopathic" patient, the control of her disease cannot be uniquely attributed to the effect of the radio-iodine

Two patients (3 and 5) had operations as part of planned experiments and gave us the first evidences of possible biologic effect of the radio-iodine which was administered They are, however, included among the failures because of the complicating factor of operation Patient 5 developed myxedema, patient 3 suffered a recurrence after hemithyroidectomy

Five patients (1, 5, 14, 16 19) were operated on who had received dosages of radio-iodine from which one might expect a cure All developed postoperative hypometabolism

Mr P C, patient 19 received divided dosage of 15, 8 and 5 millicuries, the largest total dosage in our

TABLE 3—*Urinary Studies*

Radio-Iodine (20 mc of $I^{130}$) orally administered as a single dose 17 per cent excreted in a period of four days (I, II III IV = twenty four hours collections of urine following the radio-iodine)

| | | |
|---|---|---|
| I | 17.9% | 0.047%/cc /hr |
| II | 8.5% | 0.006%/cc./hr |
| | | 5 minutes of saturated solution of potassium iodide |
| III | 3.45% | 0.006%/cc /hr |
| | | 5 minims of saturated solution of potassium iodide |
| IV | 2.3% | 0.0001%/cc /hr |

series He developed postoperative hypometabolism after a short period of persistent thyrotoxicosis (basal metabolic rate + 36 to — 18) His basal metabolic rate the day prior to operation was + 13

Finally, patient 2 received a total of 5 5 millicuries of radio-iodine in four divided doses, with a total radiation of 500 roentgens She has not been operated on but exhibits clear evidence of continued thyrotoxicosis which is only moderately well controlled by iodine

SUCCESSES

There were a total of 29 cases in this entire series In 1 case (10) the dosage was subminimal Of the remaining 28 patients who received radio-iodine of therapeutic intensity 5 were subtotally thyroidectomized All 5 developed hypometabolism

In the remaining 23 cases in which radio-iodine of therapeutic intensity was given, no subtotal thyroidectomy was performed In 20 of these patients a recent follow-up indicates that they are no longer thyrotoxic The remaining 3 cases (2, 3 and 4, already discussed) cannot be considered as successes

The thyroid gland in all but 3 of these patients became normal in size (impalpable) In the 3 patients in whom the thyroid is still palpable, despite general metabolic and clinical cure (off iodine), there were decided reductions in the size of the goiters They have firm to hard glands which suggest the presence of chronic thyroiditis or fibrosis These patients had the largest pretreatment goiters One of them (12) states that his collar size has now returned to the same as he had worn prior to the onset of hyperthyroidism He had had a large goiter (three times normal size) prior to treatment

In addition to the 20 cures in which operation was not performed, there is pathologic evidence for cure in 1 case (16) in which operation was performed A 28 Gm thyroid was removed, it showed histologic "involution," and myxedema subsequently developed

There were no mortalities in the series either as a result of thyrotoxicosis or due to operation in the 5 cases The incidence of myxedema and hypometabolism has been mentioned

No undesirable complications such as tetany or loss of phonation occurred No tracheal or laryngeal irritations occurred No undesirable radiation effects were observed No anemia ensued in any patient in the series

Although 5 of the 20 patients not operated on developed basal metabolic levels of — 15 to — 20, no one suffered the development of permanent myxedema at the dosage level employed in this series

CONCLUSIONS

From these data it is clear that we are now in a fair position to set down a minimum dosage and a preliminary estimation of the therapeutically effective dosage range in typical cases of hyperthyroidism This range is from 5 millicuries to 25 millicuries (as a single dose), with the choice of the dose largely a function of the clinical estimation of the size of the goiter of the patient being treated

The calculated dosages administered in those cases (500 to 2,500 roentgens) (± 50 per cent) in which treatment was successful are in satisfactory agreement with the x-ray dosages which have been successfully used (1 000 to 1,200 roentgens) The apparently greater efficacy of the radio-iodine treatment as compared with orthodox x-ray treatment may perhaps be attributed to the fact that x-ray dosages are sometimes limited by the appearance of undesirable skin reactions and the intraglandular irradiation within the thyroid cells may conceivably offer certain advantages over external irradiation On the basis of our experience to date, the following are considered to be important clinical considerations in patients who are to be chosen to undergo treatment by radioactive iodine

1 No previous iodine therapy, or if previously treated, iodine treatment to be stopped for at least one month to allow maximum uptake of the radioactive iodine dose

2 Availability for close follow-up

3 Administration of routine iodinization, starting one to three days after the administration of radio-iodine as soon as the uptake is known to be adequate

4 Unwisdom of treating patients having large goiters with secondary involutional changes at this time by this means, as surgery might be needed by them on a purely mechanical basis, even though detoxification by radioactive iodine could be accomplished Early diagnosis and early treatment of cases would then appear to offer major advantages in this as in many other forms of treatment.

The treatment of the special cases in the ophthalmopathic group of hyperthyroidism appears to offer special problems, as do cases of large, involutional goiters However, typical cases of hyperthyroidism respond to this form of treatment in such a manner as to make it possible to venture the prediction that this therapeutic program may in time replace the surgical approach currently in vogue

Radioactive iodine is produced in enormous quantities in nuclear chain-reacting piles When radio-iodine from such sources is made readily available to the medical

profession, this form of treatment may well prove itself not only highly effective, safe and noninjurious but also cheap and of least inconvenience to the patient who may receive it while continuing at his normal pursuits After a short period of hospitalization for the usual preliminary clinical studies and the administration of radio-iodine, the patient may be fully iodinized and released, to be followed as an ambulatory case

SUMMARY

On the basis of a series of animal and clinical experiments using radioactive isotopes of iodine as a tracer in the study of thyroid physiology and iodine metabolism the treatment of 29 cases of hyperthyroidism with internal irradiation by radioactive iodine was instituted By careful excretion studies, external counter measurements over the thyroid gland and by planned operations in 2 cases, data were obtained which allow us to construct a formula for a procedure in treatment

The addition of ordinary iodine therapy after the administration of radio-iodine offers many advantages in the clinical care of these patients and in the economy and safety of the procedure

By an analysis, over a long period, of both the failures and successes in this series of 29 cases, it is shown that radioactive iodine when given in the dosage range of 5 to 25 millicuries to uniodinized patients with hyperthyroidism possessing goiters of 60 to 75 Gm is highly effective as a cure of the disease in about 80 per cent of cases When appreciable activity has been administered and subtotal thyroidectomy is resorted to, myxedema or hypometabolism may be expected to develop in a large fraction of the cases (100 per cent in 5 cases in this series)

## THE TREATMENT OF HYPERTHYROIDISM WITH RADIOACTIVE IODINE

EARLE M CHAPMAN M D
and
ROBLEY D EVANS Ph D
Cambridge Mass

Roentgen treatment has been used for hyperthyroidism for many years In 1923 Means and Holmes [1] pointed out that in this form of treatment about one third of the patients are cured, another third improved and another third not affected Since 1923 ordinary iodine by mouth has been used as a preoperative method of quieting the hyperactive thyroid in preparation for surgery *Under iodine alone occasionally the* patient and the doctor have been agreeably surprised to find that the symptoms and signs of hyperthyroidism disappeared, and a permanent remission apparently was effected That x-ray treatment and iodine treatment sometimes cure hyperthyroidism led to the hope that some day a more effective, nonsurgical agent would be found Then the MacKenzies [2] and Astwood [3] discovered that several chemical compounds inhibit the function of the thyroid in hyperthyroidism as well as under other circumstances Several of these agents have been investigated, and until now thiouracil has been found to be most useful in the treatment of thyrotoxicosis

Induced radioactivity was discovered in 1934, and that same year Fermi and his co-workers [4] in Italy prepared radioactive isotopes of iodine Because the thyroid absorbs iodine selectively, it seemed likely that beta rays from iodine rendered radioactive would have a greater radiation effect than that derived from roentgen rays delivered through the skin and overlying tissues

The use of radioactive iodine in the study of thyroid physiology was soon undertaken and reported first in 1938 by *Hertz, Roberts and Evans* [5] *Subsequently* these and other investigators used various isotopes of radioactive iodine as tracers for the study of thyroid function [6] and it was found that in untreated hyperthyroidism the thyroid may take up as much as 80 per cent of a small dose (less than 2 mg ) of iodide within a few hours after oral administration [7] This established the basis for therapeutic trials of radioactive iodine, and in 1942 Hertz and Roberts [8] published a preliminary report of the treatment in this manner of 10 patients In this series the procedure was to give the radioactive iodine and follow this with ordinary iodine by mouth for a period of several months However, our review in the clinic of these 10 cases of Hertz and Roberts, and an additional 18 so treated under the direction of Hertz, has led to the conclusion that it is difficult to decide whether those patients who improved were responding to the ordinary iodine, to the radioactive iodine or to their combination The dosage of radioactive iodine given to these 28 patients averaged 5 millicuries in 1941, 10 millicuries in 1942 and 14 5 millicuries in 1943, the largest single dose being 21 millicuries In April 1943 Dr Hertz went on active duty in the Navy and asked us to continue with this study The present report is on a series of 22 patients with hyperthyroidism *treated only with radioactive iodine and with considerably* higher doses Although both Hertz and Roberts [8] and Hamilton and Lawrence [9] were encouraged by their therapeutic trials, the details of their findings have not yet been published

### METHODS AND DOSAGE

#### *Selection and Care of Patients*

The patients selected in the Thyroid Clinic of the Massachusetts General Hospital for radioactive iodine therapy were judged by several physicians to be thyrotoxic on the basis of classic disease pattern accompanied with constantly elevated basal metabolic rates All patients had thyroids estimated to be at least two to three times normal in size All but 3 were kept free from all forms of treatment, especially iodine, for at least four weeks prior to giving radioactive iodine For the administration of the drug they were usually hospitalized for a time adequate to obtain levels of their basal metabolic rate, then given radioactive iodine by mouth—simply a drink of what tastes like rather stale water

Aided in part by a grant from the John and Mary R. Markle Foundation

From the Thyroid Clinic of the Massachusetts General Hospital (Dr Chapman) and the Radioactivity Center of the Department of Physics of the Massachusetts Institute of Technology (Dr Evans)

1 Means J H , and Holmes G W Further Observations on the Roentgen Ray Treatment of Toxic Goiter, Arch Int Med **31** 303 (March) 1923

2 MacKenzie C G and MacKenzie J B Effect of Sulfonamides and Thioureas on the Thyroid Gland and Basal Metabolism Endocrinology **32** 185 (Feb ) 1943

3 Astwood E B Treatment of Hyperthyroidism with Thiourea and Thiouracil, J A M A. **122** 78 (May 8) 1943

4 Fermi E. Radioactivity Induced by Neutron Bombardment Nature London **133**: 757 (May 19) 1934

5 Hertz S Roberts A , and Evans R D Radioactive Iodine as an Indicator in the Study of Thyroid Physiology, Proc. Soc. Exper Biol & Med **38**: 510 (May) 1938

6 Rawson, R W Radio Iodine Its Use as a Tool in the Study of Thyroid Physiology to be published Hamilton J G and Soley M H Studies in Iodine Metabolism by the Use of a New Radioactive Isotope of Iodine Am J Physiol **127** 557 (Oct.) 1939 Le Blond C P Sue P and Chamorre A. Passage de l iode radioactif dans la thyroide d animaux sans hypophyse Compt. rend Soc de biol **133**: 540 1940

7 Hertz S , Roberts A and Salter, W T Radioactive Iodine as an Indicator in Thyroid Physiology IV The Metabolism of Iodine in Graves Disease J Clin Investigation **21**: 25 (Jan ) 1942

8 Hertz, S and Roberts A Application of Radioactive Iodine in Therapy of Graves Disease, J Clin Investigation **21**: 624 (Sept ) 1942

9 Hamilton, J G , and Lawrence J H Recent Clinical Developments in the Therapeutic Application of Radio-Phosphorus and Radio-Iodine J Clin Investigation **21**: 624 (Sept ) 1942

The urine was then collected for a period of three days to measure the urinary excretion of radioactive iodine

*Preparation of Radioactive Iodine*

The radioactive iodine is prepared by the nuclear bombardment of metallic tellurium, in the Massachusetts Institute of Technology cyclotron, using 14 MEV (million electron volts) deuterons This bombardment transmutes tellurium into iodine The principal isotopes produced in this way are $I^{130}$ (half period 12 6 hours) and $I^{131}$ (half period 8 0 days) Immediately after a short bombardment the 12-hour iodine has about ten times the radioactivity of the 8-day iodine isotope which is produced simultaneously The ratio of 12-hour to 8-day iodine decreases with increasingly long bombardments For the preparation of therapeutic radioactive sources the bombardments were usually about three to ten hours in duration

Following the bombardment, the radioactive iodine is separated[10] from the target To the metallic tellurium is added 0 5 mg of iodine as potassium iodide and 25 cc of 3 molar sulfuric acid Then concentrated nitric acid is added dropwise while the solution is heated This dissolves the target and causes the iodine to distil over as elementary iodine, which is collected in carbon tetrachloride The carbon tetrachloride solution is washed once with water in a separatory funnel and then the iodine is reduced with sodium bisulfite and is extracted in an aqueous layer as sodium iodide This aqueous solution is filtered to remove any residual droplets of carbon tetrachloride

The final solution presented to the patient is distilled water containing 14 to 79 millicuries[11] of 12-hour iodine and about one-tenth that amount of 8-day iodine in 0 5 mg of iodine as sodium iodide Because of the rapid decay of the 12-hour isotope, which is the more important radiation source, all preparations were administered to the patients within one to four hours after the conclusion of the bombardment The doses in table 2 are in terms of the radioactivity of the 12-hour isotope at the time of administration

*Tissue Radiation Doses*

In the therapeutic use of x-rays, the radiation doses are commonly reported in roentgens The x-rays produce high-speed secondary electrons in the tissue, and the therapeutic effect of x-rays is actually due to the interaction of these secondary electrons with the tissues The beta rays from a radioactive isotope are also high-speed electrons These beta rays can therefore be expected to produce tissue effects similar to those produced by x-rays, and the radiation dosages can also be expressed in roentgen units The beta rays have a maximum range of only a few millimeters of tissue Therefore the radiation doses are confined almost exclusively to the tissue actually containing the radioactive isotope and are proportional to the concentration of the isotope in the tissue

The tissue radiation dose may be predicted quantitatively for an average patient in terms of the number of millicuries of 12-hour iodine administered per estimated gram of thyroid tissue Patients may show wide variations from this estimated average tissue radiation dose, especially because of individual variations in the retention of radioactive iodine It is assumed that substantially all the administered iodine is either taken up by the thyroid gland or excreted in the urine A high urinary excretion of radioactive iodine indicates a correspondingly low retention of iodine by the thyroid, with a consequent reduction in the radiation dose available to the gland

The tissue radiation dose delivered to the thyroid gland can be estimated from the shape of the iodine retention curve,[7] the measured fractional urinary excretion of radioactive iodine, the radioactive decay curve of the two isotopes involved and the roentgen equivalent[12] of the energy of the radiation from the two isotopes

A concentration of 1 mc ($3 7 \times 10^7$ disintegrations per second) of 12-hour iodine per gram of thyroid tissue delivers 12 3 roentgens per minute If 0 1 mc of 8-day iodine is also present per gram of tissue this will add 0 85 roentgen per minute

As an illustration, we shall estimate the radiation delivered to the thyroid by the 14 millicurie dose given to patient 1 Urinary excretion measurements showed that this patient excreted about 25 per cent of the dose in three days This patient received 14 mc of 12-hour iodine and about one tenth as much 8-day iodine The thyroid was estimated to weigh 40 Gm If all the

TABLE 1.—*Estimation of Roentgen Tissue Dose Due to 12-Hour Radioactive Iodine*

Assumes a maximum of 80 per cent uptake of a dose of 0.3o millicuries per gram of thyroid

| Time Interval $t_1$ and $t_2$ | Fraction of Administered Iodine Retained in Gland (7) R | Fraction of Original 12 Hour Radioactivity Remaining: At Beginning of Time Interval, $F_1$ | At End of Time Interval, $F_2$ | $F_1 - F_2$ | Dose in Interval $D = 4090R(F_1 - F_2)$ | Total Dose in Tissue, Roentgens Due to 12 Hour Iodine |
|---|---|---|---|---|---|---|
| 0 12 hr | 0.80 | 1 00 | 0.52 | 0 48 | 1,780 | 1,780 |
| 12 24 hr | 0.80 | 0.52 | 0.27 | 0.25 | 940 | 2 720 |
| 24 36 hr | 0 78 | 0.27 | 0 14 | 0 13 | 440 | 3,160 |
| 36 48 hr | 0.54 | 0.14 | 0 073 | 0.07 | 180 | 3,340 |
| 48 60 hr | 0 48 | 0 073 | 0 038 | 0 035 | 80 | 3 420 |
| 60 72 hr | 0 43 | 0 038 | 0,020 | 0 018 | 37 | 3 457 |
| 72 84 hr | 0 41 | 0 020 | 0 010 | 0 010 | 19 | 3 476 |
| 84 96 hr | 0.39 | 0 010 | 0 0053 | 0 0053 | 9 | 3 485 |
| 96 108 hr | 0.38 | 0 0053 | 0 0028 | 0 0027 | 5 | 3,490 |
| 108-120 hr | 0.37 | 0 0028 | 0 0014 | 0 0014 | 2 | 3,492 |

administered iodine should be concentrated in the thyroid ($R = 1 00$) the initial dosage rate $A_o$ would be 12 3 (14/40) = 4 30 roentgens per minute from the 12-hour iodine plus 0 85 (14/40) = 0 30 roentgen per minute from the associated 8-day isotope

The constant coefficient of the equation[13] for determining the total roentgen ray dosage due to the 12-hour isotope is $1 44\ TA_o = 1 44 \times 12 6 \times 60 \times 4 30 = 4,680$ roentgens The dosages delivered in each 12-hour interval are given in the last column of table 1 It will be noted that 50 per cent of the total radiation dose from the 12-hour isotope is delivered in the first twelve hours, and 90 per cent is delivered within the first thirty-six hours after administration The tissue dose per hour is mainly due to the 12-hour isotope for the first 2 5 days Thereafter the 8-day isotope adds approximately 2 per cent each day to the total radiation previously delivered by the 12-hour isotope

In the previously treated patients[8] the use of low doses, below 10 mc, was thought by us to explain the lack of improvement in several patients, so it was decided to increase greatly the dose and if possible to

10 Professor John W Irvine Jr and Mrs Elizabeth Pattison carried out these radiochemical procedures

11 A millicurie is 37,000 000 atoms disintegrating per second.

12 Hertz, S Roberts, A Means J H, and Evans, R. D Radioactive Iodine as an Indicator in Thyroid Physiology II Iodine Collection by Normal and Hyperplastic Thyroids in Rabbits, Tr Am. A. Study Goiter, 1939, p 260

13 See full paper available in reprint form.

TABLE 2—*Summary of 22 Cases of Hyperthyroidism Treated Only With Radioactive Iodine*

| | Before Treatment | | | | | Treatment: Radioactive Iodine | | | | Response to Treatment: Last Examination | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case | Age | Sex | Thyroid Size, Estimated in Grams and × Normal | Basal Metabolic Rate Level | Weight Kg | Dose, mc | Date | Excretion † % in 8 Days * in 2 Days | Estimated mc / Gm. | Interval to Normal Basal Metabolic Rate | Basal Metabolic Rate Date | Weight, Kg | Size of Thyroid | Comment |
| 1 E W | 49 | ♂ | 40 2×<br>20 1× | +36 | 58 | 14 mc.<br>21 mc | 5/18/43<br>9/24/43 | 20%<br>100% | 0.85<br>1 00 | 2 mos | +8<br>2/5/46 | 67 | 1 × | See details in case report |
| 2 M M. | 38 | ♀<br>Negro | 120 6×<br>120<br>70 3× | +50 | 47 | 15 mc<br>53 mc.<br>79 mc | 6/ 2/43<br>8/17/43<br>9/29/43 | 30%<br>49% | 0 12<br>0 44<br>1 12 | See fig 1 | +12<br>2/21/46 | 57 | | See details in case report |
| 3 A M | 34 | ♂ | 40 2× | +26 | 67 | 18 mc | 8/24/43 | | 0 45 | 6 wks | —10<br>1/15/46 | 68 | 1 × | X ray treatment in February 1943 while on iodine, no response by October 1943 in myxedema same through 1944 1945 |
| 4 B O L | 52 | ♀ | 60 3× | +47 | 57 | 18 mc<br>22 mc.<br>20 mc | 8/24/43<br>9/ 7/43<br>9/21/43 | 11%<br>10% | 0.27 | 4 mos | +7<br>12/15/45 | 60 | 1 × | B M R normal by December 1943 remained well through 1944 and 1945 |
| 5 H S | 50 | ♀ | 30 2× | +30 | 41 | 20 mc<br>27 mc | 8/24/43<br>11/ 9/43 | 62% | 0 66 | 6 wks | —5<br>9/18/45 | 50 | 1 × | Subtotal thyroidectomy 1930 recurrence 1943 B M. R. normal 11/9/43 gained 10 kg 1 year well through 1945 |
| 6 F B | 50 | ♂ | 55 3× | +46 | 66 | 30 mc<br>20 mc<br>54 mc | 12/ 2/43<br>12/16/43<br>7/ 5/44 | 10%<br>54%<br>83% | 0.54 | 4 wks<br>4 wks | +26 | 70 | 1 × | Very toxic with auricular fibrillation bruit disappeared 6 days after first treatment B M R normal 12/28/43 later had duodenal ulcer and back strain 2/12/46 blood cholesterol 260 mg serum iodine 4 9 micrograms |
| 7 A S | 28 | ♀ | 60 3× | +28 | 61 | 30 mc | 12/28/43 | | 0 50 | 4 wks | +5 | 60 | 1 × | B M R —10 by 1/25/44 last seen 4/3/45 |
| 8 L S | 42 | ♂ | 60 3× | +44 | 56 | 43 mc | 1/19/44 | 18% | 0 71 | 3 mos | +1<br>11/6/45 | 60 | 1 × | See details in case report and chart 2 |
| 9 L Z | 30 | ♀ | 50 2½× | +27 | 48 | 37 mc. | 2/11/44 | 20% | 0 74 | 4 wks | +28<br>10/9/45 | 47 | 1 × | Acute streptococcic tonsillitis 8 days after dose |
| 10 L J | 33 | ♀ | 40 2× | +22 | 44 | 23 mc. | 3/11/44 | 81% | 0.57 | 2 mos | +6<br>1/20/46 | 45 | 1½ × left lobe | Subtotal thyroidectomy 1939 recurrence 1943 thyroid mass larger after dose B M R —3 May 1944 |
| 11 J B I | 50 | ♂ | 60 3×<br>40 2× | +63 | 60 | 38 mc<br>20 mc.<br>48 mc | 5/23/44<br>7/ 8/44<br>5/ 3/45 | 22%<br>38%<br>74% | 0 63<br>1 20 | 3 mos | +11<br>1/15/46 | 60 | 1 × | Biopsy of thyroid while toxic 5/20/44 biopsy of thyroid before third dose showed fibrosis but no sign of cancer |
| 12 H R | 37 | ♀ | 40 2× | +40 | 49 | 27 mc | 8/ 4/44 | | 0.54 | 1 mo | —18<br>11/6/45 | 56 | 1 × | Allergic person well in 4 weeks and in myxedema 3 months after dose see details in case report and chart 3 |
| 13 A J | 35 | ♀ | 60 3× | +50 | 57 | 24 mc<br>20 mc<br>54 mc. | 8/26/44<br>8/28/44<br>10/27/44 | | 0 4<br>0 8 | | +20<br>10/9/45 | 73 | 1 × | Observed one month on bed rest without treatment Improved by November 1944 thyroid normal through 1945 |
| 14 H D | 33 | ♀ | 30 2× | +28 | 69 | 36 mc | 11/ 3/44 | 17% | 1 00 | 2 mos | 0<br>1/29/46 | 72 | 1 × | Subtotal thyroidectomy 1933 nausea vomiting and swollen thyroid after dose |
| 15 J S | 40 | ♀ | 40 2× | +20 | 50 | 45 mc. | 12/ 5/44 | 80%* | 1 12 | 3 wks | —23<br>12/18/45 | 67 | 1½ × | Subtotal thyroidectomy in 1941 recurrence in 1944 rapid response after dose well through 1945 |
| 16 M R | 37 | ♀ | 60 3× | +36 | 60 | 52 mc | 12/ 8/44 | 34%* | 1 00 | 2 wks | — 8<br>4/16/46 | 70 | 1 × | See details in case report and chart 4 |
| 17 K W | 63 | ♀ | 40 2× | +25 | | 40 mc | 12/18/44 | 61%* | 1 00 | 2 mos | —1<br>7/10/45 | | 1 × | Subtotal thyroidectomy 1937 x ray treatment 1943 while on iodine gradual response |
| 18 J P M | 43 | ♀ | 45 2½× | +40 | 72 | 36 mc | 12/28/44 | Acute pyelitis | 0 80 | 6 wks | —17<br>2/5/46 | 90 | 1 × | No response to thiouracil and other treatments severe ophthalmopathy lessened gradually |
| 19 M W | 51 | ♂ | 60 3× | +50 | 56 | 43 mc | 1/10/45 | 73%* | 0 71 | 2 mos | —7<br>1/22/46 | 64 | 1 × | Obvious response in 10 days gained 9 7 Kg in 3 months after dose radiation sickness |
| 20 H O | 49 | ♂ | 60 3× | +52 | 72 | 45 mc<br>40 mc | 2/15/45<br>4/13/45 | 9%<br>100% | 0 75 | 4 mos | +1<br>12/17/45 | 78 | 1 × | Member of goitrous family sensitive to iodine severe radiation sickness effect probably from first dose only |
| 21 M B L | 34 | ♀ | 60 3× | +32 | 61 | 40 mc | 3/ 9/45 | 41% | 0 70 | 5 mos | —13<br>1/29/46 | 63 | 1 × | Long course of medical treatment moderate exophthalmos gradual response in 5 months |
| 22 J J B | 30 | ♂ | 60 3× | +54 | 61 | 44 mc | 3/ 9/45 | 21% | 0 73 | 6 wks | +11<br>2/5/46 | 72 | 2½ × | House staff views with skepticism dramatic response in 4 to 6 weeks |

* Percentage in two days
† Dr Wendell C Peacock made these determinations

discover the amount needed to produce total thyroid inactivity (myxedema) With this in mind the first doses were usually less than 0 5 mc per estimated gram of thyroid tissue Later these were increased to between 0 5 and 1 0 mc of 12-hour iodine per estimated gram of thyroid tissue The average total dose per patient became 40 to 50 mc and the largest single dose given has been 79 mc , which was about 0 8 mc per estimated gram of thyroid tissue

REPORT OF CASES [14]

CASE 1—E W , a man aged 49, a railroad agent who had been thyrotoxic since 1928, had 120 Gm of thyroid removed in the Massachusetts General Hospital in 1930 after an iodine preparation, the postoperative course was stormy because of pulmonary collapse and edema Through 1931, 1932 and 1933 he was moderately toxic despite taking iodine as Lugol s solution, at least 10 drops daily In June and August 1933 he was given roentgen therapy with a daily dose of 200 roentgens measured in air over a 10 cm square field to alternating sides of the neck A total of 800 roentgens was given to each side of the neck in eleven days The voltage used was 200 kilovolts and the filter used was 0 5 mm of copper and 4 0 mm of aluminum On three subsequent days he received another 800 roentgens to the posterior part of the neck The target skin distance was 50 cm Although the mass of tissue decreased in size, there was little decrease in his hyperthyroidism He was not seen again in our clinic for ten years, and then in the spring of 1943 he returned, obviously toxic He said that in 1941 he had been in a veterans' hospital but refused operation On May 11 1943 the basal metabolic rate was plus 36 and it was estimated that he had 40 Gm of recurrent thyroid tissue The eye signs were moderate On May 18 he took 14 mc. of radioactive iodine and excreted in successive twenty-four hour intervals 14 8 2 and 1 per cent for a total of 25 per cent in four days After an initial rise to plus 50 on June 1, the basal metabolic rate declined steadily to minus 12 by July 17 On August 21 the basal metabolic rate was plus 7 and the patient was delighted with the results of treatment He had gained weight the pulse was slower, the diarrhea had stopped, the eyes were almost normal in appearance and the thyroid was definitely smaller in fact, it was difficult to feel any tissue On September 24 a second dose of 20 mc was given This time at least 95 per cent of the dose was excreted in the urine in the three day period suggesting that his thyroid handled iodine like a normal gland [5] Owing to the small retention of radioactive iodine by the gland this second radiation dose was unimportant Throughout the remainder of 1943 he considered himself well and had normal basal metabolic rates In 1944 he was so well that he came to the clinic only twice for tests On Feb 5 1946 he was working regularly as a freight agent and had a basal metabolic rate of plus 8 after driving in 18 miles for the test There were no signs of toxicity and no thyroid tissue was felt

CASE 2—M M a Negro woman aged 38 had a huge symmetrical goiter with a bruit, definite exophthalmos and other signs of severe toxicity In 1934 she had been operated on at the Peter Bent Brigham Hospital for multiple nontoxic adenomas of the thyroid Thereafter she was well until 1939 From then through 1942 the signs of toxicity gradually developed, but no goiter was noticed by her By February 1943 eye signs were first noted by the patient and her doctor In March she was given six diathermy treatments to her neck and immediately after this her neck swelled until a large goiter could be recognized at a distance When first seen by us it was estimated to weigh 120 Gm She had a basal metabolic level of plus 50 and on June 2, 1943 she received the first dose of 15 mc After an increase in the basal metabolic rate to plus 65 the rate fell to plus 20 by June 28 By August 15 the metabolic rate was still elevated and she had shown little response, so she was given a second dose of 53 mc on August 17 Thereafter she was nauseated for twenty-four hours She excreted in successive twenty-four hour intervals 13, 14 and 8 per cent, or a total of 35 per cent. The basal metabolic rate dropped to minus 14 by August 31 She seemed better, and the gland decreased in size However, in the month of September the metabolic rate went up and she was obviously toxic. A third dose of 79 mc was given on September 29 Nausea and also fever upset the patient, but she recovered in three days and began to improve In successive twenty-four hour intervals she excreted 27, 18 and 4 per cent for a total of 49 per cent in three days By November the basal metabolic rate had dropped to minus 13 and she showed clinical evidence of the improvement by a gain in strength and weight and a decrease in the size of the goiter, which had become much firmer—almost hard—and estimated to weigh 45 Gm

Throughout 1944 (chart 1) the patient continued to have normal or low metabolic rates, but the goiter persisted as a hard mass two to three times normal size and definite eye signs persisted Despite the low basal metabolic rates she was judged to be in active disease She was alternating at a job with her goiterous sister when seen on Jan 9 1945 The goiter was just visible, and a 2 cm nodule had developed in the upper right lobe She was then judged to be nontoxic,

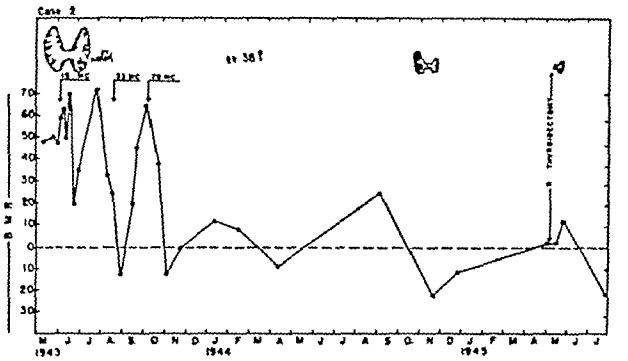



Chart 1 —Course of patient 2 who received three doses of radioactive iodine

with pulse rate 60 and weight 53 9 Kg , a total gain of 6 9 Kg Removal of the right lobe with the nodule was advised and on May 17 she entered the metabolic study wards and first had a tracer dose of 8-day ($I^{131}$) iodine and excreted 37 per cent and 4 per cent in two successive twenty-four hour intervals

On May 19, without specific antithyroid medication Dr Robert Linton removed the right lobe The operation was difficult because of fibrous adhesions and scar tissue Histologic section of this tissue showed a background of dense fibrosis with islands of small follicles lined with cells of increased height and containing little colloid Giant nuclei were present The patient made a rapid recovery and left the hospital on the fifth day after operation On subsequent visits to the clinic she has considered herself well The basal metabolic rate on Feb 21 1946 was plus 12 and she seemed normal

CASE 8—L S a man aged 42 a taxi driver entered the hospital Jan 5 1944 with classic symptoms and signs of moderately severe hyperthyroidism of six months duration. The thyroid was symmetrically enlarged to three times normal, and there was a large bruit The eye signs were minimal The basal metabolic rates were plus 44 to 52 On January 19 he drank 48 cc. of a solution containing 43 mc and that evening experienced nausea and the following day fever to 102 F (oral) With this upset he said that the thyroid increased in size. By January 21 he was much better and the temperature returned to normal Excretion of radioactivity in the first day was 6 per cent second day 7 per cent, third day 3 per cent and fourth day 2 per cent a total of 18 per cent.

14 A summary of the 22 cases is given in table 2 Space does not permit the inclusion of histories of all 22 cases in THE JOURNAL Histories of all cases however will appear in the reprints The following 5 cases have been selected as illustrating significant points in the treatment of hyperthyroidism with high dosage of radioactive iodine Case 1 The first case treated in this series Case 2 A huge goiter that required three doses of radioactive iodine A hard nodule developed that was removed and proved to show fibrosis Case 8 Response to a single dose of radioactive iodine followed by a return to a euthyoid state, Case 12, in which clinical myxedema developed and persisted for over a year Case 16 in which sensitiveness to both thiouracil and iodine was shown with good response later to radioactive iodine

The response of this patient (chart 2) has been very good and at the visit on Nov 11, 1945 his basal metabolic rate was plus 1

CASE 12.—H R, a woman aged 37, a housewife, was admitted to the wards on July 21, 1944 with moderate hyperthyroidism, moderate eye signs and a thyroid that was symmetrically enlarged to two and one-half times normal A bruit was present The basal metabolic rate ranged from plus 30 to 40 Fortu

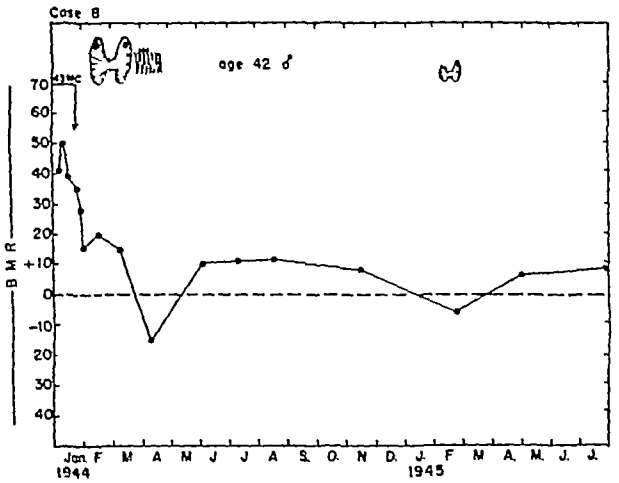



Chart 2.—Response to single dose of radioactive iodine in case 8

nately only one dose of 5 drops of saturated solution of potassium iodide was given on July 28, so on the 4th of August 27 mc of radioactive iodine was given by mouth The patient improved rapidly and by September 5 the thyroid seemed normal the eyes were normal and the metabolic rates were normal Through the autumn she gradually felt cold and sluggish and by November 28 the basal metabolic rate was minus 20 and she was in a state of moderate myxedema No treatment for this was given, but continued observations confirmed this opinion. By Feb 6, 1945 she had gained 8.6 Kg and suffered from the cold Through 1945 she continued to feel sluggish and tired easily, and the basal metabolic rate continued low and the thyroid was not palpable Chart 3 depicts her course She has not taken thyroid

CASE 16.—M R, a woman aged 37, a housewife, was referred to us by Dr R. H Williams of the Boston City Hospital Her favorable response to thiouracil had previously been reported (Williams and Bissell,[15] case 5) but in July and again in November 1944 she developed acute febrile, toxic reactions to thiouracil and thiourea, so another form of treatment became necessary Five drops of saturated solution of potassium iodide twice daily was tried, but this caused an extensive dermatitis with fever, a reaction that lasted about a week

When first seen by us on Dec 5, 1944 she was in active thyrotoxicosis with the basal metabolic rate plus 36 and a diffusely enlarged thyroid without a bruit The eyes showed lid edema slight exophthalmos and lid lag The gland was estimated to be three times normal size (45-60 Gm.) December 8 she swallowed 52 mc of radioactive iodine That night she vomited and noted pressure in the neck Excretion for zero to twenty-four hours was 28 per cent and from twenty-four to forty-eight hours 6 per cent, totaling 34 per cent. On December 19 the basal metabolic rate was minus 2 and she felt much better Subsequently she showed a weight gain and a decline into a myxedematous state, but without medication she returned to low normal basal metabolic rates The thyroid was not palpable Chart 4 best depicts her course.

## COMMENT

These 22 cases represent our three years' experience in treating hyperthyroidism only with large doses of radioactive iodine If we try to summarize the results we can say that as with other methods of treatment, there are good results, surprising effects and some poor results and disappointments Obviously such a small group does not lend itself to statistical analysis Of the 22 patients who originally had goiters at least two to three times the size of a normal thyroid, 21 (all except patient 2) now have no goiter, or a thyroid that is just palpable We can point out that, of 12 patients treated before Aug 15, 1944, 11 are well and show no signs of toxic goiter, the 12th, patient 9, continues mildly thyrotoxic Patient 2 originally had a huge goiter and developed a hard, nodular right lobe that was removed by hemithyroidectomy The histologic appearance of this gland was of fibrosis engulfing scattered acini with high columnar cells No evidence of malignant disease was seen The reduction in the amount of hyperplastic tissue seems to explain the response to treatment However, the remaining thyroid follicles appear to be hyperplastic, so that it seems reasonable to conclude that radioactive iodine does not affect the original stimulus causing hyperthyroidism but acts only to destroy the overfunctioning parenchyma

The basal metabolic curves of 14 patients who received a single dose of radioactive iodine are recorded graphically in chart 5 The rate of response is in reasonable relation to the probable loss of previously formed thyroxin Our composite curves may be compared to the iodine-response curve [16] and the thiouracil-response curve [17] both of which have been interpreted as thyroxin-decay curves The average length of time for the complete response to the radioactive iodine treatment was about seven to eight weeks, which is longer than the time required for the response to iodine or thiouracil

Of the 10 patients treated since Aug 15, 1944,[18] all have made a good response to treatment, although the basal metabolic rate of patient 13 has continued above normal, but the patient has no goiter and insists that she is well By a response to treatment we mean that the patients have felt better, gained weight and had an

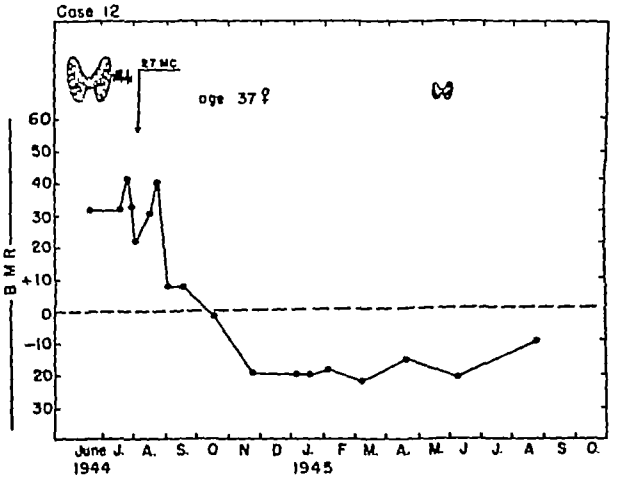



Chart 3.—Course of patient 12 who swallowed a single dose of radioactive iodine and has subsequently continued in myxedema

appreciable decrease in the size of the goiter, a persistent fall in their basal metabolic rate and a diminution in their eye signs Improvement of the eyes has been

15 Williams R H and Bissell G W Thiouracil in the Treatment of Thyrotoxicosis New England J Med 229 97 (July 15) 1943

16 Means, J H and Lerman J The Curves of Thyroxine Decay in Myxedema and of Iodine Response in Thyrotoxicosis Their Similarity and Its Possible Significance, Ann. Int Med 12 811 (Dec.) 1938

17 Rawson R. W Evans, R. D Means J H Peacock, W C Lerman J and Cortell R. E. The Action of Thiouracil on the Thyroid Gland in Graves Disease J. Clin Endocrinol 4 1 (Jan.) 1944

18 Twenty five additional cases in which there has been response to treatment since March 1945 are not included in this report as the follow up period has been too short

least of all these responses Of the 22 patients treated there was only 1 who had severe ophthalmopathy, and we believe that this decreased after the treatment with radioactive iodine Another index of a favorable response has been the observations on the blood lipid fractions before and after treatment Dr F F Foldes [19] made these determinations in 3 cases, in all of which the plasma lipid values increased after treatment, parallel with the clinical improvement

It is of note that 7 of our 22 patients (1, 2, 5, 10, 14, 15 and 17) had been previously operated on for

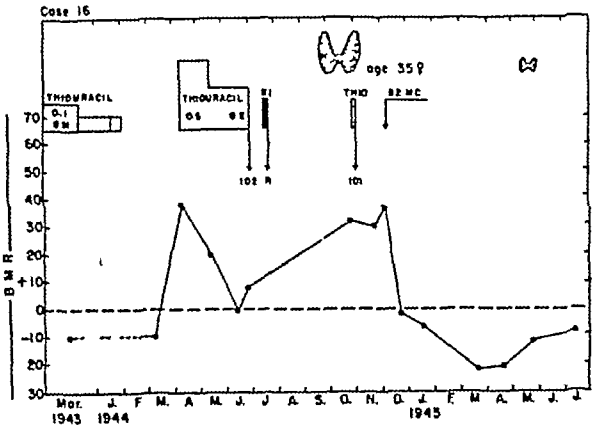



Chart 4—Response of patient 16, a woman who became sensitive to thiouracil and iodine and has responded to a single dose of radioactive iodine

hyperthyroidism and these 7 have responded very well to radioactive iodine treatment Three (1, 3 and 17) of the 22 had received previous roentgen treatment by the usual external application without halting the disorder and yet in each a good result has been obtained with radioactive iodine. One patient, sensitive to both thiouracil and iodine, has had a good response and developed mild myxedema Eight (2, 4, 5, 6, 7, 9, 11 and 13) of the 22 patients had not previously taken iodine, of these 8 patients 3 (2, 11 and 13) had the largest goiters in the entire group and required three doses at intervals of several months to control their thyrotoxicosis The response to this form of radiation seems roughly in inverse proportion to the amount of tissue causing thyrotoxicosis The larger goiters did not respond as quickly as the smaller

The absence of ordinary iodine and yet the adequate response to radioactive iodine support our belief that ordinary iodine by mouth is not needed in conjunction with radioactive iodine therapy However, it seems advisable to withhold ordinary iodine for several weeks before administering radioactive iodine in order to assure maximum uptake by the thyroid of the radioactive iodine The lack of iodine in the gland may be a condition that favors a better response to radiation, possibly this links with the good effects seen from external roentgen treatment in the period before 1924, when iodine treatment became popular We have as yet no comparative experiments demonstrating whether or not ordinary iodine started a few days after the radioactive iodine will hasten the response Such a series is now under observation

In 4 instances (cases 3, 12, 15 and 16) hypothyroidism, or evident myxedema, was produced Although none of these 4 were treated with thyroid, 2 gradually returned to low normal basal metabolic rates The approximate dosage of 1 millicurie per estimated gram of tissue in these 4 cases seems to be high, and yet we have tried this dosage in others without producing myxedema The individual variation in absorption and excretion makes the matter of dosage selection uncertain

Toxic reactions to large doses of radioactive iodine are very much like acute roentgen ray sickness Nausea, vomiting, malaise and even slight increase in gland size and fever occurred and lasted two days at the most, the doses were 48 mc or more in 4 of the 6 patients having radiation sickness No subsequent ill effects or leukopenia have been observed Malignant changes were not observed in the tissue removed in 2 cases, 1 as long as two years after this form of radiation

## SUMMARY AND CONCLUSION

1 In hyperthyroidism orally administered doses of radioactive iodine, carried in about 1 mg or less of ordinary iodine, are concentrated largely in the thyroid gland The beta rays from the radioactive iodine deliver within the thyroid an internal radiation which is physically similar to roentgen radiation The radiation dose in a patient who swallowed 14 millicuries has been calculated as equivalent to approximately 3,490 roentgens, due to the 12-hour isotope

2 Between May 1943 and March 1945, 22 patients having hyperthyroidism were treated with large doses of radioactive iodine No other form of therapy was given

3 Fourteen patients responded well to a single dose of radioactive iodine, 3 were given two doses and 5 were given three doses Myxedema has followed this treatment in 4 patients Two patients after treatment with this agent, though improved, still have mild hyperthyroidism

4 Reactions which resembled roentgen ray sickness were observed in 6 patients following large doses of radioactive iodine Fibrosis of the thyroid has been observed in biopsy of 2 patients after treatment

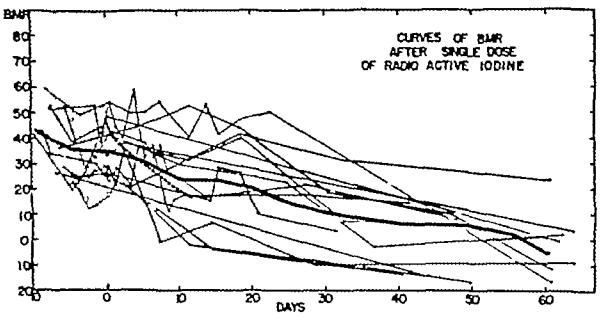



Chart 5—Curves of basal metabolic rate after a single dose of radioactive iodine. The shaded area is before the treatment. The heavy black line is the average of fourteen curves The dotted line is the ordinary iodine response curve of Means

5 Patients who have not responded to other forms of treatment or have been sensitive to iodine or thiouracil have responded well to radioactive iodine Ordinary iodine is not necessary with radioactive iodine treatment

6 We believe that therapy with radioactive iodine can be added to the growing list of medical methods for the control of thyrotoxicosis

266 Beacon Street, Boston 16

19 Foldes F F., and Murphy A. J The Distribution of Cholesterol Cholesterol Ester and Phospholipid P in Red Cells and Plasma of (1) Normal Subjects and (2) in Diseases of the Thyroid to be published Methods Bloor W R J Biol Chem 24 227 1916 24:447 1916 36 33 1918. Fiske C H and Subbarow Yellapragada ibid 66:375 1925

# SURGICAL ASPECTS OF AMEBIC DYSENTERY

LIEUTENANT COMMANDER GUSTAF E. LINDSKOG
and
CAPTAIN WALTMAN WALTERS
Medical Corps, U. S. Naval Reserve

We are reporting 3 cases of amebic hepatic abscess and 1 case of obstructing amebic granuloma of the ileocecal region. These cases were complicated in many respects. Perforation of the abscess to the diaphragmatic region was the first evidence of amebic hepatic disease in 1 of the cases, which was similar to 2 other cases reported by Walters, Watkins, Butt and Marshall.[1] Administration of amebacides, aspiration of the abscess and right hemicolectomy were the successful methods of treatment in the respective cases.

The opinion is still held rather generally, although erroneously, that amebic dysentery is a tropical disease with only sporadic and more or less accidental appearances in the temperate zone. More correctly, it is an endemic disease of all climates and of worldwide distribution. Faust[2] stated that "Endameba histolytica has been found wherever careful coprological surveys have been made on the human population from Saskatchewan, Canada (52° 30′ N.) to the Strait of Magellan (52° S.)." The existence of asymptomatic or convalescent carriers (cyst passers) assures the propagation of the disease by the well known routes of contamination of food and water in which poor hygiene, house flies and cockroaches play a role. The return to the United States of several million overseas veterans from heavily infested regions makes it certain that amebiasis will have an increased incidence in this country in the near future.

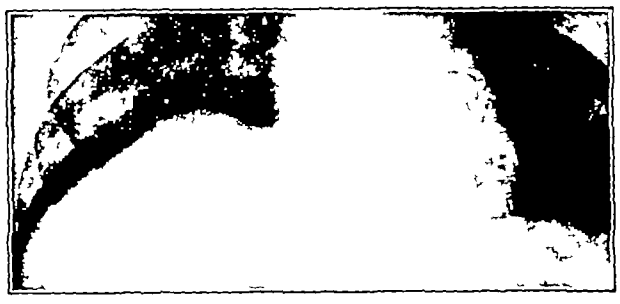


Fig. 1.—Elevation and irregularity of right hemidiaphragm.

Although several surveys of sample populations, by the methods of stool examinations, indicate that from 5 to 10 per cent of our people have Endameba histolytica at some time in their intestines, Faust[2] expressed the belief that "in the population of the United States an average amebiasis incidence as high as 20 per cent may be reached, rather than the accepted figure of 5 to 10 per cent." Craig[3] has estimated that between 6,000,000 and 12,000,000 people in the United States are infected, but Ochsner and DeBakey[4] expressed the belief that a figure of 20,000,000 to 25,000,000 would be more accurate. And, to quote from the latter authors, "the potential number of hepatic complications is approximately one million."

Amebic dysentery is of surgical interest in two ways. First, it simulates more familiar clinical syndromes such as appendicitis, cholecystitis, pancreatitis, perforated peptic ulcer and carcinoma of the colon. Ill advised surgical treatment in the misdiagnosed amebic case, unprepared by specific antiamebic therapy, has been a serious cause of poor results and a high mortality rate, as witness the aftermath of the Chicago epidemic.

Second, the complications of this disease in its original site, the colon (namely, acute perforation with peritonitis, chronic perforation with pericolic abscess, and granuloma) and in its chief metastatic sites (abscess of the liver, lungs and brain) may call for a direct surgical approach in cases in which there is insufficient response to emetine and other amebacides.

Both of these aspects are well illustrated by a report of 4 cases which were observed within a short period at a naval hospital.

## REPORT OF CASES

CASE 1.—*Amebic hepatic abscess treated with emetine, other amebacides and closed aspiration.* A marine corporal aged 25 was admitted with a tentative diagnosis of gastroenteritis on Dec. 11, 1944. Five days before admission he had begun to have nausea and vomiting, followed by flatulence and crampy pain in the epigastrium. Following the onset, his stools became liquid and numbered three to four daily.

The patient had had several episodes of dysentery while on active duty in the South Pacific a year previously but with no specific diagnosis or treatment. He had been under atabrine antimalarial suppressive treatment for the past two and a half years, without previous toxic symptoms.

The temperature on admission was 103 F., the pulse rate 120. The patient appeared acutely ill and undernourished. There was an intense yellow pigmentation, which did not involve the scleras. There was enlargement of the liver with epigastric tenderness. A roentgenogram of the thorax, taken on admission, was reported negative.

The concentration of hemoglobin was 10.0 Gm. per hundred cubic centimeters of blood. Erythrocytes numbered 3,340,000 and leukocytes 16,400 in each cubic millimeter of blood. The percentages of the various types of leukocytes were as follows: neutrophils 80, eosinophils 0. The icterus index was 5.6. The concentration of bilirubin was 0.5 mg. in 100 cc. of serum. A blood smear did not show malarial parasites. Stools were constantly negative for amebas.

On December 15 suppression of the breath sounds and relative dulness were noted at the base of the right lung. The patient was transferred to the surgical wards with a tentative diagnosis of subhepatic abscess.

In view of the history of dysentery, acute fever, chills and enlarged, tender liver, a diagnosis of amebic hepatitis and abscess was made.

Sigmoidoscopy revealed two or three small rectal ulcerations, discrete and punched out, with a surrounding zone of congestion. Administration of 0.06 Gm. of emetine daily was begun December 18. The temperature was normal in four days, and administration of emetine was discontinued in nine days.

Because of a persistent tender mass in the epigastrium, on December 28 a small incision was made in the subxiphoid

From the U. S. Naval Hospital, Philadelphia.

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the United States Navy. The opinions and views set forth in this article are those of the writers and are not to be considered as reflecting the policies of the Navy Department.

At the time this work was done Dr. Lindskog was on leave of absence from Yale University Medical School, New Haven, Conn., and Dr. Walters was on leave of absence from the Mayo Clinic and Mayo Foundation, Rochester, Minn.

1. Walters, Waltman, Watkins, C. H., Butt, H. R., and Marshall, J. M.: Amebic Abscess of the Liver Unsuspected Until Perforation, J. A. M. A. **125**: 963-966 (Aug. 5) 1944.

2. Faust, E. C.: The Prevalence of Amebiasis in the Western Hemisphere, Am. J. Trop. Med. **22**: 93-105 (Jan.) 1942.

3. Craig, C. F.: Amebiasis and Amebic Dysentery, Springfield, Ill., Charles C. Thomas, Publisher, 1934.

4. Ochsner, Alton, and DeBakey, Michael: Amebic Hepatitis and Hepatic Abscess: An Analysis of 181 Cases, with Review of the Literature, Surgery **13**: 460-493 (March), 612-649 (April) 1943. Surgical Consideration of Amebiasis, Collective Review, Internat. Abstr. Surg. **69**: 392-403, 1939, in Surg., Gynec. & Obst., October 1939.

region while the patient was under local anesthesia, 700 cc of buff colored pus was removed by needle aspiration from a mass in the anterior border of the liver On Jan 4, 1945 an additional 50 cc was evacuated Sluggishly motile trophozoites were found on smear On January 3 a second sigmoidoscopy gave negative results Administration of carbarsone was begun

Convalescence was smooth and rapid until January 9, when a temperature of 102 F developed with malaise. The following day the patient had a chill, with a temperature of 104 6 F A malarial smear was positive for Plasmodium vivax The patient was given 5 grams (0 3 Gm) of quinine three times a day for three days, and suppressive treatment by administration of atabrine 0 1 Gm. three times a day was resumed The temperature remained normal during the rest of the period of hospitalization The liver was no longer palpably enlarged or tender

A second ten day course of carbarsone was given beginning January 17, and a seven day course, beginning February 26

On March 27 the concentration of hemoglobin was 13 0 Gm per hundred cubic centimeters of blood Erythrocytes numbered 4 500,000 and leukocytes 10,800 in each cubic millimeter of blood

The patient was given a convalescent leave and returned to duty April 11, 1945 He has since had one recurrence of malaria but no further intestinal symptoms

Case 1 illustrates a number of important points Amebic abscess of the liver may occur many months or many years after the initial colonic infection In about 50 per cent of cases one is not so fortunate as to have a clearcut history of antecedent diarrhea or dysentery and acute colonic symptoms are not usually present[4]

As in this, in about 60 per cent of cases of abscess the stools are negative for amebas on repeated study by the technic of saline catharsis and warm stage examination

While the leukocyte count is typically elevated to 15,000 or 30,000 in each cubic millimeter of blood, it may be normal in cases of chronic abscess with a well developed wall reaction

Emetine and the adjunct drugs may not be curative when amebic hepatitis has progressed to gross abscess formation Yet the effect of the amebacide should be assayed with patience unless rupture seems imminent, such treatment reduces the mortality rate of subsequent surgical treatment from 60 to about 3 per cent and may render any surgical procedure unnecessary

Aspiration of the abscess with a trocar or needle is preferred to external drainage, as simpler and safer, unless (1) the abscess has ruptured intraperitoneally, (2) it is located in the left lobe (about 15 per cent of cases), (3) it is otherwise inaccessible or (4) it has been demonstrated to be contaminated by pyogenic organisms Under such circumstances external drainage may be preferable

The patient may be a simultaneous victim of more than one protozoan parasite, as demonstrated by the concomitant malaria in this case

CASE 2—*(1) Amebic hepatic abscess with diaphragmatic perforation and involvement of respiratory tract (2) evidences of emetine toxemia* A white man aged 35 a warrant officer began to have diarrhea in March 1945, the day after he arrived in the United States after eighteen months' shore duty in Brazil He had three to six loose yellow stools with blood-flecked mucoid particles daily He had lost about 30 pounds (13 6 Kg) during the course of his illness and had noted some postprandial distress and anorexia

On admission May 3 1945, his temperature was 99 8 F, pulse rate 120 and respiratory rate 24 There was slight epigastric tenderness There was mild secondary anemia leukocytes numbered 9,250 in each cubic millimeter of blood Stools were repeatedly negative for ova and parasites The results of roentgenographic examination after a barium enema were reported normal, and sigmoidoscopy showed slight injection of the mucosa but no ulceration A roentgenogram of the thorax on May 9 (fig 1) showed a slight irregular elevation of the medial right hemidiaphragm On May 15 the patient had sudden pain in the right lower portion of the thorax, dyspnea, cyanosis and tachycardia Another roentgenogram showed an elevated right hemidiaphragm and a region of pneumonitis at the right base A diagnosis of hepatic abscess rupturing into the subdiaphragmatic region was made, surgical consultants confirmed the impression of amebiasis and administration of emetine with penicillin was begun on the same day

On May 21 a roentgenogram (fig 2) showed the entire right pulmonary field to be obscured by a homogeneous density with cardiac displacement to the left side Thoracentesis, done cautiously, yielded small amounts of clear sterile fluid which clotted rapidly and did not contain amebas Administration of emetine was discontinued after nine days and administration of carbarsone was begun Although the temperature was nearly normal, a second course of emetine was begun on June 4 because of persistent thoracic signs After the fourth daily dose there was a sudden onset of tachycardia (pulse rate 140), cyanosis and enlarged, tender liver Administration of emetine was discontinued Thereafter the course was smooth The patient was ordered to limited duty on Oct 3, 1945 with no complaints greatly improved in strength and regaining his normal weight rapidly Examination of stools remained negative for amebas

Ochsner and DeBakey stated that in a series of 2,490 reported cases of amebic hepatic abscess pleuropulmonary complications occurred in 15 8 per cent The same incidence occurred in 95 consecutive cases of amebic hepatic abscess admitted to the Charity Hospital and Touro Infirmary, New Orleans

In case 2 the predominance of thoracic signs and symptoms overshadowed the abdominal picture Berne[5] stated that this is true in about 30 per cent of cases The amebic hepatic abscess usually occurs high on the posterior aspect of the right lobe By a process of aseptic necrosis and inflammatory adhesion it may involve the diaphragm and pleura When rupture occurs, it may be directly into the bronchial lumens, less commonly into the pleural cavity Therefore a low lying pneumonitis of uncertain cause should excite suspicion of a subdiaphragmatic lesion

Case 2 emphasizes further that emetine is a toxic alkaloid, a protoplasmic poison with cumulative action and a strong affinity for muscle tissue, this accounts, probably, for the evidence of myocardial failure on the fourth day of the second course and the necessity for discontinuance of the drug

The presence of free pleural fluid of a clear, highly proteinaceous type indicated an impending or walled off rupture of the abscess below A surgical approach through the twelfth rib might have expedited the cure It was contemplated twice, but each time a little improvement postponed it Patience proved to be a virtue in this case

CASE 3—*Obstructing amebic granuloma of ileocecal region not responding to amebacides and treated by right hemicolectomy* In September 1944 a white seaman aged 27 was one of a small group who suffered from typical acute amebic dysentery by infection from a cyst-passing food handler The patient had severe diarrhea lower abdominal cramps and watery stools containing blood streaked mucus and amebas He was treated with emetine and carbarsone and was well in twenty-six days He did not receive enemas of chiniofon or other colonic irrigations

5 Berne C J Diagnosis and Treatment of Amebic Liver Abscess Surg Gynec & Obst **75** 235 238 (Aug) 1942

Three weeks prior to admission on April 19, 1945 he had a recurrence of diarrhea, profuse liquid reddish brown stools and lower abdominal cramps He received a course of 6 grains (0 4 Gm ) of emetine, which caused partial improvement

On admission the concentration of hemoglobin was 12 5 Gm in 100 cc. of blood Erythrocytes numbered 4,470,000 and leukocytes 9,850 in each cubic millimeter of blood Of the leukocytes 4 per cent were eosinophils Stools were negative for amebas until June 2, when a single doubtful positive result was obtained. Physical examination revealed severe tenderness over the course of the colon, particularly in the right lower quadrant. Sigmoidoscopy revealed pin point ulcerations in the rectum

The patient was treated in the gastrointestinal ward with courses of sulfathalidine and carbarsone over a long interval One seven day course of emetine hydrochloride was given in June and a ten day course in August After a temporary improvement he began to show increasing secondary anemia, and a discrete movable tumor mass appeared in the right lower quadrant. Stools were again liquid and numbered three to six daily Roentgenographic studies after administration of barium revealed a constrictive filling defect at the ileocecal junction

On September 12 the patient was transferred to the surgical service and was given a low residue diet and sulfathalidine, with vitamin concentrates On September 21, while he was under continuous spinal anesthesia, right hemicolectomy with side to side anastomosis was performed with the use of silk sutures The terminal ileum and cecum were found to be thickened and edematous, a mass having a diameter of 4 cm was present in the ileocecal junction The regional nodes were hyperplastic

Postoperatively the course was smooth Emetine was given (0 06 Gm ) for seven days and penicillin for eight days The patient was up in a chair the tenth day, and stools were



Fig 2 —Obscuration of right pulmonary field with cardiac displacement to left

reduced to two soft formed ones daily On October 10 the concentration of hemoglobin was 13 0 Gm per hundred cubic centimeters of blood, erythrocytes numbered 4,100,000 and leukocytes 7,100 in each cubic millimeter of blood The subsequent course was excellent

The pathologist described a chronic granuloma of the ileocecal juncture, with small superficial ulcerations in the ascending colon Scrapings of these ulcers did not show definite amebas (fig 3)

Although amebic granulomas are uncommon complications, several cases have been reported Such granulomas are most commonly located in the cecum or the sigmoid They are probably a phase of intercurrent secondary infection which may eventuate in chronic ulcerative colitis With repeated recurrences of the

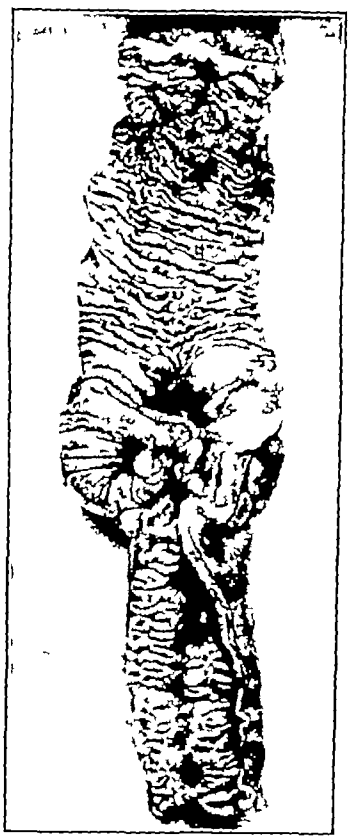


Fig 3 —Chronic amebic granuloma of the ileocecal juncture

infection, destruction of the bowel wall and fibrous tissue replacement occur, producing stenosis Granulomas are frequently multiple, usually amebas are not observed in them They simulate neoplasms strongly both in symptoms and in physical findings [6] They have been known to cause intussusception, obstruction [7] and gross bleeding Their surgical extirpation has in the past been fraught with high risk

An attempt should be made to eliminate a granuloma first by specific chemotherapy, frequently such treatment is unsuccessful Resection must be done with an accurate closed technic, the operation should be preceded and followed by amebacidal therapy The establishment of a colonic stoma is to be avoided among other things, amebic infection of the abdominal wall has been reported

One naturally raises the question as to whether local treatment of the large bowel at the time of first infection might have prevented a recurrence and the late complication in case 3 The experience of British and American physicians in the China-Burma-India campaigns suggests that direct treatment of the bowel by oxyquinoline drugs is necessary after the control of the

6 Donald C J Jr and Brown P W Amebic Granuloma Simulating Carcinoma of the Rectum Proc. Staff Meet Mayo Clin 15: 321 323 (May 22) 1940

7 Likely D S and Lisa J R Granuloma of the Large Intestine Associated with Amebiasis New York State J Med. 42 2322 2323 (Dec 15) 1942

acute phase with emetine[8] Emetine has a remarkable clinical effect on the acute disease but clears the bowel of all parasites in only 15 per cent of cases

CASE 4—*Recurring amebic hepatic abscess responding to administration of emetine and penicillin* A white veteran aged 25, admitted on Aug 18, 1945 with a diagnosis of cholecystitis and empyema of the gallbladder, complained chiefly of pain in the right upper quadrant of the abdomen

He had been discharged from an army hospital in July 1945 after ninety days' hospitalization for a subdiaphragmatic abscess on the right side At that time he had returned recently from the tropics but had not had an antecedent operation or acute abdominal illness Penicillin therapy, aspiration and emetine were followed by resection of the twelfth right rib and drainage of a large hepatic (?) abscess

One week before admission he was discharged from the Army The same day he began to have pain in the epigastrium and right upper quadrant Four days before admission, increasing fever was noted

Physical examination on admission revealed a temperature of 102 F rising to 104, a pulse rate of 92 and a respiratory rate of 28 There was a scar of previous rib resection in the right lower posterior aspect of the thorax, with deep tenderness and slight fulness beneath it Leukocytes numbered 11 700 in each cubic millimeter of blood, with 67 per cent of neutrophils A roentgenogram of the thorax showed an enlarged hepatic shadow an elevated right diaphragm and pneumonitis at the right base Sigmoidoscopy was negative for ulcerations

Administration of penicillin was begun August 19 and of emetine August 21 The temperature was normal on the eighth day and remained so thereafter Tenderness and fulness under the thoracotomy scar disappeared Elevation of the right hemidiaphragm subsided progressively, and aeration at the right base improved The patient was discharged on the twenty-fourth hospital day

In case 4 the diagnosis is certainly not proved, but it is strongly presumptive for amebic abscess, residual or recurrent in the liver This case illustrates one danger of external surgical drainage such as is usually employed for pyogenic abscess An amebic hepatic abscess is almost always sterile to ordinary culture, but it does not remain so after external drainage and the advent of dermal pyogenic contaminants When external drainage becomes necessary great care must be taken that the cavity be closed before the drainage tube is removed The triad of enlarged tender liver, high diaphragm and basilar pneumonitis is illustrated by this case

Combined treatment with penicillin and emetine gave a rapid and excellent result It was felt that the therapeutic test was preferable to surgical reexploration as long as one kept in mind the possible toxic manifestations of the drug employed

SUMMARY

In 3 cases of amebic hepatic abscess and 1 of amebic granuloma of the cecum occurring among personnel of the Army or Navy the use of amebacides, especially emetine, was of great value as a preliminary to aspiration of the abscess in 1 case and in the conservative treatment in 2 cases In 1 of these cases perforation of the abscess through the diaphragm (nonsurgical) to the pleuropulmonary region occurred and in the other a right hepatic abscess recurred after open drainage In 1 case the obstructing amebic granuloma in the ileocecal region was not affected by emetine and right hemicolectomy was performed The result was successful

8 Circular Letter No 24 British Medical Liaison Officer Carlisle Barracks, Pa Oct 17 1945

## LIFE EXPECTANCY IN ANGINA PECTORIS

ROBERT L PARKER, M D
THOMAS J DRY, M D
FREDRICK A WILLIUS, M D
and
ROBERT P GAGE M S
Rochester Minn

In recent years there has been a gradual change in the conception of the prognosis of patients who have angina pectoris As additional follow-up studies are recorded, one may note a favorable lengthening of the average survival period of patients who have this disease[1] No one would wish to contend that the diagnosis of coronary sclerosis with angina pectoris does not carry with it an element of seriousness and insecurity which usually necessitates a decided modification of the patient's manner of living However, there is now reason to believe that the average patient who has angina pectoris may anticipate a longer survival than was thought reasonable to predict a few years ago Investigations of the pathologic characteristics of coronary heart disease have led to an increased appreciation of the amazing extent to which the heart is capable of readjusting itself to pathologic processes involving the coronary blood vessels, even though the natural tendency of these processes may be one of progression

Unless the physician has the unique opportunity of observing personally a group of anginal patients sufficiently large to allow for statistical accuracy and of following their course until all have died, he cannot know the average duration of life in that group Such an analysis is seldom possible Recently, however, White, Bland and Miskall have reported a follow-up study of 497 cases of angina pectoris observed over a period of twenty-three years in which only 52 patients still survived The average duration of the disease for the 445 who died was 7 9 years The average duration of the disease for patients still living was 18 4 years As the mortality rate of the patients still living remains a question, the true figures indicating the mortality rate of the whole group cannot be determined, yet this report no doubt represents the most accurate and complete study made of this type

### METHOD OF STUDY

A follow-up study was conducted on all patients examined at the Mayo Clinic from Jan 1, 1927 to Dec 31, 1936 inclusive for whom a diagnosis of angina pectoris was made Those patients whose records did not contain adequate information as to survival were traced by letter There were 3,440 cases which formed the basis of this statistical analysis The data obtained from these records were analyzed with the assistance of the Division of Biometry and Medical Statistics For the most part the method used in the calculation of survival rates was that employed in actuarial prac-

From the Section on Cardiology (Drs Parker, Dry and Willius) and the Division of Biometry and Medical Statistics (Mr Gage) Mayo Clinic.

1 Herrick, J B and Nuzum F R Angina Pectoris Clinical Experience with 200 Cases J A M A. **70** 67 70 (Jan 12) 1918 Mackenzie James Angina Pectoris London Henry Frowde and Hodder & Stoughton 1923 White P D The Prognosis of Angina Pectoris and of Coronary Thrombosis J A M A **87** 1525 1530 (Nov 6) 1926 White P D and Bland E F A Further Report on the Prognosis of Angina Pectoris and of Coronary Thrombosis A Study of 500 Cases of the Former Condition and of 200 Cases of the Latter, Am Heart J **7**: 1 14 (Oct.) 1931 Eppinger E C and Levine S A. Angina Pectoris Some Clinical Considerations, with Special Reference to Prognosis Arch. Int Med **53**: 120-130 (Jan.) 1934 White, P D Bland E F and Miskall E W The Prognosis of Angina Pectoris A Long Time Follow Up of 497 Cases Including a Note on 75 Additional Cases of Angina Pectoris Decubitus J A. M A **123** 801-804 (Nov 27) 1943

tice[2] This method is governed by mathematical laws which allow computation of the desired data as to survival rates even though a considerable number of the patients falling within the scope of our study were still living at the time the investigation was conducted The data submitted for analysis were under date of Jan 1, 1942, allowing a minimal known survival period of at least five years for those patients still living

Granted that statistical studies of survival in such a condition as coronary sclerosis with angina pectoris do not make available data with which one can predict with accuracy the prognosis in any individual case, such a study as this does give an opportunity to evaluate better what influencing factors contribute toward a favorable or unfavorable prognosis

Information which was available from these records and which seemed pertinent to the determination of survival rates included the duration of symptoms (the anginal syndrome) prior to the time the diagnosis was made at the clinic, the age and sex of the patient, the presence or absence of associated hypertension and its severity, the presence or absence of cardiac hypertrophy, congestive heart failure, data as to the development of previous or subsequent coronary thrombosis with cardiac infarction and the presence or absence of significant electrocardiographic abnormalities

### AGE DISTRIBUTION

The average age of the patients at the time of onset of the anginal syndrome (table 1) was 57 1 years The youngest patient was 22 years and the oldest 92 years of age The average age of women (58 0 years) was slightly greater than that of men (56 9 years) Eighty-eight per cent of the patients were included in the age groups from 40 to 69 years Only 3 6 per cent of all patients were younger than 40 years of age, and 8 per cent were 70 years of age or older

Analysis of the patients' histories indicated that the syndrome of angina pectoris had been present prior to the time of their examination at the clinic for periods varying from a few days to eighteen years The majority of patients had suffered with angina pectoris for a period of two years or less prior to their examination This group included 2,555 patients (74 3 per cent) Ninety-eight patients (2 8 per cent) had had symptoms of angina pectoris for ten years or more prior to the time of examination (A considerable number of patients in this group had been examined at the clinic in years prior to the period of this study [1927 to 1936 inclusive] and the diagnosis of angina pectoris had been made, but these patients were reexamined and the diagnosis was confirmed during the period included in this survey )

TABLE 1—*Age of Patients at Time of Onset of Angina Pectoris According to Sex*

| Age Years | Total Number | Total Per Cent | Males Number | Males Per Cent | Females Number | Females Per Cent |
|---|---|---|---|---|---|---|
| 20-29 | 8 | 0.2 | 7 | 0.2 | 1 | 0.2 |
| 30-39 | 117 | 3 4 | 95 | 3 4 | 22 | 3 4 |
| 40-49 | 646 | 18 8 | 546 | 19 6 | 100 | 15.6 |
| 50-59 | 1 320 | 38.4 | 1 083 | 38.8 | 237 | 36 7 |
| 60-69 | 1 073 | 31.2 | 837 | 30 0 | 236 | 36.5 |
| 70-79 | 266 | 7 7 | 218 | 7.8 | 48 | 7 4 |
| 80-89 | 9 | 0 3 | 7 | 0.2 | 2 | 0 3 |
| 90+ | 1 | * | 1 | * | 0 | 0 |
| Total | 3 440 | 100 | 2 794 | 100 | 646 | 100 |

* Less than 0 1 per cent

### SEX DISTRIBUTION

Table 2 gives the age and sex distribution at the time of our diagnosis of angina pectoris Of the entire group there were 2,794 men and 646 women, giving a ratio of 4 3 1 In comparing the sex distribution by age at the time of examination there does not seem to be any consistency in the ratio of male patients to female patients, the ratios being for the fourth decade 3 2 1, for the fifth decade 6 8 1, for the sixth decade 4 8 1, for the seventh decade 3 5 1 and for the eighth decade 4 3 1 The number of cases in the third and ninth decades is hardly sufficient to allow for statistical evaluation In the fifth decade the male patients represented 16 1 per cent of the total male group and the female patients represented 10 2 per cent of the total female group Considering the general impression of infrequency of occurrence of angina pectoris among women less than 50 years of age, 10 2 per cent may seem amazingly high In all probability details of these cases would reveal evidence of associated vascular disease due to hypertension in a higher percentage of this group which would tend to predispose them to the early development of coronary insufficiency

TABLE 2—*Age of Patients at Time of Diagnosis of Angina Pectoris According to Sex*

| Age Years | Total Number | Total Per Cent | Males Number | Males Per Cent | Females Number | Females Per Cent |
|---|---|---|---|---|---|---|
| 20-29 | 8 | 0 1 | 2 | 0 1 | 1 | 0.2 |
| 30-39 | 59 | 1.7 | 45 | 1 6 | 14 | 2.2 |
| 40-49 | 517 | 15 0 | 451 | 16 1 | 66 | 10.2 |
| 50-59 | 1,220 | 35.5 | 1 008 | 36 1 | 212 | 32.8 |
| 60-69 | 1,254 | 36.5 | 974 | 34.9 | 280 | 43.3 |
| 70-79 | 238 | 10 7 | 229 | 10 7 | 69 | 10 7 |
| 80-89 | 18 | 0 5 | 14 | 0.5 | 4 | 0.6 |
| 90-99 | 1 | * | 1 | * | 0 | 0 |
| Total | 3 440 | 100 | 2 794 | 100 | 646 | 100 |
| Mean age | 59 1 yrs | | 58 8 yrs | | 60.2 yrs | |
| Youngest | 28 yrs | | | | | |
| Oldest | 92 yrs | | | | | |

* Less than 0 1 per cent

In the age groups of 60 years and older there was a total of 46 1 per cent of the total male group as compared with 54 6 per cent of the total female group Although this difference is not great, it does add confirmation to the impression generally accepted that coronary disease in women is likely to become manifest at a later average period of life than in men

### SURVIVAL RATES IN CASES OF ANGINA PECTORIS

In the upper portion of chart 1 are shown the percentages of patients having angina pectoris who survived for the specified numbers of years after onset of the anginal syndrome In the lower portion of chart 1 are shown the percentages of patients who survived for the specified numbers of years after the diagnosis of angina pectoris had been made at the clinic Both curves are compared with the survival curves of normal populations of similar age and sex distribution

These curves clearly show that the survival rate in each instance is much less than that of the normal

2 Berkson Joseph The Calculation of Survival Rates in Walters Waltman Gray H K and Priestley J T Carcinoma and Other Malignant Lesions of the Stomach Philadelphia, W B Saunders Company, 1942 chapter 22 pp 467-484

population It is of particular interest to note that from year to year the rate of survival remains nearly constant The steepest descent in the survival curve, indicating a higher mortality rate, is seen in the first year following the time of diagnosis (lower portion of chart 1) During this year 18 per cent of the patients succumbed or, in other words, there was a survival rate for the first year of 82 per cent In contrast to this figure, during the first year from the time of onset of symptoms of angina pectoris the survival rate was 94 per cent, or the mortality rate was 6 per cent More clearly, perhaps, these figures indicate that, of every hundred patients having angina pectoris at an average age of 57 years, 5 or 6 would succumb during the first year from the time symptoms first developed while 18 patients of each hundred at an average age of 59 years would succumb to the disease during the first year subsequent to the date when they presented themselves at the clinic for examination By the end of the second year after diagnosis we find that of each hundred patients 27 will have succumbed, in comparison to a mortality rate of 4 7 for the average population From year to year thereafter the survival curve indicates a rather constant mortality rate of approximately 10 per cent among the survivors

## SURVIVAL RATES AMONG PATIENTS OF DIFFERENT SEX

That the women who have angina pectoris tend to survive longer than men who have angina pectoris has long been the accepted opinion of most physicians Further confirmation of this opinion is presented in this study In table 3 and the lower part of chart 1 the survival rates of all patients according to sex as compared with the total series and the normal population are presented These survival rates were determined as of the time when the diagnosis of angina pectoris was established by examination at the clinic It is

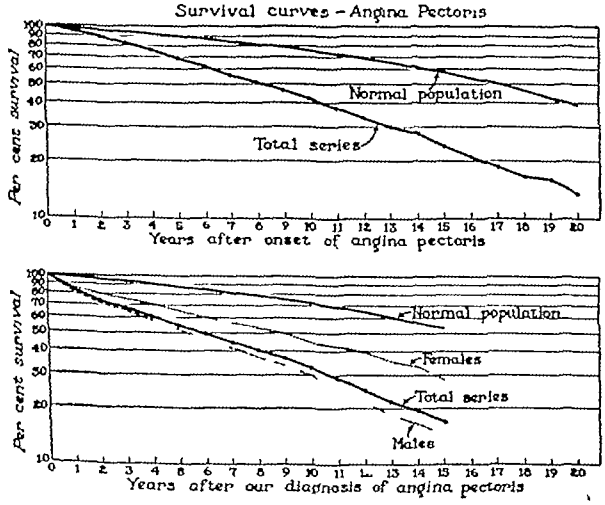



Chart 1 —Survival curves of patients who had angina pectoris and of a normal population of the same age and sex distribution

clearly shown that from the first year through the fifteenth year the survival rate of women who have angina pectoris is consistently and increasingly higher than that of the male group of patients This greater survival rate of women than of men raises many questions regarding the etiology of vascular degenerative changes for which so far no adequate explanation is available

## FIVE YEAR SURVIVAL RATES AMONG PATIENTS OF DIFFERENT AGE GROUPS

In table 4 are presented the five year survival rates according to age of patients at time of examination, based on a review of data for 2 827 traced patients Since only the five year survival rates were desired for comparison at the various age levels the actuarial method of calculation was not employed In such instances a more direct method of computation seems advisable and the table illustrates the method The last column in the table gives the survival rates for each decade after an adjustment has been made for the normal death rate

TABLE 3—*Survival Rates of Patients, According to Sex, Having Angina Pectoris*

| Interval Following Time of Diagnosis at Clinic Years | Last Report Dead | Last Report Living | Total Persons Living at Beginning of Interval | Person Years Exposed | Probability of Dying in Interval | Survival Rate per Cent |
|---|---|---|---|---|---|---|
| | | | Males | | | |
| 0 1 | 456 | | 2 418 | 2,418 | 0 1886 | 100 |
| 1 2 | 226 | 30 | 1 962 | 1 942 5 | 0 1163 | 81 1 |
| 2 3 | 152 | 22 | 1 697 | 1,686 | 0 0902 | 71 7 |
| 3 4 | 171 | 23 | 1 523 | 1,511 5 | 0 1131 | 65 2 |
| 4 5 | 135 | 24 | 1 329 | 1,317 | 0 1025 | 57 9 |
| 5- 6 | 126 | 107 | 1 170 | 1 116 5 | 0 1120 | 51 9 |
| 6- 7 | 83 | 133 | 938 | 871.5 | 0 0952 | 46 1 |
| 7 8 | 74 | 102 | 722 | 671 | 0 1103 | 41 7 |
| 8 9 | 51 | 68 | 546 | 512 | 0 0996 | 37 1 |
| 9-10 | 42 | 64 | 427 | 395 | 0 1063 | 33 4 |
| 10-11 | 43 | 45 | 321 | 298 5 | 0 1441 | 29 9 |
| 11 12 | 34 | 53 | 233 | 206 5 | 0 1646 | 25 6 |
| 12 13 | 18 | 33 | 146 | 129 5 | 0 1390 | 21 4 |
| 13-14 | 9 | 27 | 95 | 81 5 | 0 1104 | 18 4 |
| 14 15 | 6 | 23 | 59 | 47.5 | 0 1263 | 16 4 |
| 15+ | 3 | 27 | 30 | | | 14 3 |
| | | | Females | | | |
| 0- 1 | 82 | | 555 | 555 | 0 1477 | 100 |
| 1 2 | 30 | 8 | 473 | 469 | 0 0640 | 85 2 |
| 2 3 | 27 | 8 | 435 | 431 | 0.0626 | 79 8 |
| 3 4 | 22 | 7 | 400 | 396 5 | 0 0555 | 74 8 |
| 4 5 | 20 | 7 | 371 | 367.5 | 0 0707 | 70 6 |
| 5- 6 | 25 | 28 | 338 | 324 | 0 0772 | 65 6 |
| 6- 7 | 20 | 31 | 285 | 269 5 | 0 0743 | 60 6 |
| 7 8 | 11 | 32 | 234 | 218 | 0 0505 | 56 1 |
| 8 9 | 14 | 24 | 191 | 179 | 0 0782 | 53.2 |
| 9 10 | 13 | 27 | 153 | 139 5 | 0 0932 | 49 1 |
| 10-11 | 5 | 22 | 113 | 102 | 0 0490 | 44.5 |
| 11 12 | 5 | 23 | 86 | 74 5 | 0 0671 | 42 3 |
| 12 13 | 5 | 18 | 58 | 49 | 0 1020 | 39.5 |
| 13 14 | 2 | 9 | 35 | 30 5 | 0 0656 | 35 5 |
| 14 15 | 3 | 7 | 24 | 20 5 | 0 1463 | 33 1 |
| 15+ | 3 | 11 | 14 | | | 28.3 |

Although the calculations were carried out for the groups less than 30 years and for those 80 years of age or more, the paucity of data does not allow a proper interpretation for these age groups The average five year survival rate for the entire group was 53 2 per cent, indicating that of each hundred patients 47 have succumbed before the end of the fifth year from the time the diagnosis was established and 53 patients were known to be alive at the end of this period The survival rates for the fifth and sixth decades were more favorable than for the fourth decade of life If, however, we adjust this survival rate to eliminate the effect of deaths from other causes than angina pectoris, we obtain the information that the rates from the fifth decade to the eighth decade inclusive are more favorable than the rate for the fourth decade We think this finding is of special significance and this must necessarily alter the general interpretation by physicians regarding the favorable influence of youth on the prognosis of patients having coronary sclerosis and angina pectoris It is well known that the mortality rate following acute coronary thrombosis is much lower in the younger age groups than in later decades,

yet it would seem from this survey that the mortality rate of patients having the anginal syndrome in the fourth decade is higher than in the later years of life

It has been our impression that, when coronary heart disease with the anginal syndrome becomes manifest among patients in the fourth decade of life or earlier it is most often precipitated by an acute coronary closure Less often do we obtain a history of gradual progressive anginal distress on exertion among such patients but rather more dramatic incidents indicative of impending, if not already actual, infarction The patient who has the anginal syndrome in the fourth decade of life or earlier is likely to be one who has previously sustained myocardial damage, whereas the older patient is likely to present a history indicative of more gradual development of coronary insufficiency This may to some extent explain our finding of a lowered survival rate among young patients who have angina pectoris

## FACTORS INFLUENCING PROGNOSIS FIVE YEAR SURVIVAL STUDIES

*Cardiac Hypertrophy*.—Regardless of the cause of the cardiac lesion in question—whether it is rheumatic heart disease, congenital heart disease or coronary heart disease—it has long been appreciated that the factor of cardiac hypertrophy plays an important role in the evaluation of the ability of the heart to withstand the effects of such a disease process In this study we established further confirmation of the importance of the finding of cardiac enlargement in influencing the survival rates of patients who had angina pectoris

In table 5 the five year survival rates of patients who had cardiac enlargement as determined both by clinical and by teleoroentgenographic examination are compared with the survival rates of those who did not have cardiac enlargement Again the calculation of the five year survival rates was made by the direct method The five year survival rate of patients who had no

TABLE 4.—*Five Year Survival Rates by Age at Time of Examination of Patients Having Angina Pectoris*

| Age Years | Total Patients* | Traced Patients | Lived Five or More Years Following Diagnosis at Clinic: Number | Lived Five or More Years Following Diagnosis at Clinic: Per Cent of Traced Patients | Survival Rate Adjusted for Normal Death Rate |
|---|---|---|---|---|---|
| 20-29 | 3 | 3 | 2 | 66 7 | 68.5 |
| 30-39 | 59 | 50 | 27 | 54.0 | 56 0 |
| 40-49 | 515 | 432 | 270 | 62 5 | 63 7 |
| 50-59 | 1,202 | 1 014 | 573 | 56.5 | 62.4 |
| 60-69 | 1,239 | 1 009 | 520 | 51 4 | 63 7 |
| 70-79 | 360 | 284 | 101 | 35 6 | 58.8 |
| 80 89 | 17 | 14 | 2 | 14 3 | 45 4 |
| 90+ | 1 | 1 | 1 | | |
| Total | 3,396 | 2,827 | 1,505 | 53.2 | 60 8 |

* Inquiry as of Jan 1 1942 Included here are cases in which the diagnosis was made five or more years prior to the time of inquiry, that is in 1936 or earlier

clinical or roentgenographic evidence of cardiac enlargement was 62 1 per cent, whereas the corresponding rate for those patients who had associated cardiac hypertrophy was only 38 8 per cent

*Hypertension*.—Since the presence of associated hypertension in cases of coronary heart disease is the primary factor in the causation of cardiac hypertrophy, one might well expect that the five year survival rate for patients who had angina pectoris and associated hypertension would be less than that of patients who had angina pectoris without hypertension This we found to be the case The five year survival rate of patients without hypertension was 60 6 per cent as compared with a five year survival rate of 46 1 per cent for patients who had associated hypertension

TABLE 5.—*Five Year Survival Rates of Patients Having Angina Pectoris According to Factors Influencing Prognosis*

| | Total Patients* | Traced Patients | Lived Five or More Years Following Diagnosis at Clinic: Number | Lived Five or More Years Following Diagnosis at Clinic: Per Cent of Traced Patients |
|---|---|---|---|---|
| Cardiac hypertrophy | 1 270 | 1 070 | 417 | 38.8 |
| No cardiac hypertrophy | 2 117 | 1 751 | 1 088 | 62 1 |
| Hypertension | | | | |
| Fundus classification | | | | |
| Normal (without hypertension) | 959 | 781 | 473 | 60 6 |
| Group 1 hypertension | 597 | 499 | 260 | 52.1 |
| Group 2 hypertension | 342 | 279 | 117 | 41.9 |
| Group 3 hypertension | 64 | 55 | 9 | 16 4 |
| Group 4 hypertension | 6 | 4 | 0 | 0 |
| Choroidal sclerosis | 148 | 126 | 53 | 42.1 |
| Previous cardiac infarction | 742 | 640 | 289 | 45.2 |
| Subsequent cardiac infarction | 144 | 140 | 51 | 36.4 |
| Congestive heart failure | 200 | 189 | 31 | 16.4 |

* Inquiry as of Jan 1, 1942 Included here are cases in which the diagnosis was made five or more years prior to the time of inquiry, that is, 1936 or earlier.

It would likewise be anticipated that the severity of the associated hypertension would reflect itself in the survival rates of patients who had angina pectoris For a number of years it has been our policy to classify patients having essential hypertension into groups based primarily on the degree of vascular changes in the retinal arteries as seen on funduscopic examination It may be seen from table 5 that the five year survival rate decreased as the severity of hypertension increased

The importance of the factors of hypertension and cardiac hypertrophy in the determination of the ultimate failure of the heart of the anginal patient has long been appreciated and the foregoing figures tend to emphasize this point further, yet clinical experience shows that the anginal patient without clinical evidence of cardiac hypertrophy or hypertension may succumb to the disease even at an early date after the onset of the anginal syndrome It would seem that the heart laboring under the burden of both hypertension and coronary sclerosis can remain compensated through hypertrophy only as long as the coronary circulation will allow it to maintain a minimal requirement of nutrition

It has been the impression of ophthalmologists that arteriosclerotic changes involving the choroidal arteries as seen on funduscopic examination are a reflection of the degree of arteriosclerotic changes in other systemic arteries, including the coronary arteries The five year survival rate of 126 traced patients in whose eyes an ophthalmologist noted choroidal arteriosclerosis of a significant degree on funduscopic examination was 42 1 per cent The average age of this group of patients who had choroidal arteriosclerosis was 64 years The five year survival rate for all patients in the seventh decade was 51 4 per cent The decrease of the survival rate of patients who have choroidal arteriosclerosis as compared with the rate for all patients of approximately the same age tends to corroborate the impression that choroidal arteriosclerosis reflects advanced systemic arteriosclerosis

Most physicians have obtained a clearer overall picture of the problem of coronary heart disease since the enlightening studies of the pathologic changes of coronary heart disease made by Blumgart Schlesinger and Davis[3] They have come to realize that closure of coronary vessels has already occurred in the majority of patients who present the syndrome of angina pectoris whether or not a critical survey of the patient's history would indicate any one or more episodes which could be interpreted according to classic criteria as acute coronary thrombosis That cardiac infarction may occur in the absence of complete closure of a coronary artery is also known to be true More evidence is accumulating to dispel the previous assumption that coronary disease represents a disease of unrelenting progression Instead, physicians have come to realize that its progression is characterized more often by periods of crisis initiated by sudden partial or complete occlusive episodes and then followed by periods of recession of symptoms associated with revascularization and healing Even though the progression of coronary disease in most cases of angina pectoris is punctuated by episodes of coronary occlusion with or without cardiac infarction and many such episodes go unrecognized clinically, it would seem reasonable to assume that when a person who has angina pectoris has suffered an attack recognized clinically as occlusion with cardiac infarction and has recovered from the acute phase of this illness his probability of survival for a given period would be decreased Of the patients whose examinations indicated that they had sustained previous coronary thrombosis with cardiac infarction the five year survival rate was 45 2 per cent as compared with the average survival rate of 53 2 per cent Of the patients who had sustained a subsequent coronary occlusion the five year survival rate was only 36 4 per cent

*Congestive Heart Failure*—It has been a common assumption that the prognosis is extremely unfavorable in those cases of angina pectoris in which congestive heart failure develops and this assumption is supported by data recorded in this study The five year survival rate for patients who had congestive heart failure at the time of their examination at the clinic was only 16 4 per cent The five year survival rate of patients who had congestive failure, regardless of etiology, is 30 per cent as reported by Dry[4]

*Influence of Abnormal Electrocardiographic Changes on the Survival Rates*—Although one must be constantly aware of the limitations of the electrocardiogram in the diagnosis of coronary disease no one can seriously doubt its importance as a diagnostic aid especially in this field of cardiology Even though certain changes in the electrocardiogram may confirm the clinical impression of the presence of coronary disease, it has been emphasized time and again that these changes do not necessarily constitute a measure of the functioning myocardium and thus do not constitute definite prognostic criteria in the individual case In a study such as this, however, it is of interest to determine the course with regard to the survival of patients with angina pectoris having significant electrocardiographic abnormalities as compared with those who have normal electrocardiograms

The cases were divided into three main groups (1) those in which the electrocardiograms were normal or had only minor abnormalities not considered significant, (2) those with significant T wave negativity or Q wave changes or both[5] and (3) those with significant conduction disorders[6]

The survival curves for these three groups, presented in chart 2, demonstrate a well defined decrease of the survival rates among the patients who had significant electrocardiographic changes in comparison with the group whose tracings were normal

During the first year after diagnosis there was a survival rate of 89 per cent in the group in which the tracings were normal as compared with the group with T wave negativity and Q wave changes in which the survival rate was 76 per cent, and 68 per cent in the group with conduction disorders From the first year on, the survival curves in the groups with positive electrocardiographic changes tend to parallel one another with approximately a consistent decrease of survival rate of about 10 per cent in the group with conduction defects in comparison to the T and Q wave groups

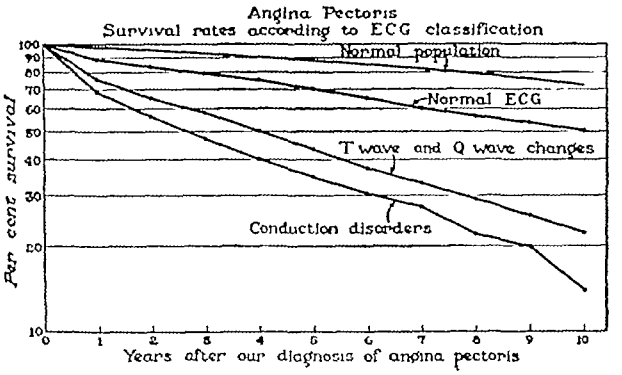



Chart 2.—Survival curves of patients who had angina pectoris classified by their electrocardiographic characteristics

Both these curves diverge at a fairly uniform rate from the survival curve of the normal group At the end of five years 70 per cent of the group who had normal electrocardiograms were living as compared with a survival rate of 43 per cent for the T and Q wave group and of only 35 per cent for the conduction defect group At the end of ten years, of each hundred patients having angina pectoris whose examination disclosed a normal tracing 50 still survived, of 100 patients whose electrocardiograms showed T wave negativity or prolonged $Q_3$ pattern 22 were still alive, but only 14 patients of each hundred who had conduction disorders survived the ten year interval One may reasonably conclude from these survival rates that the finding of positive electrocardiographic changes of the type included in this study is indicative of a much poorer chance of survival than that of the average patient who has angina pectoris

In table 6 are recorded the five year survival rates of patients who had various types of electrocardiographic abnormalities This table is similar to those previously recorded for survival rate by age groups,

3 Blumgart H L. Schlesinger M J and Davis David Studies on the Relation of the Clinical Manifestations of Angina Pectoris Coronary Thrombosis and Myocardial Infarction to the Pathologic Findings with Particular Reference to the Significance of the Collateral Circulation Am Heart J 19:1 91 (Jan) 1940

4 Dry T J Congestive Heart Failure Factors Influencing the Ultimate Prognosis J A M A 118 263 266 (Jan 24) 1942

5 Diphasic or inverted $T_1$ inverted $T_1$ and $T_2$ or inverted $T_1$ T and $T_2$ prolonged $Q_3$.

6 Prolonged auriculoventricular conduction bundle-branch block (concordant, discordant and wide S wave types) complete auriculoventricular dissociation

hypertension groups, cardiac hypertrophy and so forth Included here are only cases in which the diagnosis was made five or more years prior to the time of follow-up inquiry Perhaps the most significant finding in table 6 is the large number of cases in which the electrocardiograms were normal If the group in which left axis deviation was the only electrocardiographic abnormality is combined with the normal group, a total of 1,370 cases, or 40 per cent of the total cases reviewed, had no significant electrocardiographic changes The reasonableness of including those cases with only left axis deviation in the normal group is confirmed when we note that the survival rate in the two groups for the five year interval was almost identical, 69 3 per cent and 69 5 per cent respectively

The five year survival rate for the group of patients having T wave negativity in lead 1 was almost twice as favorable as for the group having T wave negativity in both leads 1 and 2, 42 7 per cent and 22 4 per cent respectively That the five year survival rate in the group having T wave negativity in all three standard leads should be considerably better (38 6 per cent) than the survival rate of those patients having negative $T_1$ and $T_2$ is an unexpected finding provocative of explanation Since no attempt was made, however, in this review to study in detail the types of cases falling into each group, we cannot at this time suggest what other factors may have been present to alter the survival rate in this or any other group recorded here

TABLE 6—*Five Year Survival Rates of Patients Having Angina Pectoris According to Electrocardiographic Classification*

| Results of Electrocardiogram | Total Patients* | Traced Patients | Lived Five or More Years Following Diagnosis at Clinic | |
|---|---|---|---|---|
| | | | Number | Per Cent of Traced Patients |
| Normal | 629 | 483 | 300 | 69 3 |
| Left axis deviation | 841 | 679 | 472 | 69 5 |
| Total | 1 370 | 1 112 | 772 | 69 4 |
| Inverted $T_1$ | 522 | 445 | 190 | 42 7 |
| Inverted $T_1$ 2 | 281 | 228 | 51 | 22 4 |
| Inverted T 3 | 429 | 363 | 174 | 47 9 |
| Inverted $T_1$ 3 | 169 | 140 | 54 | 38 6 |
| Inverted $T_3$ $Q_3$ or $Q_3$ alone | 107 | 136 | 64 | 47 1 |
| Left bundle-branch (concordant) block | 138 | 126 | 39 | 31 0 |
| Left bundle-branch (discordant) block | 114 | 102 | 33 | 32 4 |
| Right bundle-branch block | 6 | 5 | 2 | 40 0 |
| Wide S wave | 28 | 25 | 14 | 56 0 |
| Complete heart block | 4 | 4 | 1 | 25 0 |
| Delayed auriculoventricular conduction | 73 | 67 | 21 | 31 3 |
| Auricular fibrillation | 70 | 57 | 10 | 17 5 |

* Inquiry as of Jan 1 1942. Included here are cases in which the diagnosis was made five or more years prior to the time of inquiry, that is in 1936 or earlier

T wave negativity was the most common significant electrocardiographic abnormality noted and was found in approximately half of the cases It would seem that patients having T wave negativity in leads 2 and 3 and those having a Pardee Q pattern in lead 3 had a slightly more favorable survival record than those having T wave changes in lead 1 or leads 1 and 2

As was previously noted in the determination of the survival curves by the actuarial method, we find in table 6 that in general the five year survival rate of patients having conduction disorders is less than the survival rate of those having T wave negativity However, there is one exception which demands emphasis and that is the relatively favorable five year survival rate (56 per cent) of patients having the wide S wave type of bundle-branch block The corresponding survival rates in left concordant and left discordant bundle-branch block were 31 per cent and 32 per cent respectively This we believe again serves to stress the clinical importance of not confusing the wide S wave type of conduction pattern with other types of bundle-branch block [7]

The lowest five year survival rate (highest mortality rate) of any of the groups listed is found among the patients having auricular fibrillation Of this small group only 17 5 per cent were alive at the end of five years As auricular fibrillation is likely to be a late development in the course of coronary heart disease and is most often associated with congestive heart failure, a low survival rate would have been anticipated for this group

Probably the most significant finding of the electrocardiographic survey included in this study is the large proportion of patients (40 per cent) whose electrocardiograms were within the limits of normal variation at the time a positive diagnosis of angina pectoris was made Studies of survival curves and five year survival rates of traced patients indicate that when significant electrocardiographic abnormalities are found among patients having angina pectoris the survival rates are considerably reduced

## SUMMARY

The survival rates of patients having the anginal syndrome of coronary arterial disease were determined for a group of 3,440 patients examined at the Mayo Clinic over a period of twenty years The data obtained from this study were analyzed critically in the Division of Biometry and Medical Statistics Follow-up letters were sent to all patients when our records did not contain the latest information regarding their status at the time of analysis of the data All survival rates of these patients were compared with the survival rates of a comparable group of the normal population having the same age and sex distribution This control is obviously the necessary yardstick for comparative study

The average age of onset of the anginal syndrome was slightly earlier for men than for women While there was wide variation in age of the patients at the onset of symptoms, 88 per cent of the patients were in the fifth, sixth and seventh decades of life The ratio of men to women was 4 3 1

The highest mortality rate occurred in the first year following the establishment of the diagnosis of coronary arterial disease with angina pectoris Thereafter the yearly mortality rate was less although it continued relentlessly yearly throughout time

The survival rates of women having the anginal syndrome are greater than those of men

When corrected for deaths not due to angina pectoris, the five year survival rate of patients 30 to 39 years of age with the anginal syndrome is definitely shorter than when the disease manifests itself later in life

Such associated conditions as cardiac hypertrophy, well defined hypertension, previous cardiac infarction, congestive heart failure and significant electrocardiographic abnormalities are clearly related to a higher mortality rate and lower survival rates

7 Willius F A Dry T J and Reeser Richard, Jr Life Expectancy in Conductive Disturbances Affecting the Ventricular Complex of the Electrocardiogram I General Considerations of Bundle Branch Block with Concordant and with Discordant Graphs and the Wide S Wave Pattern Based on 1 611 Cases Arch Int Med 67 1008-1026 (May) 1941

# THE SYNDROME OF AIRBLAST CONCUSSION CEREBRAL

COMMANDER ROBERT S SCHWAB (MC), U S N R

In the first world war the syndrome of shell shock was given considerable prominence in the medical literature The symptoms of the condition identified with this diagnosis were supposed to have been produced by the blast effect of nearby exploding shells on the human brain It was thought that the force of the blast transmitted through the air and into the cranial cavity disarranged the cytoarchitecture of the cortex by some sort of molecular disruption and that the brain so damaged produced the clinical signs that were associated with the condition These were extreme irritability, pronounced startle reaction bizarre tremors and automatic movements, some loss of memory, headaches and a decided drop in efficiency The absence of neurologic signs with these symptoms and the total absence of other data that would indicate structural damage to the brain caused many at the time to doubt that these effects were due to the physical energy of the blast The production of these identical symptoms by other factors than nearby explosions such as a violent disruptive death of a companion or some other horrible emotional experience as well as the successful therapy in many of these cases by purely psychiatric procedures finally reduced shell shock to the category of a severe hysteric-anxiety syndrome and the term fell into disrepute

The reviews by Viets [1] in 1917 and the articles by Myers [2] in 1915-1916, Bailey [3] in 1918, Southard [4] in 1917, Mott [5] in 1916 and the final report in the Army Medical Department, volume X,[6] in 1929 cover the problem in World War I and leave the reader definitely with the impression that the majority (95 per cent) of so-called "shell shock" cases showed no evidence of damage or changes in the central nervous system

For example, in the report of the United States Army Medical Department [6] of 1,003 cases of so-called "shell shock" in a neurologic hospital only 10 showed any neurologic signs and were finally kept as brain concussion cases The rest were termed war neuroses and were handled as such

Mott reported some pathologic material found in men killed near explosions Reading of his three papers, which, incidentally, have been misquoted in modern reviews, reveals that his main contention was that a man buried in a deep dugout by a shell blast could die from the carbon monoxide concentration in the enclosed space, and his lesions bear this out He readily concedes that the majority were cases of acute hysteria—often in predisposed vulnerable personalities

In this war as a result of the intensive bombing and greater destructive power and size of the explosives used, the world blast concussion appeared in the medical literature in 1940 It was supposed, as in the first world war, that the effect from these gigantic bomb blasts would result in direct damage to the brain Various articles have been published on this syndrome, and it is an accepted diagnostic term in both our army and our navy

In this war, strangely enough, the same sort of clinical arguments and reports appeared Preliminary and sketchy reports suggested that air blast could damage the human brain, such as the few cases of Abbott and Due [7] in 1943, but the careful, full reviews of Denny-Brown [8] and of Fulton [9] and the experimental work of Zuckerman [10] show that little if any evidence exists for brain damage and that careful microscopic studies fail to show that air blast in the open can harm the human nervous system

Fabing [11] has published a careful report of over 80 cases of this syndrome in which he failed to find organic brain injury His explanation of the symptom complex on Pavlovian terms of overstimulation of the cerebral cortex is a possible way to explain the syndrome

This report deals with clinical observations on some 350 patients seen in the Pacific theater in 1944-1945 who were admitted to naval hospitals with a diagnosis of concussion atmospheric cerebral

The first large group of cases observed were in a naval hospital in the Hawaiian Islands to which over 100 cases bearing this diagnosis were admitted The second group, consisting of 105 cases from Iwo Jima and the third group of 150 cases received during the Okinawan campaign were both seen at Guam A smaller group of some 25 cases from the Bougainville campaign were examined in a hospital in the New Hebrides I saw about a dozen patients with this diagnosis at the Chelsea Naval Hospital in 1943, having received their initial blast effect in the previous year on Guadalcanal

Since all these patients had been exposed to the near blast of either bomb or shell explosions, it might be well at this point to describe the general effect of an air blast in the open and relate some personal observations about it

I had an opportunity for some temporary duty on a heavy cruiser which was engaged in battle practice involving considerable use of 8 inch guns It was possible to be stationed, since this was not a real battle condition, on the wing of the bridge some 20 feet from the 8 inch guns during broadside fire In view of the damage to ear drums from such proximity to these discharges careful application of cotton to the auditory canals was insured The primary objective here was to note the pure blast effect and whether it would produce headache or other uncomfortable sequelae There was no danger, of course, from such a position of being injured by any fragments For the better part of a day and one evening I stood by the guns to observe the effect of these blasts, which, in spite of the cotton in the ears, was exceedingly unpleasant The force of the air wave would push one about and tear open one's shirt. A pair of spectacles were blown off in one

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the U S Navy The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the Navy Department

1 Viets, H R Shell Shock J A M A **59**: 1779 (Nov 24) 1917
2 Myers C S Study of Shell Shock Lancet **1** 316 1915 **1**: 65 (Jan 8) 608 (March 18) 1916
3 Bailey Pearce Shell Shock and Nervousness in Soldiers J A M A **71** 2148 (Dec 28) 1918
4 Southard E E Effect of High Explosives on the Central Nervous System J Ment Hyg **1** 397 (July) 1917
5 Mott, F Effect of High Explosives on the Central Nervous System Lancet **1**: 331 (Feb 12) 441 (Feb 26) 545 (March 11) 1916
6 Ireland M W Medical Department of U S Army in World War Neuropsychiatry Washington D C Government Printing Office 1929 vol. 10 pp 336-345
7 Abbott W D Due F O and Nosik W A Subdural Hematoma and Effusion as Result of Blast Injuries J A M A **121** 664 (Feb 27) 739 (March 6) 1943
8 Denny Brown D The Effect of Blast Injuries Physiol Rev **25**: 296 (April) 1945
9 Fulton J F Blast and Concussion in the Present War New England J Med **226**: 1 (Jan 5) 1946
10 Zuckerman S Experimental Study of Blast Injuries to Lungs, Lancet **2** 219 (Aug 24) 1940
11 Fabing Howard Cerebral Blast Concussion in Soldiers, Arch Neurol & Psychiat to be published

Dr. Hobart Hare Library
53
A. M. C. Medical College

of the blasts The incandescent yellow flash when observed directly in the daytime rendered the eye temporarily blind for thirty to forty seconds When observed once during the night, with the pupils dilated temporary blindness lasted for about four and one-half minutes No headache or any other somatic disturbances were noted The intensity of the blast effect was calculated by an ordnance expert as being about the same as that of a 100 pound bomb or shell exploding at the same distance

As a result of this observation it seemed unreasonable that the pure blast effect would injure the brain in the cases observed The nature of the blast wave is such that in the open atmosphere the compression effect is rapidly dissipated so that a few yards away from the exploding missile the crushing effect of the air pressure has diminished to a degree that prevents it from damaging a structure like the cranium The compressing effects, however, if intense enough, could crush soft organs containing air or fluids One would therefore suppose that, if the brain is damaged by such an effect, there must always be extensive damage to the lungs viscera, blood vessels eyeballs and sinuses The ear drums, *which respond to such pressure readily, would* always be ruptured in such cases Now this is not the case In 90 per cent of these cases seen the ear drums

*Comparison of Findings in Conditions Related to Air Blast Concussion*

| Findings | So Called Air Blast Concussion | Battle Neurosis | Head Injury | True Air Blast Concussion |
|---|---|---|---|---|
| Headache | + | + | + | + |
| Tinnitus | + | + — | + | + |
| Hearing loss | 0 | 0 | 0 | + |
| Focal neurologic signs | 0 | 0 | + | + |
| Spinal fluid abnormality | 0 | 0 | + | + |
| Ruptured ear drums | 0 | 0 | 0 | + |
| Rupture of other viscera | 0 | 0 | 0 | + |
| Retrograde amnesia | 0 | 0 | + | + |
| Pentothal recoverable amnesia | + | + | 0 | 0 |
| Tremors + startle | + | + | 0 | 0 |
| Terror nightmares | + | + | 0 | 0 |

were intact In all but 3 of the cases observed there was no evidence of blast effect in the other organs previously mentioned Furthermore, in the 3 cases just mentioned the blast did not occur in the open but took place in a confining space where the pressure effect could not be dissipated and which therefore might be expected to produce compression effects on the brain The neurologic examinations in all 3 just mentioned were definitely abnormal

On the other hand in well over 300 cases bearing this diagnosis the neurologic examination was within normal limits, indicating no clinical evidence of cerebral damage In a small group of 15 the spinal fluid was under normal pressure, free of red cells or increase in protein In a larger series of 75 not seen by me but reported verbally by Lieutenant Commander Fogel of the U S S *Bountiful* the spinal fluid was normal in all

About 40 per cent of these men complained of a definite period of amnesia lasting anywhere from thirty minutes to thirty hours It is this amnesia which has led many clinicians to the conclusion that there must be cerebral damage present An analysis of this amnesia in this group of cases reveals the following There was no retrograde amnesia in any of the cases Retrograde amnesia is usually found in damage to the brain from skull injury In fact the amnesia usually reported began after the subject had heard the explosion and felt himself pushed down by its effect In all cases in which the amnesia was explored by means of narcosynthesis (pentothal) or hypnosis restoration of the memory was possible

It is interesting to note here that so-called narcosynthesis, described in great detail by Grinker[12] in 1944, was in effect reported in 1916 by Penhallow,[13] the patient being a soldier who lost his speech, sight and memory from a nearby shell explosion on the Western Front in July 1915 In October of that year in a hospital in Paris he was given ether, regained his speech and sight and relived in a loud voice his entire battle experience in a dramatic way before the examiner and filled in completely the three months old amnesia Penhallow reported that the patient was quite well thereafter

This is not considered characteristic of the amnesia found in cerebral damage In many cases the amnesic material presented a serious panic state with complete loss of control, violent fear reactions and surrender to the flight impulse Naturally, in well trained fighting men such behavior produces intense guilt and shame, so intense that unconscious burial by means of amnesia is the only way out In a number of these cases exploration of the amnesia revealed a period of recall that ended shortly after an injection of morphine or barbiturates This medication then produced a natural sleep which could not be further explored and certainly could not be explained by any means as a result of damage to the brain but rather the normal effects of strong sedation Comparison of the findings in true air blast concussion head injury, battle neuroses and so-called air blast concussion is shown in the accompanying table It will be seen from this table that so-called air blast concussion almost parallels that of battle neurosis whereas the true air blast concussion with real cerebral damage is similar to head injury Some examples of illustrative cases will now be described

### REPORT OF CASES

Case 1.—A pharmacist's mate aged 19 was brought into the hospital by airplane with a diagnosis of air blast concussion which occurred twelve hours before on Okinawa He had been in the front lines administering to the wounded for six days There were deprivation of sleep, inadequate food and water intake and extreme fatigue He had been under heavy artillery and mortar fire most of the time His past history was free of neurotic illnesses or previous breakdowns The last thing he remembered was a shell exploding near him, and he woke up in the evacuation airplane four hours later The neurologic examination was negative There was startle, extreme anxiety, tremor of both hands and a tremulous speech Under pentothal narcosis he relived his battle experience readily, and the following is the summary A mortar blast nearby pushed him on top of a patient to whom he was trying to administer plasma and spoiled the procedure He began to shake at the time violently He dragged his patient into a foxhole and was unable to do any more first aid The patient, he believed by that time, was dead A sense of failure overwhelmed him He heard a terrific explosion above the foxhole, and this was the beginning of the amnesia period Under pentothal he remembered crawling out of the foxhole, screaming and crying, and trying to get up on his feet and run toward the aid station He passed 2 other wounded or possibly dead marines during this struggle Another corpsman aided him and put him into a tank or tractor and took him to the dressing station He remembered being given some sedation, being wrapped in a blanket and put into an ambulance He remembered crying and sobbing during the entire ambulance

12 Grinker R R and Spiegel J P War Neuroses in North Africa The Tunisian Campaign (Jan May 1943) New York Josiah Macy Jr Foundation, 1943

13 Penhallow D P Case of a Soldier with Amnesia and Hysteria Boston M & S J 174:131 (Jan 27) 1916

trip to the air field The intense guilt of this man's breakdown occurring at the time when he was thoroughly exhausted would cover the mechanism of the amnesia There is no evidence whatever of damage to his brain, and recovery of the patient took place after three weeks, and he was returned to duty

CASE 2—A marine sergeant, after twelve days in the front lines at Iwo Jima under extremely heavy fighting, was in a trench when a large bomb or torpedo exploded nearby He remembered being covered with black dust and hearing the noise of the explosion An amnesia period lasted for sixteen hours following this Under pentothal he recalled readily that he stayed in the foxhole, afraid to move, with the dust in his nose and mouth He was picked up by a stretcher group and taken back to the beach, which was also under fire On the landing vessel taking him to this ship he opened his eyes to witness the futile efforts of two corpsmen to save a man dying from a horrible wound of the throat in spite of a doctor's attempt to get in a tracheotomy tube The retelling of this part of the episode brought out tremendous agitation, anxiety and hyperventilation The man was much improved after the clearance of his amnesia with rest and sedation and probably was able to go back to noncombat duty after he left the hospital There is certainly no evidence of an organic cerebral lesion here.

CASE 3—A medical officer during an aerial bombardment was walking down the corridor of an LST when a 200 pound bomb exploded in the adjoining passage, spraying an area with fragments 2 feet in front of him He was knocked down and was unconscious for a few minutes He had no recollection of the blast or of the fragments hitting the wall in front of him The last thing he remembered was leaving his cabin to go to his battle station He showed bilaterally ruptured ear drums, loss of hearing, which was partially permanent, bleeding from the nose, moderate bleeding from the lungs, some bleeding from the intestinal tract, bilateral retinal hemorrhages, which cleared up and a definite weak left leg with a Babinski reflex He did not have the startle, tremor and anxiety or other symptoms previously described in the other cases There were a number of red cells in his spinal fluid All these signs except the hearing loss disappeared, and he was able to return to duty three months later This is 1 of the 3 cases in which a true air blast concussion was encountered and occurred in a confined space where air pressure could be built up

CASE 4—A soldier, running across an open space between two hills in the front line, was thrown by a blast of a small mortar shell against a tree, striking his helmet so violently that it produced a large dent in it on the left side. He was dizzy for a minute and had a sharp tingling in his right foot He did not lose consciousness When admitted to the hospital he had a large scalp hematoma, weakness of his right leg, which cleared up in a couple of hours, and persistent left sided headaches which kept him on the sick list for some time and eventually caused his evacuation to the United States This man undoubtedly had a cerebral injury produced by crashing into the tree and not considered as a blast at all

CASE 5—There is a case of reported blast concussion which Lieut Comdr Ira Hardy told me of which an investigation gave the following history A marine sergeant was wounded painfully in the leg but subsequently returned to the firing line on Iwo Jima He was obviously unstrung and stayed in a foxhole, gradually recovering his poise in the bombardment. While standing with his hands on his hip a Japanese 6 inch shell went between his left arm and body, not even cutting his clothes, it failed to explode. The patient uninjured, fell to the ground and had an amnesia for two hours Here we have a pure fright giving all the symptoms with no concussion possible

CASE 6—A second lieutenant marine aged 27, who was brought into the hospital on Guam by air from Iwo Jima, was diagnosed as having blast concussion. When interviewed he stated that he thought the diagnosis was in error and gave the following story He had always been susceptible to seasickness and motion sickness all his life. Outside of that there was no history of any form of nervousness He did well, and there was no trouble until on his transport he was chronically seasick for two and one-half months while the transport was on its way to the invasion He lost 35 pounds (16 Kg) but did not turn in on the sick list. On the landing boat going into the beach he was again violently seasick, and in his mind was the hope of being on firm ground in a few minutes He had no anxiety of the danger of battle. On reaching the beach he stumbled down the ramp and fell on the sand This sensation of being on solid ground and not moving around for the first time in two and one-half months was so delightful that for a moment he lay there enjoying it and then started to get up to join his company At that point two hospital corpsmen grabbed hold of him and put him on a stretcher and carried him back on the boat, which was bouncing on the surf bringing on seasickness Since no physical injury was found, the patient was evacuated by air with the diagnosis of blast concussion, and it was quite obvious that his only complaint was seasickness, so he was returned to his outfit after two weeks' rest and food and continued the remainder of the battle of Iwo Jima without trouble

### CONCLUSION

It is felt that the majority—over 90 per cent of the so-called air blast concussion cases—are extreme hysterical-anxiety states produced in men who have been exhausted or otherwise sensitized to this form of trauma There is no evidence from the observations that I made in these cases of damage to the brain or nervous system A diagnosis of air blast concussion in these cases places the men in a surgical category that is not justified by the facts and deprives them of important prompt psychotherapy It is regetted that no facilities for electroencephalographic recordings were available for this study

---

## TREATMENT OF HEADACHE WITH INTRAVENOUS SODIUM NICOTINATE

JOSEPH W GOLDZIEHER M D
and
GEORGE L. POPKIN M D
New York

The successful use of oral or parenteral nicotinic acid in the treatment of certain special types of cephalalgia, such as migraine, malarial headache or sinus headache, has been reported within recent years Although these studies were very promising they were of necessity limited in scope For this reason it was decided to investigate the effect of sodium nicotinate on a sufficiently large series of headaches regardless of etiology, and to determine if possible what types are suitable for vasodilator therapy

### MATERIALS AND METHODS

In our experiments sodium nicotinate was used except in a few instances in which niacin was substituted[1] The intravenous route of administration was chosen for precision and the decisiveness of the clinical effect, 100 mg of nicotinic acid or its equivalent as the sodium salt was taken as the standard dose because this amount was found adequate to produce a flush in almost every case One hundred consecutive headaches were treated at City Hospital, Welfare Island, over a period of months, an attempt was made to exclude all neurotic or hypersensitive persons for obvious reasons In 13 additional cases an intravenous injection of nicotinamide (100 mg) was given and some of this group received

From the New York City Hospital Welfare Island Department of Hospitals New York 17

1 The sodium nicotinate (Naotin) used in this investigation was supplied through the courtesy of Mr J H Moss of the Drug Products Company, Inc.

the usual intravenous dose of sodium nicotinate twenty to thirty minutes later. Every attempt was made to minimize psychologic factors; often it was possible to give the injection without the patient being aware of the reason for this procedure. With the appearance of flush and other symptoms a number of routine questions were asked, among them whether there was any amelioration of the headache. Subsequently the patient was questioned as to the nature and duration of the original headache, its cause if determinable, any previous history of cephalalgia, and the effects of the nicotinate therapy in detail. Follow-up at six to twelve hours and again at twenty-four hours was possible in nearly every case.

## FINDINGS

The results of therapy in 100 cases are presented in the table.

The following 2 cases will serve to illustrate the rather dramatic effects of intravenous sodium nicotinate.

## REPORT OF CASES

CASE 1.—A. R. had suffered with typical migraine for a number of years. The characteristic family history, the aura and scotomas were all present. Four consecutive attacks, all

*Results of Treatment in 100 Cases*

| Type or Probable Cause of Headache | Number | Complete Relief | Recurrence: As Before | Recurrence: Moderated | Recurrence: Minimal | Failed |
|---|---|---|---|---|---|---|
| Migraine (typical) | 9 | 8 | 1* | | | |
| Spinal tap | 13 | 11 | | | | |
| Air encephalogram | 2 | | | | 2 | |
| Hypertensive | 6 | 5 | | | 1 | |
| Sinus | 4 | 3 | | 1 | | |
| Premenstrual | 2 | 2 | | | | |
| Postoperative | 2 | 1 | | 1 | | |
| Post traumatic | 2 | 1 | | | 1 | |
| Hangover | 1 | | | 1 | | |
| Meningitis (syphilitic) | 1 | | | | | 1 |
| Endocarditis (embolic) | 1 | | | | | 1 |
| Idiopathic | 67 | 42 | 8 | 6 | 5 | 1 |
| Total | 100 | 75 | 4 | 9 | 9 | 3 |

* See text.

severe, were treated at various intervals after onset with sodium nicotinate intravenously. In each instance there was a prompt flush and with it complete disappearance of the migraine. There was no recurrence. On a fifth occasion this patient had cephalalgia not of the migraine type but presumably due to overwork and weariness. In this instance also an intravenous injection relieved the headache in less than one minute. Subsequent to these injections the patient was given definitive therapy for his migraine with excellent results.

CASE 2.—A young Negro was undergoing diagnostic air encephalography. After 20 cc. of air had been injected into the spinal canal in the usual way a headache developed so severe that the patient refused to cooperate further and threatened to discontinue the procedure by main force. With the patient still in position, 100 mg. of niacin was injected intravenously. The headache disappeared entirely while the needle was still in the vein, and encephalography was completed uneventfully. On the following day the patient awakened with a slight "soreness" of the head but this was of such a mild nature as to require no further medication.

## COMMENT

1. *Reaction to Injection.*—In the average case from thirty to forty-five seconds elapsed before the patient was aware of any effects. Questioning revealed that in the majority of cases a sensation of heat in the genitalia was the first sign noted. Immediately thereafter a throbbing in the vertex or burning of the head and neck with concomitant flushing appeared. Together with the heat there was commonly a feeling of restlessness and oppression, in some females apprehension could be observed for a few moments. As the effect reached its maximum there appeared paresthesias such as itching or pins and needles. Within three or four minutes the patient, though not comfortable, became accustomed to the heat, which gradually subsided in about fifteen minutes and usually disappeared in twenty minutes to a half hour. In 2 cases mild abdominal cramps were observed. In 1 case (with a suspected pathologic condition of the stomach) vomiting occurred, and 1 patient who had migraine vomited forty-five minutes after the injection, whereupon the headache recurred. Considering the time interval it is not certain that the sodium nicotinate was responsible for the vomiting in this instance. By far the greatest number of patients were immensely relieved by the therapy despite its manifest discomforts, and many repeatedly sought the "heat treatment" for subsequent headaches. A minority—invariably those with headaches of lesser severity—objected to the treatment and a few said that the treatment was worse than the headache. Certain patients showed a greater response to the standard dose than did the average individual. On the other hand, some showed little or no response to the injection and in these relief was not obtained. The blood pressure was followed in approximately 30 patients but no significant or consistent changes were noticed and this procedure was discontinued.

2. *Results.*—The individual groups that have been tabulated are in general far too small to permit statistical conclusions. The excellent results obtained in the treatment of migraine both as to rapidity and as to duration of effect require little comment. In every case complete relief was obtained within two minutes, the nature of the single recurrence has been discussed elsewhere. The rarity of side reactions is of interest in comparison to the customary use of ergotamine tartrate in migraine. In the treatment of headache following spinal tap, sodium nicotinate has given better results than the drugs commonly employed. In all 13 cases complete relief was obtained within a few minutes. No recurrence of the headache appeared in any instance. In 2 cases there was minor "soreness" of the head on the following day. In 1 case, for purely experimental purposes, an injection of 100 mg. (not included in the table) was given twenty-four hours after the first injection, with relief of the soreness. Hypertensive patients required larger doses to produce adequate flush, this is most probably coincidental. The results were not as dramatic as usual in 3 of these cases, and in 1 there was a recurrence of moderate intensity. With the presence of organic meningeal involvement (as in syphilitic meningitis) it is not to be expected that a vasodilator would be particularly effective, our findings bear this out. Of the group of idiopathic headaches 74 per cent were completely relieved. There was 1 total failure, in 3 the headache recurred unmodified shortly after treatment, and in 6 more benefit was of short duration.

3. *Controls.*—For purposes of control, injections of 100 mg. of nicotinamide were utilized in 13 cases. One patient with an idiopathic headache stated that he felt somewhat relieved, 2 patients believed that there was possibly some improvement, 10 noted no change. In 5 of this group a second injection of sodium nicotinate

was given subsequently The patient who had experienced some relief from the amide developed a good flush but his headache did not change further The headache of the other 4 patients disappeared completely without recurrence There is no doubt, however, that even with every precaution there is a certain psychogenic factor involved in treating a complaint as subjective as headache with intravenous injections

### SUMMARY AND CONCLUSIONS

1 The effect of intravenous sodium nicotinate was studied in 100 consecutive patients with severe headache Seventy-five were completely relieved

2 The relief of headache appears to be correlated with the degree of peripheral flush

3 Intravenous sodium nicotinate is recommended in the symptomatic treatment of (*a*) severe idiopathic headache, (*b*) migraine and (*c*) postspinal tap cephalalgia

## Clinical Notes, Suggestions and New Instruments

### FRONTAL OSTEOMYELITIS WITH SUBDURAL ABSCESS AND HEMIPLEGIA AFTER FRONTAL SINUSITIS

A A CIRILLO M D
Jamaica, N Y

A case of acute frontal osteomyelitis with subdural abscess was reported as cured by A R. Dingley[1] He concluded that it is uncommon for a subdural abscess to be the sole intracranial complication of an acute frontal osteomyelitis Dr J Lewis Dill[2] reported that one is impressed with the rarity of osteomyelitis of the frontal bone especially after perusal of the recent literature A E Bulson Jr[3] was able to find only 55 cases in a complete review of the literature for the thirty years previous to 1925 Furstenberg[4] found a total of 73 cases of osteomyelitis of the cranial vault up to that date He reported 14 cases which he himself had observed at the University Hospital In this group there were 8 recoveries and 6 deaths Gustave B Fred,[5] in a review of 40 cases of acute fulminating osteomyelitis of the frontal bone occurring in the wards of the Massachusetts Eye and Ear Infirmary during ten years, noted that it complicated acute frontal sinusitis and frequently followed swimming and diving and was marked by profound toxicity Its earliest and most characteristic sign is pitting doughy edema of the forehead The disease is often fatal, usually terminating in brain abscess or meningitis

#### REPORT OF CASE

L L., a woman aged 28, single, admitted to the Mary Immaculate Hospital on May 16, 1945 with the diagnosis of osteomyelitis of the frontal bone ruptured ethmoid and frontal sinus and pansinusitis stated that the illness started with a 'small blind pimple," which she picked The next day she noticed swelling and complained of headache. She treated the eye swelling with warm applications The swelling of the eyes and the face subsided She was up and about and felt well She was seen on May 15 by Dr T J Adams Her temperature was 101 F She complained of a headache and pains over the eyes At this time she was given sulfadiazine 1 Gm every four hours The temperature was up to 103 F the next day She was semicomatose, and a pitting doughy edema of the forehead was noted between the eyes

A history of massive nasal polypi for the past ten years was obtained with recurrence since an operation Polypi filled the entire nasal cavity The patient had poliomyelitis in 1936 but developed no paralysis She had no other illness Her mother and father were living and well

The head showed a pitting doughy edema between the eyes, which was tender and soft The pupils were equal and reacted normally to light The tongue was moist and was coated The nose was filled with numerous polypi, varying in size from a pea to a hickory nut Both nares were involved and some seemed to extend from the ethmoidal region The forehead showed tenderness on pressure over both inner canthi

The heart rate was 100 and regular with good tone No murmurs were present Her chest was clear and resonant except for some fine rales at both bases The abdomen was soft and not tender On May 16 Dr Adams found her comatose stuporous and irrational

On this day I found the patient stuporous, with a temperature of 102 F, pulse rate 88 and respiratory rate 21 My tentative diagnosis was an acute osteomyelitis of the frontal bone and ruptured ethmoid and frontal sinuses in addition to a pansinusitis Immediate surgical intervention was urged An x-ray was taken, and the film showed a pansinusitis with a clouding throughout There was considerable obliteration of the supraorbital ridge on the right side, just below the frontal sinus On the left side there was a similar process but to a lesser degree

Dr D S Cunning saw the patient on May 16 at 5 30 p m and felt that a cavernous sinus thrombosis should be ruled out in view of the history of 'picking a pimple" On the same day a radical frontal Killian bilateral sinusotomy was done by Dr Cunning and myself An incision was made over the supraorbital ridge down to the bone extending over the bridge of the nose to the opposite supraorbital ridge. Both eyes were pushed downward Immediately on retracting the skin we noted an area of necrosis with an opening about the size of a 50 cent piece (30 mm) in the frontal bone over the nasal bridge There exuded free pus throughout Both frontal cavities were filled with polypi and free pus An area of the overlying dura of the brain in the region of both frontal lobe tips was exposed and this showed injection This dura was not disturbed Necrotic bone was thoroughly cleaned away until healthy bone was exposed on both sides The sinus cavities were well cleaned of debris and necrotic bone and the wound was left open Numerous polypi were removed from both nares to favor drainage. Owing to the extensive osteomyelitis it was thought better to permit free drainage consequently no suturing of any kind was attempted Sulfathiazole and sulfanilamide powder were placed in the wound A dressing was applied

A spinal tap done at this time showed the fluid to be clear, under no excessive pressure, with no evidence of cloudiness

Laboratory examination on May 16 revealed that the spinal fluid showed no growth on culture The pus from the bone and sinus showed Staphylococcus albus and a nonhemolytic streptococcus The urine showed no abnormality but the blood showed 3,430 000 red cells, hemoglobin 70 per cent, leukocytes 12 450, 88 per cent polymorphonuclears and 12 per cent lymphocytes

On May 16 20,000 units of penicillin every three hours and 1 000 cc of 5 per cent glucose in isotonic solution of sodium chloride were given slowly intravenously with 75 Gm of sulfadiazine in the form of a 5 per cent solution

When the dressing was changed on May 18 the left arm and left leg showed a hemiplegia Dr Jefferson Browder noted on this day that the patient had had evidence of frontal osteomyelitis for many months, also polypi and pansinusitis for several years The first evidence of intracranial invasion came on May 16, when she became drowsy and later stuporous The frontal sinus opened that night and the patient became more alert the next morning During the afternoon of May 17, weakness of the extremities on the left side was noted Since then the patient had been stuporous but not entirely out of contact with her surroundings She was more drowsy than on the day before but not quite as drowsy as she was on entering the hospital Mild blurring of the nasal border of the nerve head was seen The neck was moderately rigid The abdominal

1 Dingley, A R Acute Frontal Osteomyelitis with Subdural Abscess J Laryng & Otol 57 450-453 (Oct ) 1942
2 Dill, J L. Osteomyelitis of the Frontal Bone Laryngoscope 52 267 274 (April) 1942
3 Bulson, A E. Jr Osteomyelitis of the Frontal Bone as a Complication of Frontal Sinusitis J A M A 86: 246-250 (Jan 23) 1926
4 Furstenberg A H Osteomyelitis of Skull, Osteogenetic Processes in Repair of Cranial Defects Ann Otol Rhin & Laryng 40 996-1012 (Dec.) 1941
5 Fred, G B Acute Fulminating Osteomyelitis of Frontal Bone Review and Prediction Ann Otol Rhin & Laryng 51 638-647 (Sept ) 1942

reflexes were not elicited Paralysis of the left upper and paresis of the left lower extremities were present A bilateral Babinski was demonstrable Deep reflexes were exaggerated on the left side It was three days now since onset of evidence of intracranial invasion, possibly a suppurative encephalitis with cerebral cortical thrombophlebitis The chances for a well



Fig 1—Appearance of patient on June 4 1945 eighteen days after bilateral radical frontal operation twelve days after trephine drainage of subdural abscess and four days after secondary reopening of wound and reestablishment of drainage through previously closed trephine wound

walled off collection of pus were not very good Dr Browder advised caffeine with sodium benzoate 3¾ grains (0 25 Gm) every four hours for six to eight doses, 500 cc of blood, continued chemotherapy and penicillin, with use of the stomach tube, 2 500 cc. of fluids being given every twenty-four hours

After the first dose of caffeine the patient went into a convulsion and the caffeine medication was stopped A suction machine was required beside the patient s bed with oxygen at all times because the mucus would accumulate and embarrass her respiration The patient was still stuporous and the prognosis was obviously grave She became gradually worse and on May 21 Dr Frank Mazzola attending physician in medicine, was also of the opinion that intracranial suppuration existed, and surgical intervention was indicated to rule out a subdural abscess pressing on the motor area and causing the hemiplegia

With this in mind Dr Browder was again called and on May 22 at 9 p m a frontal trephine of the skull was done posterior to the original site, through apparently healthy bone. The scalp and the right frontal region were shaved just above the right eye for an area of about 2 inches A 3 inch vertical incision was made through the scalp, extending down to the skull The scalp was retracted and the bleeding checked. The bone was entered with a Hudson burr, and as the burr went into this area of bone considerable free pus exuded At first it was thought that it came from the dura but this was later noted to be due to an osteomyelitis of the skull When the burr reached the dura, the dura was found red but no bulging was present A rongeur was used to widen the bone opening toward the region of the orbit The dura was opened with a knife. There was an immediate gush of about 12 ounces (350 cc.) of thick creamy pus, a culture of which was taken and found to be sterile Saline solution was used to irrigate the subdural cavity When suction was again applied, more pus appeared The region of the frontal lobe of the brain and the lateral wall and posterior wall of this subdural area was explored There was noted a whitish membrane in this zone of the brain as far as could be visualized The electric cautery was used for the dural edges and the scalp was closed with silk Before so doing 100,000 units of penicillin was injected into this cavity Dr Browder noted that the policy of closing a cavity of this type with penicillin injected into it had been used successfully by him at Kings County Hospital I deferred to Dr Browder's wider experience and injected the penicillin, and the wound was closed

Twenty thousand units of penicillin was given intramuscularly every three hours every day from May 16 in addition to the local injection of 50,000 units of penicillin daily into the dural cavity and the frontal sinuses until May 30 As of this date the patient received a total of 3,575,000 units of penicillin by injection into the subdural space, muscle and subcutaneously

On the morning of May 30 I came to the hospital and dressed the patient's wound and observed that she was obviously very sick I then left for the street. A subconscious thought directed me back to the bedside of the patient I removed the dressing and with a pair of scissors and scalpel and without anesthesia I opened the previously closed trephine wound Immediately there was a discharge of ½ ounce (15 cc) of dark colored blood and pus Massive doses of penicillin were started For example, 200,000 units of penicillin was injected into the buttocks, 100,000 units into the dural cavity and 100,000 units into the sinus cavity

The next day when the wound was dressed the patient showed so much improvement that she was able to speak coherently



Fig 2—Appearance of patient four months after discharge

and the left sided hemiplegia started to improve The massive doses of penicillin were continued until June 12 The dose was then diminished to 40,000 units daily with an injection confined to the local sinus cavity As noted, the patient received 3,575,000 units of penicillin up to May 30 Then the massive dosage was started and continued to June 13 The total amount for the

latter period was 7,260,000 units The dosage was then cut in a gradual fashion so that a total of 600,000 units was administered from June 13 to the time of discharge A total of 11,435,000 units of penicillin was administered to the patient

On June 1 her general condition was very much improved Her temperature was normal, the pulse regular and of good strong quality and her breathing normal From June 2 to June 10 her condition was obviously improving An x-ray revealed no progressive osteomyelitis The bony margins of the operative sites were well defined and sharp, indicating that the osteomyelitis had arrested itself The superior ridge of the left orbit was likewise sharper and more distinct, indicating a similar arrest The dose of penicillin was decreased and on June 27 she was discharged with the final diagnosis of record of an acute frontal osteomyelitis, ruptured ethmoid and frontal sinuses, subdural brain abscess and left sided hemiplegia

The urine showed 3 plus albumin at the height of the infection, and this rapidly diminished to give negative findings

A leukocytosis of 12,450 increased to 16 450 on May 28, confirmed at 17,150 the next day A dramatic drop to 7,400 occurred on the day following the secondary opening of the trephine site on June 2

Dr Browder saw the patient on June 26 and noted that the patient was well oriented, fully cooperative and intellectually seemed normal The midpart of the right frontal surgical scar bulged slightly The scar of the supraorbital region (sinus operation) was healing The right optic nerve head was still blurred but the left had almost completely cleared There was a complete left hemianopsia and also a slight paresis of the left side involving the face and the upper and lower extremities Babinski's sign was not present, nor were the abdominal reflexes altered

On June 26 an examination by Dr W G Frey revealed that the patient was complaining of diplopia, which was diminishing The diplopia was due to a 10 prism diopter degree of right hyperphoria which she overcame quite easily It was his impression that this would gradually diminish

At present the patient has no paralysis and no complaints and the accompanying photographs during convalescence and recovery demonstrate the changing status

### COMMENT

The patient is indeed fortunate if the localizing type of lesion occurs and a diagnosis is established already One of the cardinal signs in the diagnosis is pitting doughy edema of the forehead It is the first and the most reliable sign of osteomyelitis of the frontal bone

Dr Fred divided the 40 cases admitted to the Massachusetts Eye and Ear Infirmary between 1931 and 1941 into two five year groups From 1931 to 1936 there were 12 patients, of whom 6 died, a mortality of 50 per cent From 1936 to 1941 there were 28 patients with 6 deaths a mortality of 21 4 per cent The mortality for the 40 patients was 30 per cent The mortality of 50 per cent in the first five year group was due, Dr Fred feels, to the delayed and inadequate surgery The mortality 21 4 per cent in the latter five year period was due to early radical removal of the entire frontal bone in most of the operative cases Dr Fred noted that all patients with osteomyelitis of the anterior wall of the frontal sinus recovered In Dr Fred's cases only 1 case of subdural abscess as the sole complication of acute frontal osteomyelitis was found.

The subdural localization seems to originate as a result of direct extension from the suppurative osteomyelitis and may be favored by a more pronounced fixation of the dura to the underlying bone.

The involvement of the bone seems to occur by direct extension from the frontal sinus after necrosis of the mucous membrane has taken place The general pathology of osteomyelitis as it occurs in a flat bone seems to apply in its localization in the cortical layers and diploe of the frontal bone.

### CONCLUSION

The inadequacy of chemotherapy and penicillin therapy seems to be borne out by the course this particular case pursued. The importance of adequate surgical measures, to include wide removal of involved bone, and adequate drainage is apparent

89-21 153d Street.

## GASTROSCOPY IN ACUTE AND CHRONIC HEPATITIS

LIEUTENANT COLONEL JOSEPH BANK
*and*
CAPTAIN CHARLES H DIXON
Medical Corps Army of the United States

Recently in THE JOURNAL there appeared a report on gastroscopic observations of patients with infectious hepatitis [1]

During the past two and one-half years we had occasion to employ gastroscopy in the course of diagnostic studies of some cases of chronic hepatitis because of gastric symptoms For comparison, a number of cases of acute hepatitis were examined A total of 43 cases of acute and chronic hepatitis were thus examined by gastroscopy There were 23 cases of acute hepatitis and 20 of chronic hepatitis In no case did gastric symptoms exist prior to the onset of hepatitis X-ray examinations of stomach, duodenum and gallbladder were negative in all

### ACUTE HEPATITIS

The acute cases were diagnosed on the basis of characteristic clinical picture, enlarged and tender liver and jaundice. In the chronic cases there was obtained a history of previous attacks of acute hepatitis with persistent or recurrent symptoms of hepatitis, enlargement and tenderness of the liver and in some cases positive liver function studies Gastroscopies were done at various stages of the disease In the acute hepatitis group of 23 cases there were 18 of the infectious hepatitis type, and 5 followed the administration of blood plasma within three to four months The duration of hepatitis at the time

TABLE 1.—*Duration of Hepatitis in Twenty-Three Acute Cases*

| 1 7 Days | 8-21 Days | 21 30 Days | 2 Mos | 3 Mos | 4 Mos | 5 Mos |
|---|---|---|---|---|---|---|
| 5 | 3 | 10 | 1 | 1 | 1 | 2 |

TABLE 2.—*Duration of Hepatitis in Twenty Chronic Cases*

| 7 Mos | 1 Year | 2 Years | 2½ Years | 3 Years | 7 Years |
|---|---|---|---|---|---|
| 1 | 6 | 5 | 2 | 5 | 1 |

of gastroscopy varied from two days to five months (table 1) Jaundice and elevated serum bilirubin were present in all but 5 of the patients at the time of examination Digestive symptoms, liver enlargement and tenderness were present in all cases The cephalin flocculation was 3 or 4 plus in 14 cases, 2 plus in 5 cases and negative in 4 cases Other liver function studies done at the time of gastroscopy, including hippuric acid, qualitative urobilinogen and albumin-globulin determination, were within normal limits Gastroscopy was within normal limits in all but 2 cases These 2 showed moderate superficial erosions of the body of stomach which were not considered sufficiently significant to account for the patients' symptoms

### CHRONIC HEPATITIS

Gastroscopy was done in 20 cases of chronic hepatitis Thirteen cases followed acute infectious hepatitis, and 7 were postvaccinal The duration since the initial jaundice varied from seven months to three years (table 2) While many of the patients had previous episodes of recurrent jaundice, only 2 had evidence of jaundice at the time of gastroscopy In these 2 the icterus index was in the upper limits of normal Fifteen of the patients had symptoms of hepatitis, and the remaining 5 were not active cases, being under observation only because of enlargement and tenderness of the liver, with a previous history of acute hepatitis The sulfobromophthalein liver function test was abnormal in 6 cases (15 per cent or more retention at thirty minutes with a 5 mg dose) Other liver function studies were within normal limits Four patients showed a mild superficial gastritis in the body of stomach, consisting only of superficial erosions The remainder were entirely normal

### SUMMARY AND CONCLUSIONS

1 Gastroscopy of the gastric mucosa in 43 cases of acute and chronic hepatitis did not reveal significant evidence of gastritis

2 The minimal findings observed in some patients were not considered contributory to the patient s gastrointestinal symptoms

1 Knight W A and Cogwell, R C Preliminary Observations of the Gastric Mucosa in Patients with Infectious Hepatitis, J A M A 128 803 (July 14) 1945

# Council on Pharmacy and Chemistry

*The Council has authorized publication of the following statements* AUSTIN SMITH, M D, *Secretary*

## MEETING OF THE COUNCIL ON PHARMACY AND CHEMISTRY

The Council convened at 10 a m, Dec 15, 1945, at the Palmer House, Dr Sollmann, Chairman, presiding The following members were present Drs David P Barr, S W Clausen, E M K. Geiling, Robert P Herwick, James P Leake, Perrin H Long, G W McCoy, E M Nelson, W W Palmer, Elmer L Sevringhaus, Austin Smith, Torald Sollmann and Isaac Starr

In addition to officers and members of the American Medical Association headquarters staff there were present Dr Milton Veldee, Director, Biologics Division, National Institute of Health Dr Walton Van Winkle Jr of the Food and Drug Administration, Dr Donald A Wallace, Secretary of the Council on Dental Therapeutics, Mr Edward M Burke, attorney at law, Chicago, and Dr Harold C Lueth, formerly A M A liaison officer of the Surgeon General's Office

The following is an abstracted report of some of the more important discussions and actions

*Storage Requirements for Oxophenarsine Hydrochloride and Dichlorophenarsine Hydrochloride*—Dr Veldee reported the findings of the National Institute of Health following tests on and observations of these compounds and asserted that dichlorophenarsine hydrochloride is a stable compound and that oxophenarsine hydrochloride is now more stable because of improved manufacturing technics Following considerable discussion it was agreed that the temperature requirements suggested by the Council (THE JOURNAL, May 5, 1945, p 29) could be dropped in view of the improvements that have been made in the manufacture of these compounds

The general problem of temperature control for the storage of unstable drugs was reviewed It was agreed that for compounds which definitely require refrigeration to ensure stability, and for unstable preparations in need of temperature control, reasonable label statements relating to storage and refrigeration temperature should be required This was adopted as a general policy of the Council

*Acceptance of Drugs for Manufacturing Use*—The Council voted to consider for inclusion in N N R drugs which are made available for manufacturing use It was felt that manufacturers of the basic material should have opportunity to present their products for consideration by a body such as the Council Heretofore the Council has limited its considerations to drugs for wholesale and retail merchandising It was agreed that products which are covered by standards in official compendiums will not be included in this consideration, since standards are already available. Favorable consideration of drugs for manufacturing use by the Council does not permit purchasers of these materials to promote their finished products with claims for or reference to Council acceptance unless the finished items have been examined and also found acceptable by the Council

*Standards for Clinical Thermometers*—There is an urgent need for setting of standards for clinical thermometers many are of poor construction, there is a wide variation in the temperature readings, poor dyes have been used on the markings, misleading statements appear in the promotional material and the name of the manufacturer may be missing In view of the existence of such problems the Council recognizes the need for standards by which all clinical thermometers should be judged to determine whether or not they are satisfactory for clinical use.

The Council moved that a memorandum be sent to the Council on Physical Medicine urging that this body study the problem with a view to setting satisfactory standards for the testing of clinical thermometers Attention was called to the fact that there are also other devices which might be given consideration in the setting up of standards which would provide further uniformity of production and betterment of products The Council on Pharmacy and Chemistry is willing to lend whatever aid it can to the Council on Physical Medicine when it considers the standardization of clinical thermometers.

*Committee on Therapeutic Research*—The Committee's policies were reviewed, and it was agreed that attention should be directed by publication in THE JOURNAL to the Committee's earlier decision (annual meeting, 1945) to make available larger sums of money than have been customary, subject to consideration of the individual request, and to grant an extension of the expiration period of research beyond one year when such action seems indicated With the returning medical men it is anticipated that the number of requests for grants will be appreciably increased

*Report on Thiouracil*—Thiouracil has been subjected to considerable experimental investigation, but concerning its usefulness and toxicity there exists much confusion Following a cooperative survey by the Food and Drug Administration and six manufacturers it was agreed that the drug had a certain field of usefulness and that in spite of certain toxic properties it was suitable for release in interstate commerce. The Council recognizes the urgent need for immediate dissemination of information on this subject. At the last meeting on thiouracil of representatives of industry and of the Food and Drug Administration it was suggested that these two groups make a report to the Council for publication in THE JOURNAL. This report appeared in THE JOURNAL, Feb 9, 1946, page 343

*Therapeutic Trials Committee*—A report was made to the Council on a meeting in New York of members of the Therapeutic Trials Committee and representatives of several Eastern medical schools engaged in medical research The object of the meeting was to provide opportunity for additional clinical investigators to comment on the Committee's objectives and the criteria for operation which it has tentatively adopted It was apparent that many research workers are interested in fundamental or basic research and want freedom to pursue such investigations

*The Metric System*—A report was made to the Council concerning a meeting in Washington of several Council members Dr E Fullerton Cook of the U S P Revision Committee, Drs Justin Powers and Robert Fischelis, respectively editor for and secretary of the American Pharmaceutical Association, and representatives of the Food and Drug Administration This meeting was to discuss the promotion and use of the metric system Agreements concerning equivalents and prominence in print were reached, and soon a joint statement by these bodies will be issued and given widespread circulation and publicity

*Spanish Translation of N N R*—So far there has been little success in providing a Spanish translation of New and Nonofficial Remedies However, several manufacturers have expressed an interest in a cooperative project, and the Council instructed the Secretary to determine the attitude of the Board of Trustees and of industry, in general, of providing ways and means for publishing cooperatively (i e. Council and industry) a Spanish translation

*Therapeutic Conferences*—The Council voted to explore the possibilities of sponsoring conferences on new therapeutic measures, the first to be held at the coming annual meeting of the Congress on Industrial Health (which is sponsored by the Council on Industrial Health) with emphasis being placed on the industrial side From this experience it can be determined whether further conferences, symposiums or congresses should be held and under what circumstances A number of educational leaders have stated that there is a real need for such Council activity and that if it is properly arranged it will be continuously successful A committee was appointed by the Chairman to assist the Secretary in this matter

*Revision of Council Rules*—Much of the time of the meeting was devoted to detailed consideration of the Council's rules, with a view to necessary and desirable revisions A comprehensive revision was arrived at, will be published in THE JOURNAL and will be made available in booklet form.

# MEDICAL LICENSURE STATISTICS FOR 1945

## FORTY-FOURTH ANNUAL PRESENTATION OF LICENSURE STATISTICS BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION

Victor Johnson, M D, Secretary, and Anne Tipner

Table of Contents

| | Page |
|---|---|
| STATE BOARDS OF MEDICAL EXAMINERS | |
| Licenses Issued | 100 |
| Candidates Examined by Medical Examining Boards | 113 |
| Consolidated Examinations | 115 |
| Failures | 116 |
| Registration by Reciprocity and Endorsement | 117 |
| Licentiates Representing Additions to the Medical Profession | 121 |
| Licensure Under the Accelerated Program | 122 |
| Premedical Training | 122 |
| Required Internships | 123 |
| Licensure for the Relocated Physician | 124 |
| Annual Registration | 124 |
| Candidates Examined 1941 1945 | 125 |
| Registration 1904 1945 | 126 |
| Graduates of Approved Schools and Others Registered, 1922 1945 | 126 |
| Graduates of Unapproved Schools Registered 1940 1945 | 127 |
| Graduates of Schools of Osteopathy Registered by Medical Examining Boards 1940 1945 | 127 |
| Physicians Examined on the Basis of Credentials Obtained in Countries Other Than the United States and Canada | 130 |
| Officers of State Boards of Medical Examiners | 132 |
| BOARDS OF EXAMINERS IN THE BASIC SCIENCES | 132 |
| NATIONAL BOARD OF MEDICAL EXAMINERS | 135 |
| EXAMINING BOARDS IN THE MEDICAL SPECIALTIES | 137 |

This forty-fourth annual compilation of medical licensure and allied statistics by the Council on Medical Education and Hospitals covers the calendar year 1945 and includes data regarding (*a*) medical examining and licensing boards of the United States, the District of Columbia, the territories and possessions of the United States, (*b*) boards of examiners in the basic sciences, (*c*) the National Board of Medical Examiners and (*d*) examining boards in the medical specialties

The official reports which form the basis for these compilations have been contributed throughout the year by the medical licensing boards of all the states, Alaska, Hawaii, Puerto Rico and the Virgin Islands, the eighteen boards of examiners in the basic sciences, the fifteen approved examining boards in the medical specialties, the National Board of Medical Examiners, and the homeopathic medical licensing boards of Connecticut, Delaware and Maryland The homeopathic and eclectic examining boards in Arkansas and the homeopathic board in Louisiana did *not* examine or license any one during the year No physicians were registered for civilian practice in the Canal Zone

The cooperation of the officers of the foregoing boards in making possible the vast amount of reliable information presented in the following pages has been invaluable The Council and THE JOURNAL express their appreciation to those who have supplied these data and for other records furnished throughout the year to the office of the Council

The tables referring to medical licensing boards include figures for the number of candidates examined for medical licensure in 1945, the numbers licensed and those who have secured their first medical license and therefore represent additions to the medical profession The state boards are discussed first, followed by the basic science boards, the National Board of Medical Examiners and the examining boards in the medical specialties

### STATE BOARDS OF MEDICAL EXAMINERS

#### LICENSES ISSUED

During the year 1945 there were 9,153 licenses to practice medicine and surgery issued by the medical examining boards of the forty-eight states, the District of Columbia, Alaska, Hawaii, Puerto Rico and the Virgin Islands, as shown in table 1 Of these licenses 5,541 were issued after examination and 3,612 by reciprocity and endorsement of other state licenses or of the certificate of the National Board of Medical Examiners

TABLE 1.—*Licenses Issued 1945*

| | On the Basis of | | |
|---|---|---|---|
| | Examination | Reciprocity and Endorsement | Total |
| Alabama | 21 | 64 | 85 |
| Arizona | 11 | 21 | 32 |
| Arkansas | 123 | 11 | 134 |
| California | 500 | 708 | 1,208 |
| Colorado | 66 | 46 | 112 |
| *Connecticut* | 40 | 105 | 145 |
| Delaware | 5 | 11 | 16 |
| District of Columbia | 18 | 177 | 195 |
| Florida | 152 | | 152 |
| Georgia | 124 | 17 | 141 |
| Idaho | 17 | 2 | 19 |
| Illinois | 417 | 64 | 481 |
| Indiana | 231 | 46 | 277 |
| Iowa | 98 | 19 | 117 |
| Kansas | 94 | 11 | 105 |
| Kentucky | 75 | 31 | 106 |
| Louisiana | 209 | 31 | 240 |
| Maine. | 9 | 12 | 21 |
| Maryland | 155 | 101 | 256 |
| Massachusetts. | 124 | 143 | 267 |
| Michigan | 189 | 160 | 349 |
| Minnesota | 217 | 58 | 275 |
| Mississippi. | 51 | 19 | 70 |
| Missouri | 238 | 47 | 305 |
| Montana | 3 | 10 | 13 |
| Nebraska | 74 | 12 | 86 |
| Nevada | 1 | 19 | 20 |
| New Hampshire | 6 | 19 | 25 |
| New Jersey | 95 | 236 | 331 |
| New Mexico | 0 | 29 | 29 |
| New York | 287 | 512 | 799 |
| North Carolina | 132 | 64 | 196 |
| North Dakota | 4 | 4 | 8 |
| Ohio | 325 | 127 | 452 |
| Oklahoma | 70 | 41 | 111 |
| Oregon | 24 | 37 | 61 |
| Pennsylvania | 426 | 92 | 518 |
| *Rhode Island* | 12 | 18 | 30 |
| South Carolina | 58 | 29 | 87 |
| South Dakota | 6 | 6 | 12 |
| Tennessee. | 246 | 45 | 291 |
| Texas | 296 | 145 | 441 |
| Utah | 28 | 33 | 61 |
| Vermont | 14 | 35 | 49 |
| Virginia | 39 | 44 | 83 |
| Washington | 34 | 53 | 87 |
| West Virginia | 20 | 17 | 37 |
| Wisconsin | 90 | 58 | 148 |
| Wyoming | 0 | 6 | 6 |
| Alaska Hawaii Puerto Rico and Virgin Islands | 41 | 23 | 64 |
| Totals | 5 541 | 3 612 | 9 153 |

| Marginal Number | SCHOOL | 1 Alabama P | F | 2 Arizona P | F | 3 Arkansas P | F | 4 California P | F | 5 Colorado P | F | 6 Connecticut P | F | 7 Delaware P | F | 8 Dist of Columbia P | F | 9 Florida P | F | 10 Georgia P | F | 11 Idaho P | F | 12 Illinois P | F | 13 Indiana P | F | 14 Iowa P | F | 15 Kansas P | F | 16 Kentucky P | F | 17 Louisiana P | F | 18 Maine P | F | 19 Maryland P | F | 20 Massachusetts P | F | 21 Michigan P | F | 22 Minnesota P | F | Mar. No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ARKANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | University of Arkansas School of Medicine | | | | | 6 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | 1 |
| | CALIFORNIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | College of Medical Evangelists | | | | | | | 81 | 0 | 1 | 0 | | | | | | | 3 | 0 | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | * |
| 3 | Stanford University School of Medicine | | | | | | | 50 | 0 | 2 | 0 | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | |
| 4 | University of California Medical School | | | | | | | 78 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| 5 | University of So California School of Medicine | | | 1 | 0 | | | 69 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 5 |
| | COLORADO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | University of Colorado School of Medicine | | | | | | | 1 | 0 | 40 | 0 | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 6 |
| | CONNECTICUT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Yale University School of Medicine | | | | | | | | | | | 3 | 0 | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 7 |
| | DISTRICT OF COLUMBIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | George Washington University School of Med | | | | | | | 4 | 0 | 1 | 0 | | | | | 3 | 0 | 1 | 0 | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | 1 | 0 | | | | | 1 | 0 | 8 |
| 9 | Georgetown University College of Medicine | | | | | | | 2 | 1 | | | 1 | 0 | | | 2 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | 18 | 0 | 2 | 1 | | | | | 9 |
| 10 | *Howard University College of Medicine* | | | | | | | 1 | 0 | | | | | | | 10 | 1 | 1 | 0 | | | | | 2 | 0 | | | | | 2 | 0 | | | 2 | 1 | | | 15 | 0 | 1 | 0 | 1 | 0 | | | 10 |
| | GEORGIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Emory University School of Medicine | | | | | | | | | | | | | | | | | 22 | 0 | 56 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 11 |
| 12 | University of Georgia School of Medicine | | | | | | | | | | | | | | | | | 9 | 0 | 61 | 0 | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | 12 |
| | ILLINOIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Loyola University School of Medicine | | | | | | | 5 | 0 | | | | | | | | | 2 | 1 | | | 1 | 0 | 47 | 4 | 2 | 0 | | | | | | | | | | | 1 | 0 | 2 | 1 | 1 | 0 | | | 13 |
| 14 | Northwestern University Medical School | | | 1 | 0 | | | 16 | 0 | 2 | 0 | | | | | | | 5 | 1 | 1 | 0 | 1 | 0 | 82 | 0 | | | | | | | | | 2 | 0 | | | 1 | 0 | | | 0 | 0 | 11 | 0 | 14 |
| 15 | University of Chicago The School of Medicine | | | | | | | 5 | 0 | 1 | 0 | | | 1 | 0 | | | | | | | | | 32 | 0 | 3 | 0 | 1 | 0 | | | | | | | | | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 15 |
| 16 | University of Illinois College of Medicine | | | | | | | 13 | 0 | 1 | 0 | | | | | 1 | 0 | 0 | 3 | | | | | 80 | 2 | 1 | 0 | | | | | | | 1 | 0 | | | | | | | 1 | 0 | 5 | 0 | 16 |
| | INDIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Indiana University School of Medicine | | | 1 | 0 | | | | | | | | | | | | | 2 | 1 | | | | | 3 | 0 | 213 | 0 | | | | | | | | | | | | | | | | | 4 | 0 | 17 |
| | IOWA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | State University of Iowa College of Medicine | | | 1 | 0 | | | 3 | 0 | | | | | | | | | 5 | 1 | | | 1 | 0 | 2 | 0 | | | 45 | 1 | 1 | 0 | | | | | | | | | | | 2 | 0 | 4 | 0 | 18 |
| | KANSAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | University of Kansas School of Medicine | | | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | 82 | 0 | | | | | | | | | | | | | 1 | 0 | 19 |
| | KENTUCKY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | University of Louisville School of Medicine | | | | | | | 1 | 0 | | | | | | | | | 3 | 0 | | | 1 | 0 | | | 1 | 0 | | | | | 72 | 0 | | | | | | | | | | | | | 20 |
| | LOUISIANA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Louisiana State University School of Medicine | | | | | | | 1 | 0 | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | 78 | 0 | | | | | 1 | 0 | | | 2 | 0 | 21 |
| 22 | Tulane Univ of Louisiana School of Medicine | 1 | 0 | | | | | 4 | 0 | | | | | | | | | 8 | 0 | | | | | | | | | | | | | | | 117 | 0 | | | | | | | | | 5 | 0 | 22 |
| | MARYLAND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Johns Hopkins University School of Medicine | | | | | | | | | | | | | | | | | 5 | 0 | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | 51 | 0 | 1 | 0 | | | 2 | 0 | 23 |
| 24 | University of Maryland School of Medicine and College of Physicians and Surgeons | | | | | | | 1 | 0 | | | 1 | 0 | | | | | 4 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | 72 | 0 | 0 | 1 | 1 | 0 | | | 24 |
| | MASSACHUSETTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Boston University School of Medicine | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 25 |
| 26 | Harvard Medical School | | | | | | | 3 | 0 | 1 | 0 | 3 | 0 | | | 1 | 0 | 6 | 0 | | | | | 1 | 1 | 1 | 0 | | | | | | | | | 1 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 26 |
| 27 | Tufts College Medical School | | | | | | | | | | | 1 | 0 | | | | | 4 | 3 | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | 0 | 0 | | | | | 27 |
| | MICHIGAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | University of Michigan Medical School | | | | | | | 6 | 0 | | | | | | | | | 2 | 0 | | | 1 | 0 | 3 | 0 | | | | | 1 | 0 | | | | | | | | | 2 | 0 | 107 | 0 | 1 | 0 | 28 |
| 29 | Wayne University College of Medicine | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | 61 | 0 | | | 29 |
| | MINNESOTA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | *University of Minnesota Medical School* | | | | | | | 1 | 0 | | | 3 | 0 | | | 1 | 0 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 118 | 0 | 30 |
| | MISSOURI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | St Louis University School of Medicine | | | | | | | 0 | 0 | | | | | | | | | 4 | 2 | | | | | 2 | 0 | | | | | | | | | | | | | | | 2 | 0 | | | 3 | 0 | 31 |
| 32 | Washington University School of Medicine | | | 1 | 0 | | | 0 | 0 | | | | | | | | | 1 | 0 | | | | | 2 | 0 | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 32 |
| | NEBRASKA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | Creighton University School of Medicine | | | | | | | 22 | 0 | 6 | 0 | | | | | | | | | | | 1 | 0 | | | 18 | 0 | 12 | 0 | | | | | | | | | 0 | 1 | | | 3 | 0 | 33 |
| 34 | University of Nebraska College of Medicine | | | 1 | 0 | | | | | | | 1 | 0 | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | 2 | 0 | 34 |
| | NEW YORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | Albany Medical College | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 35 |
| 36 | Columbia University Coll of Phys and Surgs | | | | | | | | | | | | | | | | | 3 | 1 | | | 1 | 0 | | | | | | | | | | | | | | | 2 | 0 | 3 | 0 | 1 | 0 | 3 | 0 | 36 |
| 37 | Cornell University Medical College | | | | | | | | | | | 1 | 0 | | | | | 1 | 1 | | | | | | | | | | | | | | | | | 2 | 0 | | | 2 | 0 | | | | | 37 |
| 38 | *Long Island College of Medicine* | 3 | 0 | | | | | 1 | 0 | | | | | | | | | 7 | 4 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 38 |
| 39 | New York Medical College Flower and Fifth Avenue Hospitals | | | 1 | 0 | | | 1 | 0 | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | 39 |
| 40 | New York University College of Medicine | | | 1 | 0 | | | 3 | 0 | | | | | | | | | 6 | 3 | 1 | 0 | | | 3 | 0 | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | 40 |
| 41 | Syracuse University College of Medicine | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 41 |
| 42 | University of Buffalo School of Medicine | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | 1 | 0 | 42 |
| 43 | University of Rochester School of Medicine and Dentistry | | | | | | | 4 | 0 | | | 3 | 0 | | | | | 2 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | 2 | 0 | | | 1 | 0 | 43 |
| | NORTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | Bowman Gray School of Medicine of Wake Forest College | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 44 |
| 45 | Duke University School of Medicine | | | | | | | | | | | | | | | | | 10 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 45 |
| | OHIO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | Ohio State University College of Medicine | | | | | | | 2 | 0 | | | | | | | | | 8 | 3 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 2 | 0 | 46 |
| 47 | University of Cincinnati College of Medicine | | | 1 | 0 | | | 1 | 1 | | | | | | | | | 4 | 0 | | | | | 2 | 0 | | | | | | | 1 | 0 | | | | | | | 2 | 1 | | | | | 47 |
| 48 | Western Reserve University School of Medicine | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 3 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | | | 48 |
| | OKLAHOMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | University of Oklahoma School of Medicine | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 2 | 0 | 49 |
| | OREGON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | University of Oregon Medical School | | | | | | | 7 | 0 | | | | | | | | | 1 | 0 | | | 5 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | | | 7 | 0 | 50 |
| | PENNSYLVANIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 51 | Hahnemann Med Coll and Hosp of Phila | | | | | | | 6 | 0 | | | | | 1 | 0 | | | 1 | 1 | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | 5 | 1 | 0 | 1 | | | | | 51 |
| 52 | Jefferson Medical College of Philadelphia | 5 | 0 | | | | | 1 | 0 | | | 2 | 0 | 1 | 0 | 5 | 0 | 1 | 0 | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 0 | 0 | | | | | 52 |
| 53 | Temple University School of Medicine | | | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 4 | 0 | | | | | | | 1 | 0 | 1 | 0 | 1 | 0 | | | | | | | | | 4 | 0 | 1 | 0 | 4 | 0 | 53 |
| 54 | University of Pennsylvania School of Medicine | 5 | 0 | | | | | 6 | 0 | | | 1 | 0 | 1 | 0 | 4 | 1 | | | | | | | | | | | | | | | | | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 4 | 0 | 54 |
| 55 | University of Pittsburgh School of Medicine | | | | | | | 2 | 0 | | | | | | | | | 1 | 1 | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | 5 | 0 | 55 |
| 56 | Woman's Medical College of Pennsylvania | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 56 |
| | SOUTH CAROLINA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57 | Medical College of the State of South Carolina | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 57 |
| | TENNESSEE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 58 | Meharry Medical College | | | | | | | 1 | 0 | | | | | | | | | 5 | 0 | | | | | 3 | 0 | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | 58 |
| 59 | University of Tennessee College of Medicine | 3 | 0 | | | | | | | | | | | | | | | 0 | 0 | | | 1 | 0 | 3 | 0 | | | | | | | 1 | 0 | | | | | | | 0 | 1 | 1 | 0 | 3 | 0 | 59 |
| 60 | Vanderbilt University School of Medicine | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | 60 |

P—Passed F—Failed

| Marginal Number | Mississippi | | Missouri | | Montana | | Nebraska | | Nevada | | New Hampshire | | New Jersey | | New Mexico | | New York | | North Carolina | | North Dakota | | Ohio | | Oklahoma | | Oregon | | Pennsylvania | | Rhode Island | | South Carolina | | South Dakota | | Tennessee | | Texas | | Utah | | Vermont | | Virginia | | Washington | | West Virginia | | Wisconsin | | Wyoming | | Hawaii and Puerto Rico | | Totals | Examined—Passed | Examined—Failed | Percentage—Failed | No Boards Examined by | Marginal Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | | | | | | |
| 1 | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | 73 | 73 | 0 | 0 0 0 | 7 | 1 |
| 2 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | | | 4 | 0 | | | | | | | 100 | 100 | 0 | 0 0 0 | 11 | 2 |
| 3 | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 87 | 86 | 1 | 1.8 | 7 | 3 |
| 4 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 79 | 79 | 0 | 0 0 0 | 2 | 4 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 73 | 73 | 0 | 0 0 0 | 5 | 5 |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 46 | 46 | 0 | 0 0 0 | 7 | 6 |
| 7 | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 10 | 10 | 0 | 0 0 0 | 7 | 7 |
| 8 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | | | | | 17 | 17 | 0 | 0 0 0 | 11 | 8 |
| 9 | | | | | | | | | | | | | 5 | 0 | | | 5 | 5 | | | | | 1 | 0 | | | | | 5 | 0 | 1 | 0 | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | 1 | 0 | 53 | 46 | 7 | 13 2 | 14 | 9 |
| 10 | | | 22 | 0 | | | | | | | | | 1 | 0 | | | 4 | 2 | 2 | 1 | | | 2 | 0 | | | | | 6 | 0 | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 80 | 75 | 5 | 6 2 | 16 | 10 |
| 11 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 80 | 80 | 0 | 0 0 | 4 | 11 |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 74 | 73 | 1 | 1 4 | 3 | 12 |
| 13 | | | | | | | | | | | | | 2 | 0 | | | 1 | 3 | | | | | 3 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 78 | 69 | 9 | 11 5 | 13 | 13 |
| 14 | 1 | 0 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | 2 | 0 | | | | | | | | | 2 | 0 | | | | | 2 | 0 | | | | | 3 | 0 | 3 | 0 | 13 | 0 | | | | | 108 | 157 | 1 | 0 6 | 21 | 14 |
| 15 | | | | | | | | | | | | | | | | | 0 | 2 | 1 | 0 | | | 1 | 0 | | | 1 | 0 | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 55 | 53 | 2 | 3 6 | 16 | 15 |
| 16 | | | 1 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 2 | 0 | | | 1 | 0 | | | 116 | 110 | 5 | 4 3 | 14 | 16 |
| 17 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 228 | 227 | 1 | 0 4 | 8 | 17 |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 70 | 68 | 2 | 2 9 | 11 | 18 |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 90 | 90 | 0 | 0 0 | 6 | 19 |
| 20 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | 1 | 0 | 82 | 82 | 0 | 0 0 | 8 | 20 |
| 21 | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 92 | 91 | 1 | 1 1 | 6 | 21 |
| 22 | 7 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 5 | 0 | 149 | 148 | 1 | 0 7 | 9 | 22 |
| 23 | | | | | 1 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | 2 | 0 | | | | | | | | | 2 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 72 | 72 | 0 | 0 0 | 12 | 23 |
| 24 | | | | | | | | | | | | | 1 | 0 | | | | | 15 | 0 | | | | | | | | | 5 | 0 | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 104 | 103 | 1 | 1 0 | 11 | 24 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | | | 1 | 0 | | | | | | | | | | | | | 1 | 1 | 2 | 0 | | | 2 | 0 | | | | | 3 | 0 | | | | | | | | | 2 | 0 | | | | | | | 1 | 0 | 1 | 0 | | | | | 3 | 3 | 0 | 0 0 | 3 | 25 |
| 27 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | 47 | 45 | 2 | 4.3 | 90 | 26 |
| 28 | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 22 | 19 | 3 | 13 6 | 7 | 27 |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 127 | 127 | 0 | 0 0 | 11 | 28 |
| 30 | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | | | | | 1 | 0 | | | 1 | 0 | 1 | 0 | 0 | 1 | | | | | | | | | | | 1 | 0 | 133 | 133 | 2 | 1 5 | 13 | 30 |
| 31 | | | 12 | 0 | | | | | | | | | | | | | 8 | 2 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 108 | 104 | 4 | 9 5 | 8 | 31 |
| 32 | | | 9 | 0 | | | | | | | | | | | | | 1 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 0 | 111 | 110 | 1 | 0 9 | 10 | 32 |
| 33 | | | 4 | 0 | | | 1 | 0 | | | | | 1 | 0 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 72 | 70 | 2 | 2 8 | 12 | 33 |
| 34 | | | | | | | 71 | 4 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 84 | 80 | 4 | 4 8 | 9 | 34 |
| 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 35 |
| 36 | | | 1 | 0 | | | | | | | | | | | | | 2 | 0 | | | | | 1 | 0 | 1 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 20 | 19 | 1 | 5 0 | 11 | 36 |
| 37 | | | | | | | | | | | | | 1 | 0 | | | 11 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 18 | 1 | 5.3 | 6 | 37 |
| 38 | | | | | | | | | | | 1 | 0 | 4 | 0 | | | 20 | 5 | | | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 49 | 40 | 9 | 18 4 | 10 | 38 |
| 39 | | | | | | | | | | | | | 1 | 0 | | | 0 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 10 | 6 | 4 | 40 0 | 8 | 39 |
| 40 | | | | | | | | | | | | | 4 | 0 | | | 18 | 3 | 1 | 0 | | | | | | | | | 1 | 0 | 2 | 0 | | | | | | | | | | | | | 1 | 0 | 1 | 0 | | | | | 1 | 0 | 51 | 45 | 6 | 11 8 | 15 | 40 |
| 41 | | | | | | | | | | | 1 | 0 | | | | | 15 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 22 | 20 | 2 | 9 1 | 5 | 41 |
| 42 | | | | | | | | | | | | | | | | | 5 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | 10 | 0 | 0 0 | 6 | 42 |
| 43 | | | | | | | | | | | | | | | | | 11 | 0 | | | | | 7 | 0 | | | | | 2 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | 35 | 35 | 0 | 0 0 | 11 | 43 |
| 44 | | | | | | | | | | | | | | | | | | | 38 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 42 | 41 | 1 | 2 4 | 4 | 44 |
| 45 | | | | | | | | | | | | | | | | | | | 34 | 0 | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 47 | 46 | 1 | 2 1 | 4 | 45 |
| 46 | | | | | | | | | | | | | | | | | 2 | 0 | | | | | 71 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 92 | 89 | 3 | 3.3 | 7 | 46 |
| 47 | 1 | 0 | | | | | | | | | | | 1 | 0 | | | 2 | 0 | | | | | 73 | 0 | | | | | | | | | | | | | | | | | | | | | 2 | 0 | | | 2 | 0 | 94 | 92 | 2 | 2 1 | 12 | 47 |
| 48 | | | | | | | | | | | | | | | | | 1 | 2 | | | | | 84 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 96 | 93 | 3 | 3 1 | 6 | 48 |
| 49 | | | | | | | | | | | | | | | | | | | | | | | | | 68 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 73 | 73 | 0 | 0 0 | 5 | 49 |
| 50 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 2 | 0 | | | 14 | 0 | | | | | | | | | | | | | 6 | 0 | | | 1 | 0 | | | | | 51 | 51 | 0 | 0 0 | 10 | 50 |
| 51 | | | | | | | | | | | | | 20 | 0 | | | 8 | 5 | | | | | 12 | 0 | | | | | 55 | 5 | | | | | | | 1 | 0 | | | | | | | | | | | | | | | 121 | 108 | 13 | 10 7 | 13 | 51 |
| 52 | 1 | 0 | | | | | | | | | | | 21 | 0 | | | 4 | 1 | 14 | 0 | | | 4 | 0 | | | | | 80 | 0 | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 2 | 0 | 160 | 159 | 1 | 0 6 | 18 | 52 |
| 53 | | | | | | | | | | | | | 3 | 0 | | | 8 | 2 | | | | | 2 | 0 | | | | | 75 | 2 | | | 1 | 0 | | | | | 2 | 0 | 1 | 0 | 2 | 0 | | | | | | | | | 113 | 109 | 4 | 3 5 | 20 | 53 |
| 54 | 1 | 0 | 1 | 0 | | | | | | | | | 5 | 0 | | | 3 | 0 | 4 | 0 | | | 2 | 0 | | | | | 77 | 0 | | | | | | | | | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | | | | | 1 | 0 | 125 | 124 | 1 | 0 8 | 22 | 54 |
| 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 74 | 8 | | | | | | | | | | | | | | | 1 | 0 | | | | | | | 88 | 84 | 4 | 4.6 | 8 | 55 |
| 56 | | | | | | | | | | | | | 1 | 0 | | | 8 | 3 | | | | | | | | | | | 9 | 0 | | | | | | | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 20 | 17 | 3 | 15 0 | 7 | 56 |
| 57 | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 50 | 0 | | | | | | | | | | | | | | | 53 | 53 | 0 | 0 0 | 4 | 57 |
| 58 | 1 | 0 | 2 | 0 | | | | | | | | | | | | | 5 | 2 | | | | | 0 | 1 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | 68 | 64 | 4 | 5.9 | 12 | 58 |
| 59 | 81 | 0 | | | | | | | | | | | | | | | 1 | 1 | 1 | 0 | | | | | | | | | | | | | | | | | 42 | 1 | | | | | | | | | | | | | 2 | 0 | 158 | 156 | 2 | 1.3 | 16 | 59 |
| 60 | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | 98 | 0 | 1 | 0 | 1 | 0 | | | 1 | 0 | | | 1 | 0 | | | 86 | 84 | 2 | 2 3 | 6 | 60 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | 1 | | | | | | | | | | | | | | | | | | | | |
| | 23 | | 24 | | 25 | | 26 | | 27 | | 28 | | 29 | | 30 | | 31 | | 32 | | 33 | | 34 | | 35 | | 36 | | 37 | | 38 | | 39 | | 40 | | 41 | | 42 | | 43 | | 44 | | 45 | | 46 | | 47 | | 48 | | 49 | | 50 | | | | | | | |

| Number | SCHOOL | 1 Alabama P | F | 2 Arizona P | F | 3 Arkansas P | F | 4 California P | F | 5 Colorado P | F | 6 Connecticut P | F | 7 Delaware P | F | 8 Dist of Columbia P | F | 9 Florida P | F | 10 Georgia P | F | 11 Idaho P | F | 12 Illinois P | F | 13 Indiana P | F | 14 Iowa P | F | 15 Kansas P | F | 16 Kentucky P | F | 17 Louisiana P | F | 18 Maine P | F | 19 Maryland P | F | 20 Massachusetts P | F | 21 Michigan P | F | 22 Minnesota P | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TEXAS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | Baylor University College of Medicine | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 |
| 32 | Southwestern Medical College of the Southwestern Medical Foundation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | University of Texas School of Medicine | | | | | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 0 |
| | UTAH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | University of Utah School of Medicine | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | VERMONT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | University of Vermont College of Medicine | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 1 | 0 | | |
| | VIRGINIA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | Medical College of Virginia | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 37 | University of Virginia Department of Medicine | 5 | 0 | 1 | 0 | | | 1 | 0 | | | | | | | | | 4 | 0 | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| | WISCONSIN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | Marquette University School of Medicine | | | | | | | 5 | 0 | 1 | 0 | | | | | | | 2 | 1 | | | | | 1 | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| 39 | University of Wisconsin Medical School | | | | | | | 5 | 0 | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | | | | | | | | | | 1 | 0 | | |
| | CANADA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | Dalhousie University Faculty of Medicine | | | | | | | 1 | 0 | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Laval University Faculty of Medicine | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | | |
| 42 | McGill University Faculty of Medicine | | | 1 | 0 | | | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | | 3 | 0 | | | 1 | 0 |
| 43 | Queen's University Faculty of Medicine | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | University of Alberta Faculty of Medicine | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | University of Manitoba Faculty of Medicine | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | University of Montreal Faculty of Medicine | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 47 | University of Toronto Faculty of Medicine | | | | | | | | | | | | | | | | | 3 | 0 | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | |
| 48 | University of Western Ontario Medical School | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OTHERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49 | Foreign Medical Faculties | 1 | 0 | | | | | 17 | 8 | 1 | 0 | 0 | 5 | | | 1 | 0 | 1 | 0 | | | | | 10 | 10 | 1 | 0 | | | | | | | | | | | | | 1 | 3 | 8 | 7 | 12 | 15 | 1 | 0 | | |
| 50 | Extinct Medical Schools | | | | | | | 0 | 1 | | | | | | | | | 3 | 3 | | | | | 3 | 0 | | | | | | | | | | | | | | | 1 | 0 | | | | | 4 | 0 |
| 51 | Unapproved Schools and an Undergraduate | | | | | | | | | 7 | 0 | 2 | 6 | | | | | | | | | | | 115 | 3 | | | | | | | | | | | | | | | | | 43 | 1b2 | | | 8 | |
| 52 | Totals | 93 | | 11 | | 03 | | 478 | | 66 | | 43 | | 5 | | 21 | | 23b | | 124 | | 18 | | 440 | | 231 | | 69 | | 101 | | 7b | | 209 | | 12 | | 201 | | 299 | | 104 | | 91b | |
| 53 | Totals—Examined—Passed | 23 | | 11 | | 03 | | 467 | | 66 | | 31 | | 5 | | 20 | | 198 | | 124 | | 18 | | 415 | | 231 | | 68 | | 101 | | 75 | | 208 | | 9 | | 193 | | 124 | | 101 | | 917 | |
| 54 | Totals—Examined—Failed | 0 | | 0 | | 0 | | 11 | | 0 | | 12 | | 0 | | 1 | | 37 | | 0 | | 0 | | 31 | | 0 | | 1 | | 0 | | 0 | | 1 | | 3 | | 8 | | 17b | | 0 | | 0 | |
| 55 | Percentage Failed | 00 | | 00 | | 00 | | 2 3 | | 00 | | 28 0 | | 00 | | 4 8 | | 15 7 | | 00 | | 00 | | 7 0 | | 00 | | 1 4 | | 00 | | 00 | | 0 5 | | 2b 0 | | 4 0 | | 58 5 | | 00 | | 00 | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | | 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | | 22 | |

P—Passed F—Failed

It does not follow that all physicians certified in a given year after examination were tested in that year In twenty-three states, the District of Columbia, Alaska, the Canal Zone, Hawaii and Puerto Rico the internship is a requisite for practice, but in some of them a physician is permitted to take an examination before completion of the internship, if the examination is successful, the license is withheld until completion of the internship Licenses are also withheld in some states for proof of citizenship and other technicalities In other instances the licenses of those examined in December are dated and issued in the following year The statistics in table 1, therefore, include many who were examined in 1944 and even a few in previous years Consequently, figures in this table will not entirely correspond with those of later tables which deal with physicians examined for medical licensure

The greatest number of licenses during the calendar year 1945 were issued in California, 1,208 Two other states licensed more than 500 New York 799 and Pennsylvania 518 Twenty states, the District of Columbia and the territories and possessions licensed fewer than 100 The smallest number (6) was granted in Wyoming None were licensed by examination in New Mexico and Wyoming, and only 1 physician was registered by this method in Nevada Twenty-one boards (notably California, Connecticut, the District of Columbia, New Jersey and New York) licensed more physicians by reciprocity or endorsement than by examination Florida, Idaho, Massachusetts, Rhode Island and Hawaii have no reciprocal agreements, but with the exception of Florida these states endorse diplomates of the National Board of Medical Examiners

Increases in the number of physicians registered last year as compared with data reported for the year 1944 [1] were noticeable in a number of states and particularly in Arkansas, California, the District of Columbia, Florida, Illinois, Indiana, Iowa, New Jersey and the possessions, while more pronounced decreases in registration occurred in Georgia, Kansas, Kentucky, Maryland, Michigan, Mississippi, Missouri, Nebraska, Ohio,

TABLE 3—*Licenses Issued, 1935-1945*

| | Examination | Reciprocity and Endorsement | Total |
|---|---|---|---|
| 1935 | 5,725 | 2 194 | 7,919 |
| 1936 | 6,275 | 2 772 | 9 047 |
| 1937 | 6 629 | 3 201 | 9,83[illegible] |
| 1938 | 6 557 | 2 9[illegible]6 | 9,51[illegible] |
| 1939 | 6 400 | 2 872 | 9 272 |
| 1940 | 6 289 | 2 866 | 9,15[illegible] |
| 1941 | 6 054 | 2 759 | 8,81[illegible] |
| 1942 | 6 141 | 2 469 | 8 610 |
| 1943 | 6 057 | 2 336 | 8,393 |
| 1944 | 7 058 | 2,589 | 9 647 |
| 1945 | 5 541 | 3 612 | 9 153 |
| Totals | 68 790 | [illegible] 629 | [illegible] |

Pennsylvania and Virginia The decreases in these states were most noticeable in the examination column

Totals for ten previous years by all methods of licensure are shown for comparison in table 3 The high figures for the years from 1936 to 1941 in the annual number of licenses issued were due to the licensure of foreign graduates In 1944 there was an increase of 1,254 over the number registered in the previous year, while in 1945 there were 494 fewer

1 J A M A 128: 101 129 (May 12) 1945

| Marginal Number | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | Totals | Examined—Passed | Examined—Failed | Percentage—Failed | No. Boards Examined by | Marginal Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mississippi | Missouri | Montana | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | New York | North Carolina | North Dakota | Ohio | Oklahoma | Oregon | Pennsylvania | Rhode Island | South Carolina | South Dakota | Tennessee | Texas | Utah | Vermont | Virginia | Washington | West Virginia | Wisconsin | Wyoming | Hawaii and Puerto Rico | | | | | | |
| | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | P F | | | | | | |
| 61 | | | | | | | | | | | | | | | | | | | | 39 0 | | | | | | | | | 39 | 39 | 0 | 0 0 | 4 | 61 |
| 62 | | | | | | | | | | | | | | | | | | | | 47 0 | | | | | | | | | 47 | 47 | 0 | 0 0 | 1 | 62 |
| 63 | | | | | | | | | | | | | | | | | | | | 107 0 | | | | | | | | | 110 | 110 | 0 | 0 0 | 4 | 63 |
| 64 | | | | | | | | | | | | | | | | | | | | | 5 0 | | | | | | | | 6 | 6 | 0 | 0 0 | 2 | 64 |
| 65 | | | | | | | | | | | | | | | | | | | | | | 2 0 | | | | | | | 7 | 6 | 1 | 14.3 | 4 | 65 |
| 66 | | | | | | | | | 1 0 | 12 0 | | | | | | | 2 0 | | | | | | 1 0 | | 3 0 | | | 1 0 | 25 | 25 | 0 | 0 0 | 9 | 66 |
| 67 | | | | | | | | | 2 0 | 2 0 | | | | | | | | | | | | | 34 0 | | | | | | 50 | 50 | 0 | 0 0 | 8 | 67 |
| 68 | | 1 0 | | | | | | | 1 0 | | | | | | 3 0 | | | | | | | | | 2 0 | | 40 0 | | 1 1 | 66 | 64 | 2 | 3 0 | 12 | 68 |
| 69 | | 1 0 | | | | | 1 0 | | | | | | | | 2 0 | | | | | 1 0 | | | | | | 32 0 | | | 47 | 47 | 0 | 0 0 | 10 | 69 |
| 70 | | | | | | | | | 1 0 | | | | | | | | | | | | | | | | | | | | 4 | 3 | 1 | 25 0 | 3 | 70 |
| 71 | | | | | | 1 0 | | | 1 3 | | | | | | | | | | | | | | | | | | | | 6 | 2 | 4 | 66 7 | 3 | 71 |
| 72 | | | | | 1 0 | 1 0 | 1 0 | | 4 1 | 1 0 | | 1 0 | | | 1 0 | | | | | | | | | 1 0 | | | | | 23 | 22 | 1 | 4 4 | 13 | 72 |
| 73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 73 |
| 74 | | | | | | | | | | | 1 0 | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0 0 | 1 | 74 |
| 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0 0 | 2 | 75 |
| 76 | | | | | | | | | 1 0 | | | | | | | 1 0 | | | | | | | | | | | | | 4 | 4 | 0 | 0 0 | 4 | 76 |
| 77 | | | | | | | | | 1 1 | | | | | | 1 0 | | | | | | | | | | | | | | 7 | 6 | 1 | 14 3 | 4 | 77 |
| 78 | | | | | | | | | 1 1 | | | | | | 1 0 | | | | | | | | | | | | | | 4 | 3 | 1 | 25 0 | 3 | 78 |
| 79 | 1 0 | 1 1 | | 0 1 | | 2 1 | 0 7 | | 128 102 | | | 1 1 | | | 0 3 | 1 0 | | 2 0 | 1 0 | 1 1 | | | 1 1 | 1 0 | | | 3 1 | 475 | 209 | 266 | 56 0 | 2 | 79 |
| 80 | | | | | | | | | 1 2 | 1 0 | 1 0 | | | | 2 0 | | | | | | | | | 2 0 | | | | 1 0 | 25 | 19 | 6 | 24 0 | 11 | 80 |
| 81 | | | | 2 2 | | | 1 0 2 | | | | | 48 11 | | 0 1 | | | | | | 29 5 | | | 3 1 | | | 1 0 | | | 448 | 263 | 183 | 40 8 | 11 | 81 |
| 82 | 50 | 30 | 1 | 81 | 2 | 7 | 104 | 0 | 530 | 133 | 4 | 335 | 60 | 20 | 439 | 6 | 58 | 6 | 190 | 235 | 13 | 2 | 41 | 34 | 20 | 96 | 0 | 37 | 5 929 | | | | | 82 |
| 83 | 50 | 29 | 2 | 74 | 1 | 6 | 93 | 0 | 287 | 132 | 4 | 325 | 60 | 19 | 426 | 6 | 58 | 6 | 103 | 228 | 13 | 2 | 39 | 34 | 20 | 96 | 0 | 35 | | 5 341 | | | | 83 |
| 84 | 0 | 1 | 0 | 7 | 1 | 1 | 9 | 0 | 243 | 1 | 0 | 13 | 0 | 1 | 13 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | | | 588 | | | 84 |
| 85 | 00 | 04 | 00 | 86 | 500 | 143 | 87 | 00 | 464 | 08 | 00 | 38 | 00 | 00 | 30 | 00 | 00 | 00 | 10 | 30 | 00 | 00 | 24 | 00 | 00 | 00 | 00 | 54 | | | | 99 | | 85 |
| | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | | | | |

than in 1944 Acceleration started in most medical schools in the United States about July 1, 1942 and the peak of graduates was reached in 1944, when two classes were graduated at most schools The total graduates for the four session three year cycle to July 1 1945 was 20,662 For the four years 1942 to 1945 inclusive 35,803 physicians received licenses This figure includes physicians previously licensed who are migrating to other states and veteran medical officers not returning to their original state of practice It is believed that the great majority of recent graduates will have been licensed prior to entry on active duty with the armed forces Discontinuance of the A S T and Navy V-12 programs in medical schools at the end of the session which for most schools ended in March 1946 permits schools to decelerate, and most if not all schools are planning to discontinue the accelerated program

In the eleven years shown in table 3 there were 99,355 licenses issued, 68,726 after examination and 30,629 by endorsement of credentials The figures given do not altogether represent individuals but include persons who may have been licensed in more than one state during a given year nor does the total represent additions to the medical profession, since a physician previously licensed in one state may be licensed by examination in a nonreciprocating state Among those licensed by reciprocity or endorsement are some who received licenses by endorsement of the certificate of the National Board of Medical Examiners but may not have been previously licensed In tables 11, 12 and 13 can be noted the number who secured licenses for the first time and therefore represent additions to the medical profession in the United States and its territories and possessions

## CANDIDATES EXAMINED BY MEDICAL EXAMINING BOARDS

Compilations referring to those examined for medical licensure in 1945 by individual states, the District of Columbia, Hawaii and Puerto Rico, indicating the numbers who passed and failed in each state and the medical school of graduation, are recorded in table 2 Medical schools in the United States and Canada which are no longer in existence, foreign faculties of medicine and unapproved schools are not listed by name, but the numbers examined in each state in these three categories are indicated at the bottom of the table In the past year 5,929 were examined, of whom 5,341 passed and 588 failed Candidates represented sixty-nine approved medical schools in the United States, nine approved medical schools of Canada, seventy-five faculties of medicine and three licensing corporations of other countries, six medical schools now extinct, five unapproved institutions, six colleges of osteopathy and 1 individual who had not completed the medical course Osteopaths who were granted the privilege to practice medicine, surgery or both by the medical examining boards are included in these statistics Osteopaths who obtain the legal right to special practice by the osteopathic board are excluded from these compilations

Examination schedules have been adjusted to coincide as nearly as possible with the graduating dates of the medical schools located within the various states

Executive officers and members of examining boards are to be commended for adding this work to their already overtaxed responsibilities

The 5,929 examinees represented 4,928 graduates of approved medical schools in the United States, of whom 2 5 per cent failed, 53 graduates of approved Canadian schools, 15 1 per cent of whom failed, 25 who graduated from approved medical schools no longer operating, with 24 0 per cent failures, 475 graduates of faculties of medicine located in countries other than the United States and Canada, 56 0 per cent of whom failed, and

TABLE 4.—*Graduates of Medical Schools in Canada Examined for Licensure in the United States, 1945*

| | Examined | Passed | Failed |
|---|---|---|---|
| Arizona | 1 | 1 | 0 |
| California | 10 | 10 | 0 |
| Florida | 7 | 6 | 1 |
| Illinois | 1 | 0 | 1 |
| Kansas | 1 | 1 | 0 |
| Maine | 1 | 1 | 0 |
| Massachusetts | 4 | 4 | 0 |
| Minnesota | 1 | 1 | 0 |
| Nevada | 1 | 1 | 0 |
| New Hampshire | 2 | 2 | 0 |
| New Jersey | 1 | 1 | 0 |
| New York | 10 | 9 | 0 |
| North Carolina | 1 | 1 | 0 |
| North Dakota | 1 | 1 | 0 |
| Ohio | 1 | 1 | 0 |
| Pennsylvania | 3 | 3 | 0 |
| Rhode Island | 1 | 1 | 0 |
| Washington | 1 | 1 | 0 |
| Totals | 53 | 45 | 8 |

448 graduates of unapproved schools with 40 8 per cent failures The numbers examined in these categories depart significantly from the figures for the year 1944 The number from approved schools in 1945, while considerably lower than in 1944, is in excess of the normal number of annual examinees but cannot be compared with 1944, owing primarily to the accelerated program Figures for the latter year represent two graduating classes in many instances, namely December 1943 and September 1944 There were considerable reductions among foreign graduates and graduates of unapproved schools New York, where the greatest number of foreign graduates are tested, examined 190 fewer than in 1944 The majority of physicians

TABLE 5.—*Source of Candidates Examined for Licensure in the United States 1945*

| Medical Schools | Number of Schools | Number Examined | Number Passed | Number Failed | Per centage Failed |
|---|---|---|---|---|---|
| Approved in United States | 69 | 4 928 | 4,503 | 125 | 2.5 |
| Approved in Canada | 9 | 53 | 45 | 8 | 15 1 |
| Extinct | 6 | 25 | 19 | 6 | 24 0 |
| Foreign | 78 | 475 | 209 | 266 | 56 0 |
| Unapproved schools | 14 | 448 | 265 | 183 | 40 8 |
| Totals | 176 | 5 929 | 5,341 | 588 | 9.9 |

recorded in the classification of extinct medical schools were graduates of Rush Medical College In 1945 there were fewer graduates of this school examined than in 1944 There were also 134 fewer graduates of unapproved institutions examined Massachusetts, where the examining board was compelled by law to examine such graduates, last year examined 122 fewer than the previous year The state approving authority in Massachusetts, created some years ago, has ruled that only those graduates who matriculated in medical schools not acceptable to that body prior to Jan 1, 1941 will be eligible for licensure examinations in the future

As in table 1, the 5,929 physicians and others examined for medical licensure do not represent an equal number of individuals, since a candidate might take an examination in more than one state and is counted in each state However, if a candidate fails more than once in a given state within the year he is counted in that state as only one failure

The greatest number of graduates of any one school examined was 228, representing Indiana University School of Medicine, 213 of whom were examined in Indiana and 15 in seven other states This figure includes two graduating classes (December 1944 and August 1945) Only 1 of these 228 examinees failed More than 150 graduates of four other schools applied for licenses by examination last year, namely Northwestern University 158, St Louis University 158, Jefferson Medical College 160 and the University of Tennessee 158

Twenty-seven approved schools in the United States had no failures before medical licensing boards, 28 less than 5 per cent and 5 between 5 and 10 per cent There were nine schools with 10 per cent or more failures in state examinations Failures from all schools in this country amounted to 2 5 per cent The percentages for failures are modified by data on those who were examined by the National Board of Medical Examiners in its final examination as well as those passing state tests (see table 6)

Graduates of the University of Pennsylvania were examined in the greatest number of states—twenty-two Northwestern alumni were tested in twenty-one states, Harvard Medical School and Temple University in twenty states All other schools had their graduates examined in fewer than twenty states Fourteen schools had graduates examined in fewer than five states Only 1 graduate of Albany took a state written examination, this occurred in Pennsylvania

Two of the five homeopathic boards in existence examined 3 candidates Delaware 1 and Maryland 2 The homeopathic boards in Arkansas, Connecticut and Louisiana did not examine any one in 1945 The one eclectic board in Arkansas likewise did not examine a candidate

Fifty-three graduates of the nine approved medical schools in Canada were tested for medical licensure in the United States in 1945 in eighteen states (table 4), of whom 45 passed and 8 failed Nearly half of these were examined in New York, with 15, and California, with 10 Normally, large numbers of the graduates of McGill University and the University of Toronto seek licensure in the United States However, during the war years the migration of these graduates decreased In 1945 there were 23 graduates of McGill examined in thirteen states and 7 from Toronto who appeared for licensure in four states The highest percentage of failures was 66 7, however, this was from only 6 graduates of Laval University examined in three states Four Canadian schools had no failures before United States licensing boards, while four other schools had percentages higher than 14 The one remaining school had 4 4 failures

Graduates of osteopathic schools were examined by the medical boards of eight states, namely Colorado, Connecticut, Massachusetts, Nebraska, New Jersey, Ohio, Texas and Wisconsin, while graduates of unapproved schools were examined in Illinois, Massachusetts and Virginia Included among unapproved graduates is 1 candidate who had not completed his

medical course He failed in New Jersey There were 448 graduates of unapproved and osteopathic schools of whom 265 passed and 183, or 40 8 per cent, failed The numbers of successful candidates in these two categories can be ascertained by reference to tables 23 and 24 page 126

Graduates of medical schools of other countries were examined in twenty-five states, the District of Columbia and Puerto Rico There were 475 such graduates, with 266 (56 per cent) failures

Twenty-five graduates of medical schools no longer in operation were tested in eleven states, of whom 19 passed and 6 (24 per cent) failed

Altogether there were 5,929 candidates who appeared before medical examining boards in 1945 of whom 5,341 passed and 588 or 9 9 per cent, failed

The source of candidates for licensure last year on the basis of examination is further tabulated in table 5 giving totals for five groups, namely approved medical schools in the United States and those in Canada schools no longer in existence, foreign faculties of medicine and unapproved institutions As previously mentioned, 2 5 per cent from the United States schools failed, as did 15 1 per cent of the graduates of Canadian schools The greatest percentage of failures represented two groups, foreign and unapproved schools In these two categories 56 and 40 8 per cent respectively failed Of extinct schools 15 1 per cent failed

Figures which indicate actual licentiates and represent additions to the medical profession in 1945 are given later in tables 11, 12 and 13

### CONSOLIDATED EXAMINATIONS

A more accurate picture of the performance of graduates in licensure examinations than the foregoing is given by the figures which combine the results of state medical board examinations with those of part III of the National Board examinations (table 6) In 1945 there were 4,928 graduates of approved medical schools in the United States examined by medical licensing boards, of whom 2 5 per cent failed In the same period 1,219 graduates of these institutions appeared for part III of the examination of the National Board of Medical Examiners, of whom 2 4 per cent failed In some instances schools having a high percentage of failures before licensing boards had few, if any, failures before the National Board of Medical Examiners In these consolidated figures for 6,147 graduates the percentage of failures of approved medical schools in the United States was reduced to 2 2

Of the Canadian graduates 15 1 per cent failed state board tests and 13 1 the combined tests Little comparison is possible in this group, since only 8 graduates of three Canadian schools were examined by the National Board

Only 3 graduates of foreign medical faculties were admitted to the National Board's final examination, while 475 were examined by state licensing boards The National Board does not admit to its examinations the graduates of unapproved medical schools in the United States, and from foreign schools it admits only the graduates of the university medical schools of Great Britain and Ireland provided these graduates have been licensed to practice in the country in which the school attended is located

The total of all examined before medical licensing boards was 5,929, of whom 5,341 passed and 588, 9 9 per cent, failed For both groups—state boards and the National Board—7,160 were examined, 6 559 passed

TABLE 6.—*Consolidated Examinations State Medical Examining Boards and the National Board of Medical Examiners, 1945*

| School | Part III Results by Medical Examining Board Tests | | Part III Examination of National Board of Medical Examiners | | Total Examined | Totals | | |
|---|---|---|---|---|---|---|---|---|
| | P | F | P | F | | P | F | %F |
| University of **Arkansas** | 73 | 0 | 2 | 0 | 75 | 75 | 0 | 0 0 |
| Coll of Med Evan (**Calif**) | 100 | 0 | 30 | 0 | 130 | 130 | 0 | 0 0 |
| Stanford University | 56 | 1 | 2 | 0 | 59 | 58 | 1 | 1 7 |
| Univ of California | 79 | 0 | 0 | 0 | 79 | 79 | 0 | 0 0 |
| Univ of Southern California | 73 | 0 | 2 | 0 | 75 | 75 | 0 | 0 0 |
| Univ of **Colorado** | 46 | 0 | 1 | 0 | 47 | 47 | 0 | 0 0 |
| Yale Univ (**Connecticut**) | 10 | 0 | 49 | 1 | 60 | 59 | 1 | 1 7 |
| Geo Washington Univ (D C) | 17 | 0 | 52 | 0 | 69 | 69 | 0 | 0 0 |
| Georgetown University | 46 | 7 | 28 | 1 | 82 | 74 | 8 | 9.8 |
| Howard University | 75 | 5 | 3 | 0 | 83 | 78 | 5 | 6 0 |
| Emory Univ (**Georgia**) | 80 | 0 | 0 | 0 | 80 | 80 | 0 | 0 0 |
| University of Georgia | 73 | 1 | 0 | 0 | 74 | 73 | 1 | 1 4 |
| Loyola Univ (**Illinois**) | 69 | 9 | 3 | 0 | 81 | 72 | 9 | 11 1 |
| Northwestern University | 157 | 1 | 9 | 0 | 167 | 166 | 1 | 0 6 |
| University of Chicago | 53 | 2 | 3 | 0 | 58 | 56 | 2 | 3 4 |
| University of Illinois | 110 | 5 | 4 | 0 | 119 | 114 | 5 | 4 2 |
| **Indiana** University | 227 | 1 | 3 | 0 | 231 | 230 | 1 | 0.5 |
| State University of Iowa | 68 | 2 | 11 | 0 | 81 | 79 | 2 | 2.5 |
| University of **Kansas** | 90 | 0 | 0 | 0 | 90 | 90 | 0 | 0 0 |
| Univ of Louisville (Ky) | 82 | 0 | 10 | 0 | 92 | 92 | 0 | 0 0 |
| **Louisiana** State University | 91 | 1 | 0 | 0 | 92 | 91 | 1 | 1.1 |
| Tulane University | 148 | 1 | 0 | 0 | 149 | 148 | 1 | 0 7 |
| Johns Hopkins Univ (Md) | 72 | 0 | 6 | 0 | 78 | 78 | 0 | 0 0 |
| University of Maryland | 103 | 1 | 2 | 0 | 106 | 105 | 1 | 0.9 |
| Boston Univ (**Mass**) | 3 | 0 | 48 | 2 | 53 | 51 | 2 | 3.8 |
| Harvard Medical School | 46 | 2 | 109 | 0 | 156 | 154 | 2 | 1.3 |
| Tufts College Med School | 19 | 3 | 99 | 0 | 121 | 118 | 3 | 2.5 |
| University of **Michigan** | 127 | 0 | 8 | 0 | 135 | 135 | 0 | 0 0 |
| Wayne University | 63 | 0 | 1 | 0 | 64 | 64 | 0 | 0 0 |
| University of **Minnesota** | 133 | 2 | 7 | 0 | 142 | 140 | 2 | 1 4 |
| St Louis Univ (**Missouri**) | 154 | 4 | 9 | 0 | 167 | 163 | 4 | 2.4 |
| Washington University | 110 | 1 | 2 | 0 | 113 | 112 | 1 | 0.9 |
| Creighton Univ (**Nebraska**) | 70 | 2 | 1 | 0 | 73 | 71 | 2 | 2.7 |
| University of Nebraska | 80 | 4 | 2 | 0 | 86 | 82 | 4 | 4 7 |
| Albany Med Coll. (N Y) | 1 | 0 | 42 | 0 | 43 | 43 | 0 | 0 0 |
| Columbia University | 19 | 1 | 87 | 0 | 107 | 106 | 1 | 0.9 |
| Cornell University | 18 | 1 | 48 | 0 | 67 | 66 | 1 | 1.5 |
| Long Island Coll. of Med | 40 | 9 | 62 | 1 | 112 | 102 | 10 | 8.9 |
| New York Medical College | 6 | 4 | 85 | 5 | 100 | 91 | 9 | 9 0 |
| New York University | 45 | 6 | 83 | 0 | 134 | 128 | 6 | 4.5 |
| Syracuse University | 20 | 2 | 17 | 0 | 39 | 37 | 2 | 5 1 |
| University of Buffalo | 10 | 0 | 69 | 0 | 79 | 79 | 0 | 0 0 |
| University of Rochester | 35 | 0 | 39 | 0 | 74 | 74 | 0 | 0 0 |
| Bowman Gray School of Med. (**North Carolina**) | 41 | 1 | 0 | 0 | 42 | 41 | 1 | 2 4 |
| Duke University | 46 | 1 | 71 | 1 | 119 | 117 | 2 | 1 7 |
| **Ohio** State University | 89 | 3 | 1 | 0 | 93 | 90 | 3 | 3.2 |
| University of Cincinnati | 92 | 2 | 4 | 0 | 98 | 96 | 2 | 2 0 |
| Western Reserve University | 93 | 3 | 1 | 0 | 97 | 94 | 3 | 3.1 |
| University of **Oklahoma** | 73 | 0 | 1 | 0 | 74 | 74 | 0 | 0.0 |
| University of **Oregon** | 51 | 0 | 3 | 0 | 54 | 54 | 0 | 0.0 |
| Hahnemann Phila (**Pa.**) | 108 | 18 | 6 | 0 | 127 | 114 | 13 | 10.2 |
| Jefferson Medical College | 159 | 1 | 10 | 0 | 170 | 169 | 1 | 0 6 |
| Temple University | 109 | 4 | 3 | 0 | 116 | 112 | 4 | 3 4 |
| University of Pennsylvania | 124 | 1 | 27 | 0 | 152 | 151 | 1 | 0 7 |
| University of Pittsburgh | 84 | 4 | 0 | 0 | 88 | 84 | 4 | 4 6 |
| Woman s Med College | 17 | 3 | 10 | 0 | 30 | 27 | 3 | 10 0 |
| Med. Coll of **South Carolina** | 53 | 0 | 0 | 0 | 53 | 53 | 0 | 0 0 |
| Meharry Med. Coll (Tenn) | 64 | 4 | 7 | 2 | 77 | 71 | 6 | 7.8 |
| University of Tennessee | 156 | 2 | 3 | 0 | 161 | 159 | 2 | 0 6 |
| Vanderbilt University | 54 | 2 | 3 | 0 | 59 | 57 | 2 | 3 4 |
| Baylor University (**Texas**) | 39 | 0 | 0 | 0 | 39 | 39 | 0 | 0 0 |
| Southwestern Medical Coll. | 47 | 0 | 0 | 0 | 47 | 47 | 0 | 0 0 |
| University of Texas | 110 | 0 | 0 | 0 | 110 | 110 | 0 | 0 0 |
| University of **Utah** | 6 | 0 | 0 | 0 | 6 | 6 | 0 | 0 0 |
| University of **Vermont** | 6 | 1 | 8 | 0 | 15 | 14 | 1 | 6.7 |
| Med. Coll of **Virginia** | 25 | 0 | 2 | 0 | 27 | 27 | 0 | 0.0 |
| University of Virginia | 50 | 0 | 1 | 0 | 51 | 51 | 0 | 0 0 |
| Marquette Univ (**Wisconsin**) | 64 | 2 | 6 | 0 | 72 | 70 | 2 | 1.4 |
| University of Wisconsin | 47 | 0 | 1 | 0 | 48 | 48 | 0 | 0 0 |
| Subtotals U S Schools | 4 803 | 125 | 1 206 | 13 | 6,147 | 6 009 | 138 | 2.2 |
| Dalhousie Univ (N S) | 3 | 1 | 0 | 0 | 4 | 3 | 1 | 25 0 |
| Laval Univ (**Quebec**) | 2 | 4 | 0 | 0 | 6 | 2 | 4 | 66 7 |
| McGill University | 22 | 1 | 6 | 0 | 29 | 28 | 1 | 3 4 |
| Univ of Montreal | 4 | 0 | 0 | 0 | 4 | 4 | 0 | 0 0 |
| Queen s Univ (**Ontario**) | 1 | 0 | 1 | 0 | 2 | 2 | 0 | 0 0 |
| University of **Alberta** | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 0 |
| University of **Manitoba** | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 0 |
| Univ of Toronto (**Ontario**) | 6 | 1 | 1 | 0 | 8 | 7 | 1 | 12.5 |
| Univ of Western Ontario | 3 | 1 | 0 | 0 | 4 | 3 | 1 | 25 0 |
| Subtotals Canadian Schools | 45 | 8 | 8 | 0 | 61 | 53 | 8 | 13.1 |
| Extinct Medical Schools | 19 | 6 | 1 | 0 | 26 | 20 | 6 | 23 1 |
| Unapproved Schools | 265 | 183 | 0 | 0 | 448 | 265 | 183 | 40.9 |
| Foreign Medical Faculties | 299 | 266 | 3 | 0 | 478 | 212 | 266 | 55.6 |
| Totals | 5,341 | 588 | 1,218 | 13 | 7 160 | 6,559 | 601 | 8 4 |

and 601, or 8.4 per cent, failed. Fifty-nine existing schools and one extinct approved medical school were represented in the National Board's examinations. Seventeen of these schools had graduates examined in each group, with no failures in either. Three schools had failures of 10 per cent or more in the combined statistics. Loyola 11.1, Hahnemann 10.2 and Woman's Medical College 10.0.

FAILURES

Failure before medical licensing boards by licentiates of 1945 are recorded in table 7. In presenting these statistics the United States is divided into two groups—the thirty states and the District of Columbia in which approved four year medical schools are located and those states and territories and possessions which have no medical school within their boundaries. Included is the number who failed state board examinations and were graduates of a medical school located in the state in which they were examined and, for comparison, the number of graduates licensed in a given state who obtained their professional training in schools in other states.

Practically all states require the applicant to receive a general average of 75 per cent and 50 per cent in any one subject. In case of failure in not more than two subjects the applicant is entitled to another examination in those subjects within twelve months. A few states consider such individuals as conditioned in the subjects in which they fail and do not report them to the office of the Council on Medical Education and Hospitals as failures. In these instances they are not considered in the calculations in this study. When their grades are raised after a successful test in the subjects in which they failed they are recorded among those who passed.

Thirty-seven physicians failed examinations in the state in which they obtained their professional training. This occurred in seven states. Twenty-four states had no failures from approved schools within their boundaries. On the other hand, ten states reported 53 failures who graduated from approved medical schools located in states other than the one in which they were examined. Of particular interest in analyzing this table was the fact that the three approved medical schools in Massachusetts had no failures before the licensing board of that state while 11 per cent of the graduates of thirty approved schools in other states failed. In New York 6.6 per cent of those who studied medicine in eight of the nine medical schools located in that state who appeared for licensure in 1945 failed and 17.8 per cent who obtained their training in thirty-four schools located in other states failed.

In eighteen states having no medical schools only two reported failures, Florida and Nevada, 33 and 1 respectively. Fifty-three schools were represented at Florida examinations, with 14.9 per cent failures.

The total examined in the first group—states in which approved four year medical schools are located—was 4,426, while in the second group—states which have no approved medical school within their boundaries—502 were examined.

In another table presented in this group (table 8) the data are further subdivided by the number of candidates who were licensed after previous failure. The figures are presented for three categories—approved medical schools in the United States and Canada, foreign faculties of medicine and unapproved institutions. These groups are classified according to the number licensed after failing a state board examination once and after two or more failures and indicates whether the single and multiple failures have been in the state where licensed or elsewhere. The total number of candidates in 1945 examined and licensed or granted licenses by reciprocity or endorsement of credentials is shown as well as the total number of failures in all groups.

In 1945 there were 9,153 individuals licensed to practice medicine. Of these 381 had previously been unsuccessful before a licensing board. From the approved schools 170 of those licensed had previously failed a state board examination. Sixty-nine had one failure before being licensed in a given state, and sixty-two were licensed after one failure in another state. Thirty-nine received licenses after more than one failure, 16 of whom were registered in the original state, 19 elsewhere and 4 failed in the state where licensed and elsewhere.

One hundred and sixty-seven graduates of foreign faculties of medicine and 44 graduates of unapproved institutions were licensed after previous failure. The multiple failures shown for these two groups reveals the difficulty these individuals experience in passing licensure tests. In the computation of these statistics the

TABLE 7.—*Licensure Failures by Graduates of Approved Schools Located in the State Where Examined and Elsewhere, 1945*

| | Total No. Examined | No. Failures of Schools in State | No. Schools in State Represented at Examinations | Per Cent Failed | No. Failures of Schools Out of State | No. Schools Out of State Represented at Examinations | Per Cent Failed | Per Cent Failed in All U. S. Schools |
|---|---|---|---|---|---|---|---|---|
| Arkansas | 63 | 0 | 1 | 0.0 | 0 | 0 | 0.0 | 0.0 |
| California | 442 | 0 | 4 | 0.0 | 2 | 40 | 0.5 | 0.5 |
| Colorado | 58 | 0 | 1 | 0.0 | 0 | 11 | 0.0 | 0.0 |
| Connecticut | 24 | 0 | 1 | 0.0 | 1 | 13 | 4.2 | 4.2 |
| Dist. of Columbia | 20 | 1 | 3 | 5.0 | 0 | 4 | 0.0 | 5.0 |
| Georgia | 124 | 0 | 2 | 0.0 | 0 | 4 | 0.0 | 0.0 |
| Illinois | 293 | 6 | 4 | 2.0 | 2 | 30 | 0.7 | 2.7 |
| Indiana | 230 | 0 | 1 | 0.0 | 0 | 12 | 0.0 | 0.0 |
| Iowa | 69 | 1 | 1 | 1.4 | 0 | 6 | 0.0 | 1.4 |
| Kansas | 100 | 0 | 1 | 0.0 | 0 | 6 | 0.0 | 0.0 |
| Kentucky | 70 | 0 | 1 | 0.0 | 0 | 3 | 0.0 | 0.0 |
| Louisiana | 209 | 0 | 2 | 0.0 | 1 | 11 | 0.5 | 0.5 |
| Maryland | 185 | 0 | 2 | 0.0 | 1 | 20 | 0.5 | 0.5 |
| Massachusetts | 78 | 0 | 3 | 0.0 | 8 | 30 | 11.0 | 11.0 |
| Michigan | 198 | 0 | 2 | 0.0 | 0 | 17 | 0.0 | 0.0 |
| Minnesota | 212 | 0 | 1 | 0.0 | 0 | 39 | 0.0 | 0.0 |
| Missouri | 257 | 0 | 2 | 0.0 | 0 | 11 | 0.0 | 0.0 |
| Nebraska | 76 | 4 | 2 | 5.3 | 0 | 0 | 0.0 | 5.3 |
| New York | 197 | 13 | 8 | 6.6 | 35 | 34 | 17.8 | 23.4 |
| North Carolina | 131 | 0 | 2 | 0.0 | 1 | 13 | 0.8 | 0.8 |
| Ohio | 246 | 0 | 3 | 0.0 | 1 | 15 | 0.4 | 0.4 |
| Oklahoma | 69 | 0 | 1 | 0.0 | 0 | 1 | 0.0 | 0.0 |
| Oregon | 19 | 0 | 1 | 0.0 | 0 | 3 | 0.0 | 0.0 |
| Pennsylvania | 431 | 10 | 6 | 2.3 | 0 | 24 | 0.0 | 2.3 |
| South Carolina | 58 | 0 | 1 | 0.0 | 0 | 6 | 0.0 | 0.0 |
| Tennessee | 194 | 2 | 3 | 1.0 | 0 | 2 | 0.0 | 1.0 |
| Texas | 199 | 0 | 3 | 0.0 | 1 | 8 | 0.5 | 0.5 |
| Utah | 13 | 0 | 1 | 0.0 | 0 | 6 | 0.0 | 0.0 |
| Vermont | 2 | 0 | 1 | 0.0 | 0 | 0 | 0.0 | 0.0 |
| Virginia | 35 | 0 | 2 | 0.0 | 0 | 0 | 0.0 | 0.0 |
| Wisconsin | 95 | 0 | 2 | 0.0 | 0 | 10 | 0.0 | 0.0 |
| Subtotals | 4,426 | 37 | 68 | 0.8 | 53 | 379 | 1.2 | 2.0 |
| States Without Medical Schools | | | | | | | | |
| Alabama | 22 | | | | 0 | 6 | 0.0 | 0.0 |
| Arizona | 10 | | | | 0 | 10 | 0.0 | 0.0 |
| Delaware | 5 | | | | 0 | 5 | 0.0 | 0.0 |
| Florida | 221 | | | | 33 | 53 | 14.9 | 14.9 |
| Idaho | 18 | | | | 0 | 14 | 0.0 | 0.0 |
| Maine | 7 | | | | 0 | 5 | 0.0 | 0.0 |
| Mississippi | 49 | | | | 0 | 11 | 0.0 | 0.0 |
| Montana | 2 | | | | 0 | 2 | 0.0 | 0.0 |
| Nevada | 1 | | | | 1 | 1 | 100.0 | 100.0 |
| New Hampshire | 2 | | | | 0 | 2 | 0.0 | 0.0 |
| New Jersey | 78 | | | | 0 | 17 | 0.0 | 0.0 |
| New Mexico | 0 | | | | 0 | 0 | 0.0 | 0.0 |
| North Dakota | 2 | | | | 0 | 1 | 0.0 | 0.0 |
| Rhode Island | 4 | | | | 0 | 3 | 0.0 | 0.0 |
| South Dakota | 4 | | | | 0 | 3 | 0.0 | 0.0 |
| Washington | 30 | | | | 0 | 17 | 0.0 | 0.0 |
| West Virginia | 20 | | | | 0 | 13 | 0.0 | 0.0 |
| Wyoming | 0 | | | | 0 | 0 | 0.0 | 0.0 |
| Territories & Poss. | 32 | | | | 1 | 19 | 3.1 | 3.1 |
| Subtotals | 502 | | | | 35 | 182 | 7.0 | 7.0 |

records indicated that 39 graduates of foreign faculties of medicine, 8 graduates of unapproved institutions and 6 from approved schools failed five or more times before licensure. Of the foreign graduates 14 had five failures before obtaining a license, 7 failed six examinations, 5 failed seven, 4 eight, 3 nine, 1 each ten, eleven and twelve, 2 thirteen and 1 failed fifteen tests.

The 8 graduates of unapproved institutions failed as follows: five tests, 2, six tests, 3, seven tests, 1, and 1 graduate failed twenty-one tests and another thirty tests, all in Massachusetts, before securing licensure in that state. The majority of these physicians with multiple failures were Massachusetts and New York examinees.

In sixteen states all physicians licensed last year had no failure in a state medical examination before being registered. With the exception of California, Connecticut, the District of Columbia, Illinois, Massachusetts, New Jersey, New York, Ohio and Pennsylvania, the number of physicians licensed throughout the country in each state after previously having failed was less than 10.

## REGISTRATION BY RECIPROCITY AND ENDORSEMENT

The reciprocity and endorsement policies in effect in the United States, Alaska, Hawaii and Puerto Rico are summarized in table 9. Four states, Florida, Idaho, Massachusetts and Rhode Island, as well as Hawaii, have not established reciprocal agreements with regard to medical licensure. With the exception of Florida, these states and Hawaii will register diplomates of the National Board of Medical Examiners. Those desiring licenses by reciprocity or endorsement in sixteen states and the District of Columbia are required to obtain a certificate from the state board of examiners in the basic sciences before being eligible for medical licensure in the given state.

*Some kind of reciprocal relationship* in medical licensure has been established in forty-four states, the District of Columbia, Alaska and Puerto Rico. Twenty-six of these states, Alaska and Puerto Rico have definite reciprocal agreements with specific states. Twenty-six states, including seven which have specific reciprocity agreements, are given discretionary powers under the medical practice act. These twenty-six states will regis-

TABLE 8.—*Failures Before Medical Licensing Boards by Licentiates, 1945*

| | Licenses Issued by Examination Reciprocity or Endorsement | Approved Schools: Licensed After One Failure: Failed in State Where Licensed | Approved Schools: Licensed After One Failure: Elsewhere | Approved Schools: Licensed After Two or More Failures: Failed in State Where Licensed | Approved Schools: Licensed After Two or More Failures: Elsewhere | Approved Schools: Licensed After Two or More Failures: Failed in State Where Licensed and Elsewhere | Foreign Schools: Licensed After One Failure: Failed in State Where Licensed | Foreign Schools: Licensed After One Failure: Elsewhere | Foreign Schools: Licensed After Two or More Failures: Failed in State Where Licensed | Foreign Schools: Licensed After Two or More Failures: Elsewhere | Foreign Schools: Licensed After Two or More Failures: Failed in State Where Licensed and Elsewhere | Unapproved Schools: Licensed After One Failure: Failed in State Where Licensed | Unapproved Schools: Licensed After One Failure: Elsewhere | Unapproved Schools: Licensed After Two or More Failures: Failed in State Where Licensed | Unapproved Schools: Licensed After Two or More Failures: Elsewhere | Unapproved Schools: Licensed After Two or More Failures: Failed in State Where Licensed and Elsewhere | Total Failures by Licentiates 1945 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | 8 | | | | | | | | | | | | | | | | 0 |
| Arizona | 72 | | 2 | | 1 | | | | | | | | | | | | 3 |
| Arkansas | 124 | | | | | | | | | | | | | | | | 0 |
| California | 1 903 | 10 | 9 | 4 | 2 | 2 | 2 | 1 | 1 | 4 | 4 | | | | | | 48 |
| Colorado | 112 | | 2 | | | | | | | | | | | | | | 2 |
| Connecticut | 145 | 3 | 1 | | 2 | | 1 | | 1 | | 1 | | | 2 | | | 11 |
| Delaware | 10 | | | | | | | | | | | | | | | | 0 |
| District of Columbia | 19 | 1 | 4 | | | | | 3 | | 4 | | | | | | | 12 |
| Florida | 152 | 1 | 2 | | | 1 | | | | | | | | | | | 4 |
| Georgia | 141 | | | | 1 | | | | | | | | | | | | 1 |
| Idaho | 10 | | | | | | | | | | | | | | | | 0 |
| Illinois | 481 | 4 | 4 | 2 | 1 | | 4 | | | 1 | | | | | | | 16 |
| Indiana | 277 | | | | | | | | | | | | | | | | 0 |
| Iowa | 117 | | | | | | | | | | | | | | | | 0 |
| Kansas | 106 | | 2 | | | | | | | | | | | | | | 2 |
| Kentucky | 100 | | | | | | | | | | | | | | | | 0 |
| Louisiana | 240 | 1 | | | 1 | | | | | | | | | | | | 2 |
| Maine | 21 | | 1 | | | | | | | | | | | | | | 1 |
| Maryland | 246 | | 2 | | 1 | | | 1 | 1 | | | | | | | | 5 |
| Massachusetts | 267 | 3 | 3 | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | 5 | | 23 | | | 42 |
| Michigan | 319 | | 3 | | | | | | | | | | | | | | 3 |
| Minnesota | 275 | | 1 | | | | | | | | | | | | | | 1 |
| Mississippi | 70 | | | | | | | | | | | | | | | | 0 |
| Missouri | 300 | | 2 | | | | | | | | | | | | | | 2 |
| Montana | 13 | 1 | | | | | | | | | | | | | | | 1 |
| Nebraska | 86 | 2 | | | | | | | | | | 2 | | | | | 4 |
| Nevada | 20 | | | | | | | | | | | | | | | | 0 |
| New Hampshire | 25 | | | | | | | | | | | | | | | | 0 |
| New Jersey | 331 | | 5 | | 1 | | 1 | 9 | | 25 | 2 | | | | | | 43 |
| New Mexico | 29 | | 1 | | 1 | | | | | | | | | | | | 2 |
| New York | 709 | 25 | 1 | 8 | | | 31 | 2 | 48 | 1 | 7 | | | | | | 123 |
| North Carolina | 196 | | | | | | | | | | | | | | | | 0 |
| North Dakota | 8 | | | | | | | | | | | | | | | | 0 |
| Ohio | 432 | | 2 | | 2 | | | | | 2 | | 7 | 1 | 2 | | | 16 |
| Oklahoma | 111 | | 3 | | | | | | | | | | | | | | 3 |
| Oregon | 61 | | | | 1 | | | | | | | | | | | | 1 |
| Pennsylvania | 518 | 8 | 3 | | | | | | | | | | | | | | 11 |
| Rhode Island | 30 | | | | | | | | | 1 | | | | | | | 1 |
| South Carolina | 87 | 1 | 2 | | 2 | | | | | | | | | | | | 5 |
| South Dakota | 12 | | | | | | | | | | | | | | | | 0 |
| Tennessee | 291 | | 1 | | 1 | | | | | | | | | | | | 2 |
| Texas | 441 | | 1 | | 1 | | | 1 | | | | | | 1 | | | 4 |
| Utah | 61 | | | | | | | | | | | | | | | | 0 |
| Vermont | 49 | | | | | | | | | | | | | | | | 0 |
| Virginia | 83 | | | | | | | | | 1 | | | | | 1 | | 2 |
| Washington | 87 | | 1 | | | | | 1 | | | | | | | | | 2 |
| West Virginia | 37 | | | | 1 | | | | | | | | | | | | 1 |
| Wisconsin | 148 | | 3 | | | | | | | 1 | | | | | | | 4 |
| Wyoming | 6 | | | | | | | | | | | | | | | | 0 |
| Alaska Hawaii Puerto and Virgin Islands | 64 | | 1 | | | | | | | | | | | | | | 1 |
| Totals | 9 133 | 69 | 62 | 16 | 19 | 4 | 40 | 19 | 52 | 41 | 15 | 14 | 1 | 28 | 1 | 0 | 381 |

ter physicians who present credentials which correspond with those required by their respective states at the time such licenses are issued The states in which diplomates of the National Board of Medical Examiners are accepted for licensure on the basis of these credentials are also indicated

of medicine on a reciprocal basis Additional requisites or exemptions are included in footnotes

This chart will be available in reprint form It has proved to be of material assistance to physicians who are contemplating locating in another state The facts recorded in this table are intended to be

TABLE 9—*Reciprocity and Endorsement*

| Marginal Number | The Examining Board of | Reciprocates with or Endorses Certificates Granted by: Alabama | Arizona | Arkansas | California | Colorado | Connecticut | Delaware | Dist. of Columbia | Florida | Georgia | Idaho | Illinois | Indiana | Iowa | Kansas | Kentucky | Louisiana | Maine | Maryland | Massachusetts | Michigan | Minnesota | Mississippi | Missouri | Montana | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | Marginal Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Alabama | | | + | + | + | | + | + | | + | | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | | + | | 1 |
| 2 | Arizona | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 3 | Arkansas (regular board) | + | + | | + | + | | | + | | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | | + | + | | + | + | 3 |
| 4 | California | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| 5 | Colorado | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| 6 | Connecticut (reg. & homeo. bds.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| 7 | Delaware (regular board) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 |
| 8 | District of Columbia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| 9 | Florida | No reciprocity or endorsement policies | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 |
| 10 | Georgia | + | | + | + | + | | | + | | | | | + | + | + | + | + | + | + | | + | + | + | + | | + | + | + | + | + | 10 |
| 11 | Idaho | No reciprocal relations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 |
| 12 | Illinois | + | | + | + | + | | | | | | | | + | + | + | + | + | + | + | | + | | + | + | | + | + | | + | | 12 |
| 13 | Indiana | + | | + | + | + | | | + | | + | | +[32] | | + | + | + | + | + | + | | + | | + | + | | + | + | + | + | + | 13 |
| 14 | Iowa | + | | + | + | + | | + | + | | + | | + | + | | + | + | + | + | + | | + | | + | + | + | + | + | + | + | + | 14 |
| 15 | Kansas | + | + | +[10] | + | | | + | + | | + | | + | + | + | | | + | + | + | | + | | + | + | + | + | + | + | + | + | 15 |
| 16 | Kentucky | + | | + | + | + | | + | + | | + | | + | + | + | + | | | + | + | | + | + | + | + | | + | + | + | + | + | 16 |
| 17 | Louisiana (reg. & homeo. bds.) | + | + | + | + | + | | + | + | | + | | + | + | + | + | + | | | + | | + | + | + | + | | + | + | + | + | + | 17 |
| 18 | Maine | | | + | + | + | | + | + | | + | | + | + | + | + | + | + | | + | | + | + | | + | + | + | + | | + | + | 18 |
| 19 | Maryland (reg. & homeo. bds.) | + | | + | + | | | | + | | + | | + | + | + | + | + | + | + | | | + | + | + | + | + | + | + | + | + | + | 19 |
| 20 | Massachusetts | No reciprocal relations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 |
| 21 | Michigan | + | + | + | + | + | + | + | + | | + | | + | + | + | + | + | + | + | + | | | + | + | + | + | + | + | + | + | + | + | 21 |
| 22 | Minnesota | + | + | + | + | + | + | + | | | + | | | | + | | + | + | + | + | | + | | + | + | + | + | + | + | + | + | 22 |
| 23 | Mississippi | + | + | + | + | + | + | + | + | | + | | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | 23 |
| 24 | Missouri | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 |
| 25 | Montana | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 25 |
| 26 | Nebraska | + | + | + | + | + | + | + | + | | + | | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | 26 |
| 27 | Nevada | | | +[21] | + | + | | | | | + | | + | + | + | + | + | + | + | + | | + | + | + | | + | + | | + | | | 27 |
| 28 | New Hampshire | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 28 |
| 29 | New Jersey | + | | | + | + | | | + | | + | | + | + | + | + | + | + | + | + | | + | + | | | | + | | + | | | 29 |
| 30 | New Mexico | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 |
| 31 | New York | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 31 |
| 32 | North Carolina | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 32 |
| 33 | North Dakota | + | | + | + | + | | | | | + | | + | + | + | + | + | + | + | | | + | | + | + | + | + | + | + | + | + | 33 |
| 34 | Ohio | + | + | + | + | + | + | + | + | | + | | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | 34 |
| 35 | Oklahoma | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 35 |
| 36 | Oregon | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 36 |
| 37 | Pennsylvania | | | | | | | | | | | | | | | | | | | - | | | | | | | | | | | | | 37 |
| 38 | Rhode Island | No reciprocal relations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 38 |
| 39 | South Carolina | + | | | | | | | + | | + | | | | | + | + | + | + | + | | + | | | | | + | | + | + | | 39 |
| 40 | South Dakota | + | + | + | + | + | | | | | + | | | + | + | + | + | + | | | | + | + | + | | + | + | + | | | + | 40 |
| 41 | Tennessee | + | + | + | + | + | + | + | + | | + | | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | | + | + | + | 41 |
| 42 | Texas | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 42 |
| 43 | Utah | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 43 |
| 44 | Vermont | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 44 |
| 45 | Virginia | + | | + | + | | | + | + | | + | | | + | + | + | + | + | + | + | | + | + | + | | + | | | + | + | + | 45 |
| 46 | Washington | + | | | + | + | | | | | + | | | | + | | + | + | | + | | + | + | + | + | + | + | | | | | 46 |
| 47 | West Virginia | + | | + | | | | + | + | | + | | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | | + | | 47 |
| 48 | Wisconsin | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | 48 |
| 49 | Wyoming | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| 50 | Alaska | + | | + | + | + | + | | + | | | | | + | | + | + | | | + | | + | + | | + | | | + | + | + | | 50 |
| 51 | Hawaii | No reciprocal relations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 51 |
| 52 | Puerto Rico | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 52 |

This summary should be supplemented by direct communication with the

Some states have additional requirements for graduates of schools outside the United States and Canada

+ indicates reciprocal or endorsement relationships have been established indicates no reciprocal or endorsement relationships have been established (See column— At the discretion of the board )

1 1st P first papers required ⊕ in citizenship column indicates full citizenship required

2 In most cases there is a small additional recording or registration fee

3 If state of original license grants similar privileges

4 Internship accepted in lieu of one year's practice

5 Professional practice required

6 All applicants must be graduates of a medical school approved by the American Medical Association

7 Just preceding application

8 No basic science reciprocity—examination must be within the state

9 Basic science certificate required either by reciprocity or examination in addition to basic science subjects of National Board

10 Canadian citizens are required to file first papers

11 Leading medical schools of Great Britain recognized

12 Oral examination required when original license is ten or more years old

13 Applicant must have resided in the state used as basis of application for one year after date on said certificate

14 Oral examination required

15 Unless in practice in another state for five years

16 Actual practice for a period of three years immediately preceding date of application

17 Practical clinical examination required

18 Foreign graduates only

19 Regular and Homeopathic boards

Specific requirements, such as professional practice, oral examination and internship, are recorded, as is also the fee for a license without written examination Citizenship prerequisites are mentioned In some states physicians of Canadian birth are exempt from the citizenship requirement This is indicated in footnotes Few states will accept graduates of foreign faculties merely general statements of licensure policies A physician using this chart for reciprocity purposes should supplement the information contained therein by direct communication with the secretary of the licensing board of the state in which he is interested

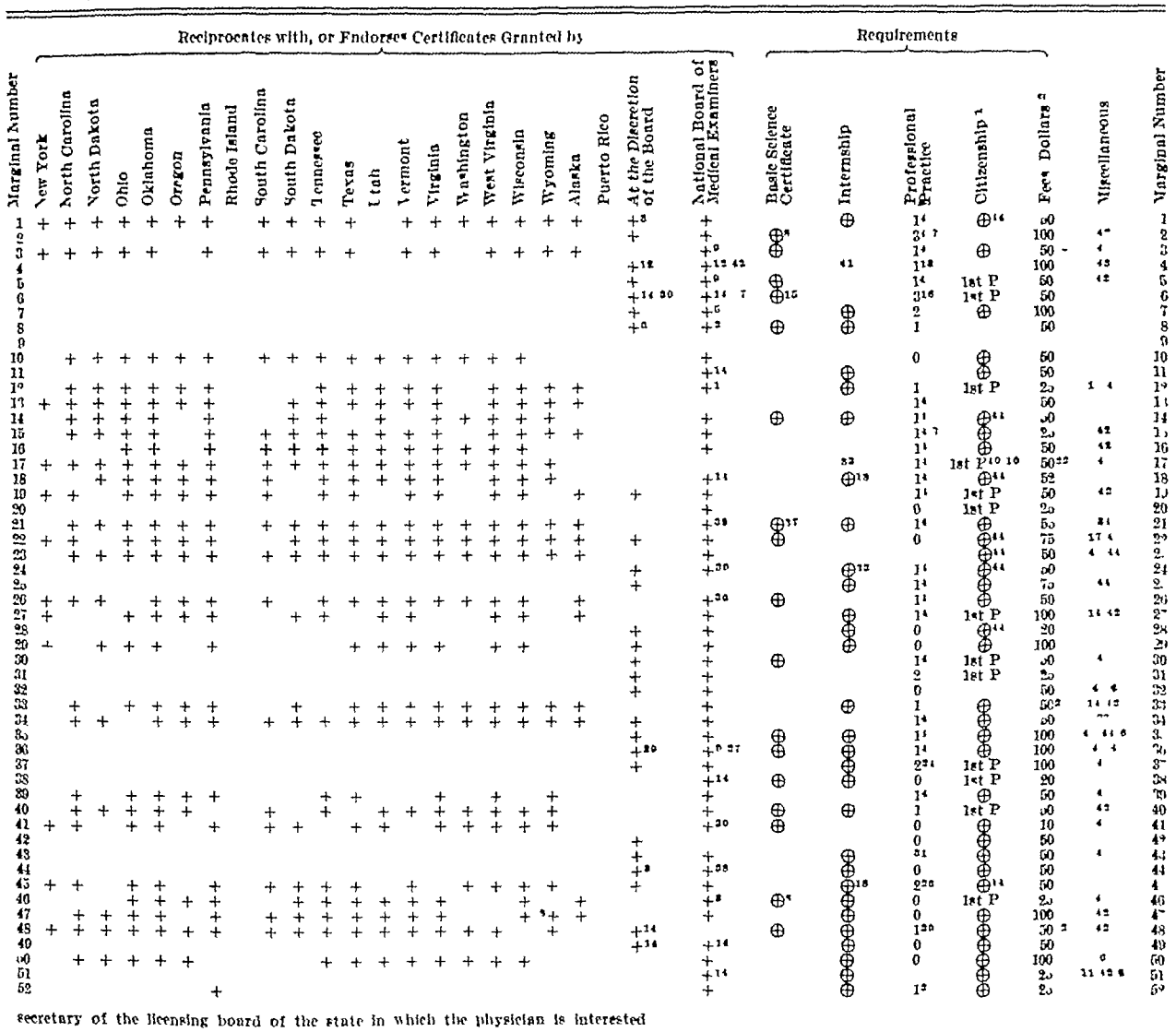
The credentials presented by physicians granted licenses to practice medicine and surgery without writ-

ten examination are given in table 10 There were 3 612 so registered on the basis of licenses previously issued by other states, the District of Columbia, the territories or possessions or foreign countries, the certificate of the National Board of Medical Examiners or one of the government services

the same type of credentials were the 1,103 presenting certificates of the National Board of Medical Examiners On the basis of the National Board's certificate 407 were certified by New York and 143 by Massachusetts

More than 100 physicians presented licenses issued in Illinois, Maryland, Michigan, Missouri, New York,

*Policies of State Medical Boards*




secretary of the licensing board of the state in which the physician is interested

20 Licentiates of Florida Idaho Massachusetts Rhode Island and Hawaii not eligible for license by reciprocity
21 Regular board
22 Fee same as applicant's state charges if more than $50
23 Oral examination required if applicant's state requires it
24 If the applicant passes the examination in the state from which he transfers after the completion of his internship, no practice is required
25 Two year residency accepted in lieu of one year's practice
26 Internship accepted—considered equivalent to two years practice
27 Fee $25
28 Conditionally
29 A two year internship is accepted
30 Diplomates of National Board not required to have been in practice for three years
31 Same as required of Utah candidates applying for licensure
32 Clinical examination required.
33 Reciprocity applicants only
34 Supplemental examination required in certain cases when accepting the examination of a state with whom reciprocal relations have not been established
35 May be licensed after a special (written) supplemental examination
36 Fee for license on basis of National Board certificate $50
37 For matriculants after Oct 15 1937
38 Fee $20
39 Fee $15
40 Permanent license withheld until completion of citizenship
41 Graduates of foreign medical schools effective Sept 15 1935 Canadian schools exempted effective Sept 10 1939
42 Graduates of foreign medical school are not accepted
43 Graduates of foreign medical schools must have fulfilled all requirements of California prior to admittance to examination for any certificate used as basis of application to California
44 Not applicable to citizens of Canada

California issued 708 licenses by this method, New York 512 and New Jersey 236 Seven other states endorsed 100 or more candidates, namely the District of Columbia 177, Michigan 160, Texas 145 Massachusetts 143 Ohio 127, Connecticut 105 and Maryland 101 The largest numbers of candidates presenting Ohio, Pennsylvania and Tennessee The greatest number (298) were licensed on the basis of previous registration in New York Other states registered 69 physicians holding California licenses, while that state licensed on credentials 708 physicians from other states Similarly other states licensed 37 physicians from New

TABLE 10—*Candidates Licensed by Reciprocity and Endorsement, 1945*

| State Issuing License by Reciprocity or Endorsement | Total Licensed | Alabama | Arizona | Arkansas | California | Colorado | Connecticut | Delaware | District of Columbia | Florida | Georgia | Idaho | Illinois | Indiana | Iowa | Kansas | Kentucky | Louisiana | Maine | Maryland | Massachusetts | Michigan | Minnesota | Mississippi | Missouri | Montana | Nebraska | Nevada | New Hampshire | New Jersey | New Mexico | New York | North Carolina | North Dakota | Ohio | Oklahoma | Oregon | Pennsylvania | Rhode Island | South Carolina | South Dakota | Tennessee | Texas | Utah | Vermont | Virginia | Washington | West Virginia | Wisconsin | Wyoming | U S Govt Services | National Board of Medical Examiners | U S Terr and Possessions | Canadian & Foreign | Miscellaneous |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Source of Former License or Credentials | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marginal Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 23 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 |
| Alabama | 61 | | | 4 | 1 | | | | | | 8 | | 3 | | | | 1 | 7 | | 2 | | 1 | | 1 | 3 | | 1 | | | | | 5 | | | 1 | | | 2 | | | 13 | 2 | | 1 | 1 | | | | | | 5 | | | |
| Arizona | 21 | | | 1 | 2 | | | | | | | | 1 | | 2 | | | | | 1 | | | | | 1 | | 1 | | | | | 2 | 1 | | 1 | | | 1 | | | | | | | 1 | | | | | 3 | | 1 | |
| Arkansas | 11 | | | | 1 | | 1 | | | | | | 2 | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | | | | | | 3 | | | | | 1 | | | | 1 | | | |
| California | 708 | 2 | 3 | 4 | | 12 | 3 | | 4 | 3 | 9 | 2 | 108 | 16 | 6 | 15 | 8 | 10 | 1 | 21 | 3 | 38 | 37 | 4 | 25 | 4 | 10 | 1 | | 10 | | 68 | 2 | 1 | 45 | 7 | 12 | 34 | 2 | 1 | 1 | 9 | 12 | 5 | | 5 | 16 | 3 | 14 | | 11 | 98 | 1 | | |
| Colorado | 46 | | | 2 | 5 | | | | | | | | 5 | 2 | 1 | | 1 | 2 | | | | 1 | 5 | | | | 8 | | | | | 2 | | | 1 | 1 | | 1 | | | | | | | | | 1 | | | | 8 | | | |
| Connecticut | 105 | | | | 1 | | | | | | | | 1 | 1 | | | 1 | | | 5 | 5 | 1 | 2 | | | | | | | 2 | | 22 | | | | | 1 | | 2 | 2 | | | | 1 | 2 | | | 1 | 2 | | | 52 | | | |
| Delaware | 11 | | | | 1 | | | | 1 | | | | | | | | | | | 2 | 1 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 | | |
| Dist Columbia | 177 | 1 | | | 2 | | 2 | | | | 4 | | 5 | 4 | | 1 | 1 | 8 | | 19 | | 4 | | | 1 | | 4 | | | 8 | | 21 | 2 | | 7 | | | 12 | | | 5 | 1 | | | 17 | | 2 | 2 | | | 47 | 2 | | |
| Florida | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Georgia | 17 | 1 | | | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | 1 | | | 1 | | 2 | | | 5 | | | 1 | 1 | | | | | 2 | | | |
| Idaho | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| Illinois | 61 | | | 1 | 1 | 1 | | | | | | | | 1 | 2 | 4 | 1 | | | | | 4 | 2 | | 11 | | 1 | | | | | | | | 2 | | | | | | 2 | 1 | | | | 1 | 6 | | 3 | 20 | | | |
| Indiana | 40 | | | | 1 | | | | | | | | 10 | | 1 | | 2 | | 1 | | | 5 | | | 1 | | 1 | | | | | 5 | | 1 | 4 | | | | | | | | 1 | | | 2 | | | 9 | | | |
| Iowa | 19 | | | | | | | | | | | | 5 | | | | | | | | | 1 | | | 2 | | 1 | | | | | 1 | | | | 1 | | 2 | | | | | 1 | | | | | | 5 | | | |
| Kansas | 11 | | | | | | | | | | 1 | | | | | | | | | | | | | | 3 | | 1 | | | | | | | | | | | 1 | | | | | 1 | | | 1 | | | 3 | | | |
| Kentucky | 31 | 1 | | | | | | | | 1 | | | 2 | | 1 | | | 3 | | 1 | | | | 1 | | | 1 | | | 1 | | 2 | | | 3 | | | 3 | | 1 | | 2 | | | | | | 1 | 4 | | | |
| Louisiana | 31 | 2 | | | 1 | | | | 1 | | | | 1 | | | | 3 | | | 2 | | | | | | | 1 | | | | | 2 | | | 2 | 1 | | 2 | | | 3 | 3 | | | | 1 | 1 | | | | | | |
| Maine | 12 | | | | 1 | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | 8 | | | |
| Maryland | 101 | | | 1 | 1 | | 1 | 1 | 37 | | 1 | | | | | | | 1 | | | | 2 | | 1 | | | | | | 2 | | 9 | 3 | | 3 | 1 | | 9 | | | 3 | | | 5 | | 1 | 1 | | | 17 | | | 1 |
| Massachusetts | 143 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 143 | | | |
| Michigan | 168 | | | 2 | 4 | 2 | | | | | | | 17 | 14 | 6 | 5 | 1 | 1 | 2 | 3 | | | 7 | 1 | 10 | | 2 | | | | 1 | 9 | 3 | | 16 | 4 | | 7 | | 1 | | 18 | 6 | | 2 | 2 | 4 | | | 11 | | | |
| Minnesota | 38 | 1 | | 3 | 3 | | | | 2 | | 1 | | | | 2 | | | 1 | | | | 7 | | | 2 | 1 | 3 | | | | | 2 | | | | 1 | 1 | 2 | | | | | | | 1 | | | 5 | | 20 | | | |
| Mississippi | 19 | 1 | | 1 | | | 1 | | | | | | 2 | 1 | | | | 1 | | 2 | | 1 | 1 | | | | | | | | | | 1 | | | | | | | | | 4 | | | | 1 | | | | | 2 | | | |
| Missouri | 47 | | | 3 | 1 | | 1 | | | | | | 1 | | 3 | 9 | 1 | 1 | | | | | | | | | 1 | | | | | 3 | 1 | | 3 | 2 | | 2 | | | 6 | 2 | | | | | | | | 7 | | | |
| Montana | 10 | | | | 1 | 1 | | | | | | | 1 | | 2 | | | | | 1 | | | 2 | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | |
| Nebraska | 12 | | | | 1 | | | | | | | | | | 3 | 1 | | 1 | | | | | | | 1 | | | | | | | | | | | 1 | | 1 | | | | 1 | | | | | 1 | | | | 1 | | | |
| Nevada | 10 | | | | 0 | | | | | | 1 | | | | 1 | | | | | | | 1 | 1 | 1 | | | | | | | 1 | 1 | | | 1 | | | 1 | | | | | | 1 | | | | | | 1 | | | |
| New Hampshire | 10 | | | | | | | | | 1 | | | | | | | | | | 1 | 8 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | |
| New Jersey | 236 | 1 | | 1 | | | 1 | 2 | 3 | 1 | 1 | | 7 | 2 | 4 | 1 | 1 | 6 | 2 | 7 | 1 | 3 | 1 | | 5 | | | | | | | 84 | | | 1 | | | 28 | | | 7 | 1 | | 1 | 1 | | 1 | | | | 62 | | | |
| New Mexico | 29 | | | | | | | | | | | | 2 | 1 | | | | 1 | 1 | 1 | | 1 | 1 | | 1 | | | | | | | 3 | | | 4 | | | 1 | | | 3 | 4 | | | | | | 1 | | | 3 | | | |
| New York | 512 | | | | 8 | | | | 1 | | | | | 3 | 7 | | | 5 | | 23 | | 6 | 2 | | 8 | | 2 | | | | | | 3 | | | | | 1 | 20 | | | | 3 | | 1 | 3 | | | 3 | | | 407 | 1 | 5 | |
| North Carolina | 64 | | | 1 | | 1 | | | | | 6 | | | | 1 | | | 1 | | 2 | | 1 | | | 2 | | | | | | | 3 | | | 6 | | | 4 | | 4 | 1 | 2 | | | 1 | 5 | | 1 | | | 23 | | | |
| North Dakota | 4 | | | 1 | | | | | | | | | | | | | 1 | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ohio | 127 | | | 3 | 4 | 2 | | | | | 2 | | 6 | 3 | 2 | 3 | 6 | 1 | | 3 | | 11 | 1 | | 14 | | 1 | | | 1 | | 13 | 1 | 1 | | | | 19 | | | 1 | | | | 3 | | 2 | 3 | | | 19 | | | |
| Oklahoma | 41 | | | 3 | | 3 | | | | | 1 | | 2 | | 1 | 4 | 1 | 2 | | | | 2 | | | 4 | | | | | 1 | | | | | 2 | | | 1 | | | 2 | 3 | | 1 | | | | 2 | | | 6 | | | |
| Oregon | 37 | | | | 2 | 1 | | | | | 1 | | 5 | 1 | 3 | | | | | 1 | | 1 | 2 | | 6 | | 3 | | | | | 2 | | | 1 | 1 | | | | | | 1 | | | | 1 | | 2 | | | 2 | | | |
| Pennsylvania | 92 | | | | 2 | 1 | | | 1 | | | | 1 | 1 | 5 | | | 1 | | 2 | | 4 | | | 2 | | 1 | | | 10 | | 7 | 3 | | 7 | | | | | | 2 | 2 | | | 3 | 1 | 2 | | | 30 | | | 5 |
| Rhode Island | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | | | |
| South Carolina | 29 | 1 | | | | | | | | | 2 | | 2 | | | | 1 | | 3 | | 1 | | | | | | | | | | | | | 6 | | | 2 | | | 7 | | | | | | | 2 | | | | 2 | | | |
| South Dakota | 6 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | | | | | 1 | | | 1 | | | | | 1 | | 1 | | | | | | | | | | |
| Tennessee | 45 | 1 | | 1 | 2 | | | | 1 | | 3 | | 2 | 1 | 3 | | | 1 | 2 | 1 | | 2 | | 2 | 3 | | | | | 1 | | 6 | 1 | | 3 | | | 1 | | | | | | | 3 | | | 1 | | 4 | | | |
| Texas | 145 | 2 | | 4 | | 2 | | | 1 | | 2 | | 9 | 4 | 4 | 2 | 1 | 14 | 2 | 3 | | 5 | 2 | 4 | 8 | | 1 | | | 1 | | 14 | 2 | | 18 | 3 | | 5 | | 1 | 1 | 15 | | 1 | | 3 | | 6 | | 4 | 1 | | |
| Utah | 33 | | | | 3 | | 1 | | | | 1 | | 9 | 1 | | | 1 | 1 | | | | | 1 | | 3 | | 1 | | | | | | | | 2 | | | 1 | | | 1 | | | | | 1 | | | | 1 | 5 | | | |
| Vermont | 35 | 1 | | | | | | | | | | | 2 | | | | | | | | | 1 | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 27 | | 1 | |
| Virginia | 44 | | | 1 | 1 | | | | 8 | | 2 | | 1 | | | 1 | | | | 2 | | 2 | | | 2 | | | | | | | 4 | 2 | | 2 | | | 2 | | 1 | | 5 | | 1 | | | 2 | | 2 | 3 | | | |
| Washington | 51 | | | | 5 | 1 | | | | | | | | 2 | | | 1 | 1 | | 1 | | 4 | 8 | | 3 | 1 | 1 | | | | | | | | 4 | 3 | 1 | 6 | | | | | | 2 | 1 | | | 4 | | | 4 | | | |
| West Virginia | 17 | | | | | 1 | | | | | | | 1 | | 1 | | | 1 | 1 | 1 | | | | | 2 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | 3 | | | |
| Wisconsin | 62 | | | | 3 | 1 | | | | | | | 7 | | 2 | | | 2 | | | | 2 | 4 | | 12 | | 3 | | | | | 4 | | | 2 | | 1 | 3 | | | | 1 | | | | 1 | | | 4 | | | |
| Wyoming | 6 | | | | | 1 | | | | | | | 2 | | | | | | | | | 1 | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | 4 | | | |
| U S Terr & Poss | 23 | | | | 1 | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 10 | | | 8 |
| Totals | 3 012 | 15 | 3 | 37 | 69 | 30 | 11 | 3 | 60 | 6 | 42 | 2 | 224 | 59 | 62 | 48 | 37 | 67 | 11 | 109 | 18 | 117 | 80 | 20 | 136 | 6 | 59 | 1 | 0 | 37 | 2 | 298 | 32 | 4 | 146 | 27 | 17 | 175 | 4 | 15 | 5 | 129 | 45 | 10 | 11 | 63 | 23 | 22 | 59 | 1 | 26 | 1 | 103 | 4 | 8 | 14 |
| Marginal Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 |

Jersey, while that state endorsed credentials of 236 from outside the state On the other hand Illinois endorsed only 64 credentials from other sources, while other states accepted 224 candidates previously licensed in Illinois No physician holding a New Hampshire certificate applied for registration in another state during the year, and only 1 physician from Nevada and Wyoming sought licensure elsewhere Florida, with no reciprocity or endorsement policies, licensed no one except by the regular examination procedures

Eight were admitted to private practice in the Virgin Islands on presentation of satisfactory credentials Twenty-six medical officers of one of the government services received licenses without written examination in seven states California 11, Texas 4, Wisconsin 4, Illinois 3, Virginia 2, Kentucky 1 and Utah 1

Five physicians who were legal residents of Pennsylvania and were qualified to take the state board examination but were prevented from doing so by their service in the armed forces were licensed without examination in Pennsylvania under the provisions of Act No 132, approved April 25, 1945

Two physicians were licensed in the District of Columbia and 1 each in California and New York on credentials from one of the possessions of the United States The foreign credentials of 8 physicians were accepted as a basis for licensure without examination Arizona (Canadian license), Delaware (England), New York (Canada, Manitoba, Austria, France and Germany) and Vermont (Quebec)

Included in the table are 35 osteopaths licensed without examination These individuals secured licenses in the District of Columbia, Indiana, Ohio, Oregon, Texas and Wisconsin

Diplomates of the National Board of Medical Examiners were registered on the basis of this credential by forty licensing boards in the United States and by the boards of Hawaii and Puerto Rico last year There were 1,103 individuals who presented these credentials Of all who were registered by reciprocity and endorsement nearly one third presented National Board credentials

The number of physicians securing licenses by reciprocity or by endorsement has been steadily increasing in recent years The figure for 1945 (3,612) represented 1,023 more licenses issued by this method than in 1944

## LICENTIATES REPRESENTING ADDITIONS TO THE MEDICAL PROFESSION

Licentiates of 1945 who received their first license to practice medicine and surgery during the year and therefore represent additions to the physician population of the United States, Alaska, Hawaii, Puerto Rico and the Virgin Islands are recorded in table 11 The figures in this compilation represent candidates examined in 1945 and immediately licensed, also those examined in previous years whose licenses were withheld for lack of internship, citizenship and other technicalities and issued in 1945, and those without a state license who were during the year certified on the basis of the examinations of the National Board of Medical Examiners, government services or Canadian and foreign credentials The majority licensed by examination represent recent graduates who received their training under the A S T or Navy V-12 programs and will enter active duty with the Armed forces on completion of an internship Therefore only a small percentage of the 1945 licentiates who received licenses after examination can be considered to be additions to the present civilian physician population

There were 5,707 additions to the medical profession in 1945 The number removed by death in the United States, possessions and temporary foreign in the same period was 3,815 [2] It would appear therefore that the physician population in the United States last year was increased by 1,892 There was a decrease of 1,252 new licentiates as compared with the previous year's figure of 6,959, but the 1945 figure corresponds to the annual prewar excess of physicians added to

TABLE 11.—*Licentiates Representing Additions to the Medical Profession, 1945*

| | Examination | Reciprocity and Endorsement | Total |
|---|---|---|---|
| Alabama | 19 | 3 | 22 |
| Arizona | 5 | 2 | 7 |
| Arkansas | 123 | 1 | 124 |
| California | 438 | 34 | 472 |
| Colorado | 61 | 1 | 62 |
| Connecticut. | 27 | 31 | 58 |
| Delaware | 5 | 1 | 6 |
| District of Columbia | 13 | 38 | 51 |
| Florida | 26 | 0 | 26 |
| Georgia | 124 | 1 | 125 |
| Idaho | 4 | 0 | 4 |
| Illinois | 348 | 9 | 357 |
| Indiana | 229 | 3 | 232 |
| Iowa | 91 | 5 | 96 |
| Kansas | 91 | 1 | 92 |
| Kentucky | 75 | 0 | 75 |
| Louisiana | 203 | 0 | 203 |
| Maine | 5 | 3 | 8 |
| Maryland | 152 | 6 | 158 |
| Massachusetts | 69 | 121 | 190 |
| Michigan | 178 | 4 | 182 |
| Minnesota | 160 | 5 | 165 |
| Mississippi. | 48 | 1 | 49 |
| Missouri | 258 | 2 | 260 |
| Montana | 3 | 0 | 3 |
| Nebraska | 73 | 0 | 73 |
| Nevada | 1 | 0 | 1 |
| New Hampshire.. | 6 | 3 | 9 |
| New Jersey | 89 | 30 | 119 |
| New Mexico | 0 | 0 | 0 |
| New York | 248 | 370 | 618 |
| North Carolina | 132 | 16 | 148 |
| North Dakota | 0 | 0 | 0 |
| Ohio | 321 | 7 | 328 |
| Oklahoma | 67 | 2 | 69 |
| Oregon | 20 | 2 | 22 |
| Pennsylvania | 408 | 22 | 430 |
| Rhode Island | 10 | 11 | 21 |
| South Carolina | 54 | 0 | 54 |
| South Dakota | 5 | 0 | 5 |
| Tennessee | 242 | 2 | 244 |
| Texas | 291 | 2 | 293 |
| Utah | 26 | 2 | 28 |
| Vermont | 14 | 16 | 30 |
| Virginia | 37 | 1 | 38 |
| Washington | 7 | 0 | 7 |
| West Virginia | 12 | 0 | 12 |
| Wisconsin | 90 | 3 | 93 |
| Wyoming | 0 | 0 | 0 |
| Alaska Hawaii Puerto Rico Virgin Islands | 33 | 7 | 40 |
| Totals | 4 939 | 768 | 5 707 |

the profession over deaths While a decrease in the civilian physician population had resulted because of the active military service obligation of recent graduates there has been an increase in the number of physicians licensed without examination, as seen in table 1 as a result of the veteran medical officers returning to civilian practice

The greatest number of physicians in any one state, 616, was added to the profession in New York Both California and Pennsylvania added more than 400 and Illinois and Ohio more than 300 By comparison with 1944 figures [1] it can be noted that more were licensed and represent additions to the profession in 1945 in the cases of Alabama, Arkansas, California, Connecticut, District of Columbia, Florida, Illinois, Indiana, Iowa, North Carolina, Tennessee, Texas, Utah, Ver-

2 J A M A 130 148 (Jan 19) 1946

mont, Wisconsin and the territories and possessions The comparison of figures with 1944 showing increases in a number of states is significant since figures for the previous year represented two graduating classes in many instances Indiana University was the only school that had two classes examined in 1945 No one was added to the profession as a first licentiate in New Mexico, North Dakota and Wyoming, while in thirteen states between 100 and 299 received initial licenses Twenty-seven states, the District of Columbia, Alaska, Hawaii, Puerto Rico and the Virgin Islands added fewer than 100 The 5,707 licentiates constituting additions to the medical profession last year represented 4,939 who secured their licenses by examination and 768 by endorsement of credentials The latter represent mainly diplomates of the National Board of Medical Examiners

TABLE 12—*Licentiates Representing Additions to the Medical Profession Grouped in Geographic Divisions, 1945*

| | Examination | Reciprocity and Endorsement | Total |
|---|---|---|---|
| New England | | | |
| Maine | 5 | 3 | 8 |
| New Hampshire | 6 | 3 | 9 |
| Vermont | 14 | 16 | 30 |
| Massachusetts | 69 | 121 | 190 |
| Rhode Island | 10 | 11 | 21 |
| Connecticut | 27 | 31 | 58 |
| | 131 | 185 | 316 |
| Middle Atlantic | | | |
| New York | 246 | 370 | 616 |
| New Jersey | 89 | 30 | 119 |
| Pennsylvania | 408 | 22 | 430 |
| | 743 | 422 | 1,165 |
| East North Central | | | |
| Ohio | 321 | 7 | 328 |
| Indiana | 229 | 3 | 232 |
| Illinois | 348 | 9 | 357 |
| Michigan | 178 | 4 | 182 |
| Wisconsin | 90 | 3 | 93 |
| | 1 166 | 26 | 1 192 |
| West North Central | | | |
| Minnesota | 160 | 5 | 165 |
| Iowa | 91 | 5 | 96 |
| Missouri | 258 | 2 | 260 |
| North Dakota | 0 | 0 | 0 |
| South Dakota | 5 | 0 | 5 |
| Nebraska | 73 | 0 | 73 |
| Kansas | 91 | 1 | 92 |
| | 678 | 13 | 691 |
| South Atlantic | | | |
| Delaware | 5 | 1 | 6 |
| Maryland | 152 | 6 | 158 |
| District of Columbia | 13 | 38 | 51 |
| Virginia | 37 | 1 | 38 |
| West Virginia | 12 | 0 | 12 |
| North Carolina | 132 | 16 | 148 |
| South Carolina | 54 | 0 | 54 |
| Georgia | 124 | 1 | 125 |
| Florida | 26 | 0 | 26 |
| | 555 | 63 | 618 |
| East South Central | | | |
| Kentucky | 75 | 0 | 75 |
| Tennessee | 242 | 2 | 244 |
| Alabama | 19 | 3 | 22 |
| Mississippi | 48 | 1 | 49 |
| | 384 | 6 | 390 |
| West South Central | | | |
| Arkansas | 123 | 1 | 124 |
| Louisiana | 203 | 0 | 203 |
| Oklahoma | 67 | 2 | 69 |
| Texas | 291 | 2 | 293 |
| | 684 | 5 | 689 |
| Mountain | | | |
| Montana | 3 | 0 | 3 |
| Idaho | 4 | 0 | 4 |
| Wyoming | 0 | 0 | 0 |
| Colorado | 61 | 1 | 62 |
| New Mexico | 0 | 0 | 0 |
| Arizona | 5 | 2 | 7 |
| Utah | 26 | 2 | 28 |
| Nevada | 1 | 0 | 1 |
| | 100 | 5 | 105 |
| Pacific | | | |
| Washington | 7 | 0 | 7 |
| Oregon | 20 | 2 | 22 |
| California | 438 | 34 | 472 |
| | 465 | 36 | 501 |
| Territories and Possessions | | | |
| Alaska | 0 | 0 | 0 |
| Hawaii | 3 | 0 | 3 |
| Puerto Rico | 30 | 7 | 37 |
| Virgin Islands | 0 | 0 | 0 |
| | 33 | 7 | 40 |
| Totals | 4 939 | 768 | 5 707 |

Table 13 in this section gives the number of licentiates added to the profession each year since 1935 Twenty-seven states, the District of Columbia, Alaska, Hawaii, Puerto Rico and the Virgin Islands added fewer than 100 The 5,707 licentiates constituting additions to the medical profession last year represented 4,939 who secured their licenses by examination and 768 by endorsement of credentials The latter represent mainly diplomates of the National Board of Medical Examiners

Increases in the physician population arranged in nine geographic divisions are shown in table 12 The Middle Atlantic and East North Central group of states added the greatest number, 1,165 and 1,192 respectively More than 600 were added in three groups—the West North Central, South Atlantic and West South Central states The fewest number of physicians, 105, were added to the medical profession in the Mountain states Two states in this group—New Mexico and Wyoming—did not add a single physician to the medical profession last year in this compilation of first licenses

In eleven years there were 66,646 physicians added to the profession (table 13), 61,041 were licensed after a successful written examination and 5,605 by reciprocity or endorsement In the same period 99,355 licenses were issued, 68,726 by examination and 30,629 by endorsement of credentials Thus 32,709 licenses were obtained in this eleven year period by physicians who had previously been licensed to practice medicine

TABLE 13—*Licentiates Representing Additions to the Medical Profession, 1935 1945*

| Year | Examination | Reciprocity and Endorsement | Total |
|---|---|---|---|
| 1935 | 5 099 | 411 | 5,510 |
| 1936 | 5,548 | 629 | 6,177 |
| 1937 | 5,812 | 612 | 6 424 |
| 1938 | 5 759 | 501 | 6,260 |
| 1939 | 5 584 | 460 | 6 044 |
| 1940 | 5 432 | 455 | 5,887 |
| 1941 | 5,239 | 473 | 5 712 |
| 1942 | 5,558 | 454 | 6 012 |
| 1943 | 5,582 | 372 | 5,954 |
| 1944 | 6 480 | 470 | 6 950 |
| 1945 | 4,939 | 768 | 5 707 |
| Totals | 61 041 | 5 605 | 66 646 |

Estimated figures indicate that on Jan 1, 1946 the number of physicians in continental United States including those licensed in 1945 and those still in military service was 195,899 With the rapid discharge of medical officers in the past nine months it can be assumed that the civilian physician population will reach its prewar level within a reasonable period

### LICENSURE UNDER THE ACCELERATED PROGRAM

The majority of physicians who obtained their professional training under the wartime accelerated program have thus far experienced no difficulty in obtaining licensure on that account All states, as well as the District of Columbia, Alaska, Hawaii and Puerto Rico, made adjustments in their licensure legislation or practices, where these were required, to facilitate the licensure of graduates under the accelerated program Legislation in four instances (District of Columbia, Georgia, Illinois and Minnesota) is such as might not provide for students who have completed all their medical school work under the accelerated program and spend a week or two less than thirty-six months in a medical school

### PREMEDICAL TRAINING

The minimum requirement of the Council on Medical Education and Hospitals for admission to approved medical schools since 1918 has been two years of college

training, and in 1938 three years was recommended With the exception of California, Connecticut and Nebraska (table 14) the state licensing boards, by statute in the majority of instances, require that an applicant for licensure must present evidence of having completed two years of college In November 1942

TABLE 14.—*Requirements of Preliminary Training by Medical Licensing Boards*

| | | |
|---|---|---|
| **Two Years or More of College** | | |
| Alabama | Louisiana | Oklahoma |
| Alaska | Maine | Oregon |
| Arizona | Maryland | Pennsylvania |
| Arkansas | Massachusetts | Puerto Rico |
| Canal Zone | Michigan | Rhode Island |
| Colorado | Minnesota | South Carolina |
| Delaware | Mississippi | South Dakota |
| District of Columbia | Missouri | Tennessee |
| Florida | Montana | Texas |
| Georgia | Nevada | Utah |
| Hawaii | New Hampshire | Vermont |
| Idaho | New Jersey | Virginia |
| Illinois | New Mexico | Washington |
| Indiana | New York | West Virginia |
| Iowa | North Carolina | Wisconsin |
| Kansas | North Dakota | Wyoming |
| Kentucky | Ohio | |
| **One Year of College** | | |
| California | Connecticut* | |
| **High School Graduation or Its Equivalent** | | |
| Nebraska | | |

* Two year college requirement for graduates after 1946

the Council on Medical Education and Hospitals recommended that for the duration of the war premedical education including satisfactory courses in physics, biology and inorganic and organic chemistry, be included within two calendar years Such a program was adopted by practically all medical schools of the country Many medical schools have already returned to the prewar premedical requirement of three years of premedical training

The Army Specialized Training and Navy V-12 premedical programs called for less than two years of college training, but in both of these programs the studies were continuous and provided for the student carrying more than the normal peacetime studies per semester Both the army and navy programs provided for work well in excess of the sixty semester hours constituting the normal two academic years of medical study The information received from those states whose licensure laws include specific premedical requirements seems to indicate that there should be no licensure difficulties encountered by students whose premedical

TABLE 15.—*Medical Schools Requiring an Internship*

College of Medical Evangelists
University of Southern California School of Medicine
Stanford University School of Medicine
Northwestern University Medical School
University of Minnesota Medical School
Duke University School of Medicine
University of Alberta Faculty of Medicine
University of Manitoba Faculty of Medicine
Dalhousie University Faculty of Medicine
University of Montreal Faculty of Medicine

work was taken under the Army Specialized Training or Navy V-12 or comparably accelerated civilian programs

REQUIRED INTERNSHIPS

In tables 15 and 16 are listed the medical schools and licensing boards now requiring internships for the M D degree and licensure respectively Six schools in the United States and four in Canada require an internship for graduation Although relatively few schools require the internship for the M D degree, this is a requirement for licensure by twenty-three state medical licensing boards, the Arkansas and Connecticut homeopathic medical examining boards, the District of Columbia, Alaska, the Canal Zone, Hawaii and Puerto Rico Table 17 lists these states and indicates the relationship of this requirement to the nine month internship Ten states, the Connecticut homeopathic examining board, Alaska, the Canal Zone, Hawaii and Puerto Rico will accept a nine month internship as fulfilling the internship requirement Eleven states and the District of Columbia require an additional three months in a civilian hospital

TABLE 16.—*Medical Licensing Boards Requiring an Internship of All Candidates*

| | | |
|---|---|---|
| Alabama | Montana | Puerto Rico |
| Alaska | Nevada | Rhode Island |
| Canal Zone | New Hampshire | South Dakota |
| Delaware | New Jersey | Utah |
| District of Columbia | New Mexico | Vermont |
| Hawaii | North Dakota | Washington |
| Idaho | Oklahoma | West Virginia |
| Illinois | Oregon | Wisconsin |
| Iowa | Pennsylvania | Wyoming |
| Michigan | | |

Some states require the internship of graduates of medical faculties abroad and of reciprocity or endorsement applicants
Alabama Delaware Illinois, Iowa Michigan North Dakota, Pennsylvania, Rhode Island Utah, Washington and Wisconsin require the internship to be a rotating service, while New Jersey recommends this type of service

or military service but will permit applicants for licensure to write the examination on completion of the nine month internship but will withhold the license until this is completed In two states physicians are not eligible to take the examination until after com-

TABLE 17.—*Relationship of the Nine Month Internship to Licensure*

| Accepted as Fulfilling Internship Requirement | Additional Three Months in Civilian Hospital or Military Service Required: Will Give Examination at End of Nine Months | Additional Three Months in Civilian Hospital or Military Service Required: Will Not Give Examination Until Completion of Year's Service |
|---|---|---|
| Alaska | Alabama [1,2] | Arkansas (homeo board) |
| Canal Zone | Delaware | Illinois [2] |
| Connecticut (homeo board) | Dist of Columbia [1] | New Mexico |
| Hawaii | North Dakota | |
| Idaho | Oregon [1,2] | |
| Iowa [1] | Rhode Island [1] | |
| Michigan [1] | South Dakota [1,2] | |
| Montana [1] | Utah [1,2] | |
| Nevada | Vermont [1] | |
| New Jersey | Washington [1] | |
| New Hampshire | Wisconsin | |
| Oklahoma [1] | Wyoming | |
| Pennsylvania [1] | | |
| Puerto Rico | | |
| West Virginia | | |

1 Will also give examination on completion of the medical course but withhold license until internship is completed
2 Military medical service must be in a military hospital
Some states require the internship of graduates of medical faculties abroad and reciprocity or endorsement applicants
Alabama, Delaware Illinois Iowa Michigan North Dakota Pennsylvania Rhode Island Utah Washington and Wisconsin require the internship to be a rotating service, while New Jersey recommends this type of service

pletion of a year's internship three months of which may be in the military service This is true also of the homeopathic examining board in Arkansas

Five states (Connecticut, Maryland, Missouri, Texas and Virginia) whose laws do not require an internship withhold the licenses of candidates from schools requiring an internship for the M D degree until the internship is completed In these states the examination may be taken at any time after completion of the medical school course

The licensing boards of Alabama, Delaware, Illinois, Iowa, Michigan, North Dakota, Pennsylvania, Rhode

Island, Utah, Washington and Wisconsin require the internship to be a rotating service, while New Jersey recommends this type of service

A few of the medical schools and licensing boards maintain their own list of hospitals acceptable for intern training, but the list of approved internships compiled by the Council on Medical Education and Hospitals of the American Medical Association is generally used

### LICENSURE FOR THE RELOCATED PHYSICIAN

To assist the physician returning to civilian practice or in locating in areas where there are shortages of physicians, the licensing boards of fifteen states, Alaska and Puerto Rico in 1945 provided for the issuance of temporary permits, usually without immediate examination These states, the length of the validity of the permit and the number of permits granted during the last calendar year are shown in table 18 Four states

TABLE 18.—*Temporary Permits, 1945*

| State | Permit Valid For | Permits Granted |
|---|---|---|
| Alaska | 6 mos | 10 |
| Arizona | 3 mos | 57 |
| Florida [1] | | 18 |
| Georgia | Next board meeting | 26 |
| Kentucky | 1-5 yrs | 6 |
| Louisiana | Next board meeting | 37 |
| Maine | Duration of war | 7 |
| Mississippi | Next board meeting | |
| Nevada | Until June 30, 1947 | 14 |
| New Hampshire | Varies | |
| New Mexico | Next board meeting | |
| North Dakota | Next board meeting | |
| Pennsylvania | 6 mos after cessation of hostilities | 6 |
| Puerto Rico | 6 mos after cessation of hostilities | 12 |
| Virginia | Next board meeting | |
| Washington | Next board meeting | 110 |
| West Virginia | Next board meeting | 10 |
| Total | | 323 |

1 Temporary permit regulation terminates July 1 1946

(Arkansas, Delaware Kansas and Wyoming) discontinued this emergency measure in 1945, and the Florida regulation will terminate on July 1, 1946 All licenses in Nevada in the past several years have been issued as temporary licenses which will expire on June 30, 1947 The Nevada board held a meeting on Feb 4, 1946 to reconsider the status of physicians holding these temporary licenses with a view to granting permanent licenses There were 323 temporary permits granted in 1945 by seventeen licensing boards

The Bureau of Information of the American Medical Association is helping veteran medical officers with their medical practice and relocation problems This is done through close association with state and county medical societies as an entirely voluntary effort without any attempt to direct the location of a physician

An officer can obtain a brief but comprehensive picture of the economic status of any particular area he is interested in from the data contained on county summary sheets This includes data on population, principal cities, physicians, hospital and medical facilities and pertinent economic, social and financial information A copy of this summary sheet is forwarded to the inquirer, and a copy of the letter to him is sent to the state and county medical society concerned

In addition to the information contained on the summary sheets, other data are available for interested officers Requests for full or part time salaried medical positions from industries, institutions and other organizations, requests from practicing physicians for associates, needs for specialists and requests of individuals for practices are cross filed and kept current by a return post card system which keeps the Bureau of Information informed of final locations, filling of vacancies and the securing of physicians

At the request of the Committee on Postwar Medical Service, the secretary of the Federation of State Medical Boards of the United States canvassed the respective licensing boards of the country on several points pertaining to the licensure of returning medical officers The report of the secretary to the federation on Feb 12, 1946 [3] is as follows

1 Medical officers desiring to relocate after separation from military service will be required to satisfy peacetime licensure regulations in the states concerned, except in New York, North Dakota and Pennsylvania, where special consideration is given to such applicants

2 Medical officers who are graduates of unapproved medical schools will experience difficulty in obtaining licensure in any state except Illinois and Massachusetts, although New York is giving special consideration to medical officers

3 Medical officers who entered military service without obtaining a license to practice in any state, with the exception of diplomates of the National Board of Medical Examiners, will be required to take the regular licensure examination in the state where they expect to practice.

4 A limited number of states have provision for temporary licensure, but only for the duration of the war and six months thereafter

5 As regards the licensure requirement for hospital residents which prevails in twelve states and the District of Columbia, and to a limited extent in four more states, it seemed evident that hospital residencies desired for returning medical officers should be regarded as a form of postgraduate or refresher courses of training, and therefore these physicians might be relieved of licensure requirements particularly if restriction of practice is rigidly observed Several state boards are considering the matter in this light

At its December 1945 meeting the Council on Medical Education and Hospitals of the American Medical Association passed the following resolution

The Council on Medical Education and Hospitals of the American Medical Association does not intend to remove any hospital from the lists of hospitals approved for internships or residencies which furnishes teaching facilities to any veteran medical officer who is eligible for educational benefits under the Servicemen's Readjustment Act, provided the veteran is legally eligible for medical licensure in the state in which the hospital is located

This action of the Council was approved by the Federation of State Medical Boards at its meeting on Feb 12, 1946 The American College of Surgeons is also in accord with this policy of the Council on Medical Education and Hospitals

TABLE 19.—*States Requiring Annual Registration*

| | | |
|---|---|---|
| Alaska | Idaho | New York * |
| Arizona | Iowa | North Dakota |
| Arkansas | Kansas | Oklahoma |
| California | Louisiana | Oregon |
| Colorado | Minnesota | Pennsylvania |
| Connecticut | Missouri * | Texas |
| Delaware | Montana | Utah |
| District of Columbia | Nebraska | Washington |
| Florida | Nevada | Wisconsin |
| Georgia | New Mexico | Wyoming |
| Hawaii | | |

* Biennial registration

### ANNUAL REGISTRATION

Twenty-eight states, the District of Columbia, Alaska and Hawaii require physicians to register their license annually In table 19 are listed the licensing boards

3 Fed Bull 3 68 (March) 1946

which exact this requirement Some of these boards require such registration whether or not physicians reside in the state The fee is generally $2

CANDIDATES EXAMINED 1941 1945

The numbers of candidates examined for medical licensure in the United States and its territories and possessions for the last five years 1941-1945, are given

TABLE 20.—*Candidates Examined 1941-1945*

| | 1941 | | 1942 | | 1943 | | 1944 | | 1945 | | Totals for Five Years | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | F | P | F | P | F | P | F | P | F | P | F | %F |
| Alabama | 20 | 8 | 34 | 0 | 20 | 0 | 20 | 0 | 23 | 0 | 123 | 8 | 2 4 |
| Arizona | 17 | 0 | 9 | 0 | 6 | 0 | 11 | 0 | 11 | 0 | 54 | 0 | 0 0 |
| Arkansas | 60 | 0 | 67 | 0 | 60 | 0 | 115 | 0 | 60 | 0 | 367 | 0 | 0 0 |
| California | 400 | 11 | 459 | 15 | 507 | 12 | 458 | 14 | 467 | 11 | 2 291 | 63 | 2.7 |
| Colorado | 54 | 4 | 68 | 3 | 113 | 3 | 70 | 3 | 60 | 0 | 380 | 13 | 3.3 |
| Connecticut | 80 | 36 | 59 | 31 | 62 | 12 | 34 | 15 | 31 | 12 | 266 | 109 | 29 1 |
| Delaware.. | 18 | 0 | 7 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 60 | 0 | 0 0 |
| District of Columbia | 83 | 0 | 27 | 0 | 42 | 2 | 26 | 2 | 20 | 1 | 148 | 5 | 3.3 |
| Florida | 143 | 7 | 110 | 8 | 129 | 6 | 130 | 9 | 108 | 37 | 710 | 69 | 8 9 |
| Georgia | 94 | 2 | 96 | 0 | 100 | 0 | 120 | 1 | 124 | 0 | 634 | 3 | 0 5 |
| Idaho | 30 | 0 | 12 | 1 | 9 | 1 | 10 | 0 | 18 | 0 | 84 | 2 | 2 3 |
| Illinois | 4 4 | 46 | 421 | 48 | 391 | 29 | 218 | 20 | 410 | 31 | 1 919 | 179 | 8.5 |
| Indiana | 120 | 0 | 128 | 0 | 233 | 0 | 120 | 0 | 231 | 0 | 838 | 0 | 0 0 |
| Iowa | 67 | 0 | 44 | 1 | 106 | 8 | 83 | 8 | 68 | 1 | 368 | 18 | 4 7 |
| Kansas | 92 | 0 | 99 | 0 | 86 | 0 | 170 | 0 | 101 | 0 | 557 | 0 | 0 0 |
| Kentucky | 54 | 0 | 86 | 0 | 101 | 1 | 78 | 0 | 70 | 0 | 484 | 1 | 0 2 |
| Louisiana | 140 | 1 | 175 | 0 | 228 | 2 | 200 | 4 | 208 | 1 | 1 011 | 8 | 0 8 |
| Maine | 78 | 19 | 47 | 0 | 29 | 3 | 13 | 3 | 9 | 3 | 131 | 27 | 17 1 |
| Maryland | 177 | 9 | 160 | 11 | 296 | 14 | 151 | 4 | 193 | 8 | 982 | 46 | 4 5 |
| Massachusetts | 294 | 288 | 201 | 201 | 207 | 204 | 162 | 201 | 124 | 170 | 998 | 1 060 | 60 0 |
| Michigan | 239 | 0 | 196 | 0 | 200 | 2 | 180 | 0 | 101 | 0 | 1 117 | 2 | 0 2 |
| Minnesota | 240 | 0 | 199 | 1 | 200 | 0 | 197 | 0 | 217 | 0 | 1 143 | 1 | 0 1 |
| Mississippi | 38 | 0 | 43 | 2 | 113 | 1 | 71 | 0 | 60 | 0 | 315 | 3 | 0.9 |
| Missouri | 106 | 0 | 182 | 1 | 421 | 1 | 207 | 0 | 288 | 1 | 1,204 | 3 | 0 2 |
| Montana | 7 | 1 | 7 | 1 | 4 | 0 | 3 | 0 | 2 | 0 | 23 | 2 | 8 0 |
| Nebraska | 92 | 0 | 77 | 2 | 150 | 15 | 81 | 11 | 74 | 7 | 479 | 35 | 6.8 |
| Nevada | 5 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 8 | 4 | 33.3 |
| New Hampshire | 10 | 1 | 3 | 3 | 5 | 4 | 9 | 4 | 6 | 1 | 33 | 13 | 28.3 |
| New Jersey | 130 | 29 | 110 | 10 | 150 | 11 | 104 | 11 | 90 | 9 | 614 | 70 | 0 2 |
| New Mexico | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 0 |
| New York. | 888 | 963 | 1 071 | 660 | 633 | 443 | 454 | 367 | 287 | 248 | 3,333 | 2 681 | 44 6 |
| North Carolina | 54 | 0 | 77 | 0 | 115 | 0 | 100 | 0 | 132 | 1 | 483 | 1 | 0 2 |
| North Dakota | 15 | 1 | 6 | 1 | 1 | 0 | 3 | 0 | 4 | 0 | 29 | 2 | 6 5 |
| Ohio | 263 | 14 | 274 | 6 | 622 | 22 | 329 | 25 | 325 | 13 | 1 813 | 80 | 4 2 |
| Oklahoma | 54 | 0 | 54 | 0 | 114 | 0 | 72 | 0 | 69 | 0 | 363 | 0 | 0 0 |
| Oregon.. | 22 | 0 | 45 | 0 | 52 | 5 | 11 | 5 | 10 | 1 | 149 | 11 | 6.9 |
| Pennsylvania | 440 | 18 | 456 | 21 | 470 | 12 | 503 | 20 | 420 | 13 | 2 050 | 84 | 3 1 |
| Rhode Island | 22 | 0 | 30 | 0 | 20 | 0 | 13 | 3 | 6 | 0 | 90 | 3 | 3 0 |
| South Carolina | 40 | 0 | 46 | 0 | 91 | 0 | 51 | 1 | 43 | 0 | 291 | 1 | 0 3 |
| South Dakota | 9 | 0 | 5 | 0 | 6 | 0 | 3 | 0 | 6 | 0 | 29 | 0 | 0 0 |
| Tennessee | 190 | 4 | 190 | 0 | 201 | 0 | 237 | 0 | 193 | 2 | 1 020 | 6 | 0 6 |
| Texas | 177 | 13 | 289 | 10 | 190 | 4 | 303 | 3 | 223 | 7 | 1 192 | 42 | 3 4 |
| Utah. | 10 | 0 | 14 | 0 | 27 | 0 | 30 | 0 | 13 | 0 | 99 | 0 | 0 0 |
| Vermont | 18 | 0 | 24 | 1 | 19 | 0 | 7 | 0 | 2 | 0 | 70 | 1 | 1 4 |
| Virginia | 140 | 3 | 145 | 1 | 204 | 1 | 108 | 9 | 30 | 2 | 532 | 16 | 2 1 |
| Washington | 69 | 1 | 60 | 0 | 54 | 1 | 75 | 0 | 34 | 0 | 292 | 2 | 0 7 |
| West Virginia | 34 | 0 | 27 | 0 | 23 | 0 | 24 | 0 | 20 | 0 | 128 | 0 | 0 0 |
| Wisconsin | 120 | 0 | 124 | 1 | 176 | 0 | 74 | 0 | 96 | 0 | 590 | 1 | 0 2 |
| Wyoming | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 0 |
| U S Terr & Poss | 63 | 8 | 54 | 5 | 14 | 2 | 39 | 0 | 35 | 2 | 205 | 17 | 7 7 |
| Totals Examined | 7 539 | | 7,224 | | 8 398 | | 6,814 | | 5,920 | | 35,904 | | |
| Passed. | 6 057 | | 6 118 | | 7 484 | | 6 008 | | 5,341 | | 31,008 | | |
| Failed | 1 482 | | 1 106 | | 914 | | 806 | | 588 | | 4,896 | | |
| Percentage Failed | 19 7 | | 15.3 | | 10 9 | | 11 9 | | 9 9 | | 13 6 | | |

in table 20 For each year there is recorded the number who passed and failed licensing examinations Totals for the five year period and the percentage of candidates who failed are also given

During this five year period 35 904 examinations were given, 31,008 were successful tests and 4,896, 13 6 per cent, failed New York leads in the number of examinations given In this state in the last five years 3,333 passed the licensure examination Other states passing more than 2 000 included Pennsylvania 2 656 and California 2,291 More than 1,000 were examined in eight other states and passed, namely Illinois, Louisiana, Michigan Minnesota Missouri, Ohio, Tennessee and Texas

The greatest percentage of failures, 60 0, occurred in Massachusetts The high percentage in this state is due to the fact that, by law, the licensing board admitted to its examinations the graduates of unapproved medical schools and graduates of osteopathic schools, many of whom repeatedly fail A recent amendment to the medical practice act provided for a state approving authority This authority has ruled that students matriculated in institutions not meeting the standards of the authority after Jan 1, 1941 will not be eligible to take the licensing examination New York had a failure percentage of 44 6, occasioned in large part by the admittance to examination of a considerable number of graduates of foreign medical schools, who likewise repeatedly fail in large numbers The numbers of such graduates admitted to licensure has been decreasing in the last few years Other high percentages of failure occurred in Connecticut, Maine, Nevada and New Hampshire On the other hand thirty-seven states failed less than 5 per cent in the five year period These included eleven states which had no failures Arizona, Arkansas, Delaware Indiana, Kansas New Mexico, Oklahoma, South Dakota, Utah, West Virginia and Wyoming The percentage of failures in all states has decreased from 19 7 in 1941 to 9 9 in 1945 The lowest percentage of failures in this five year period occurred in 1945, when 9 9 per cent failed

These figures represent examinations given and not individuals A candidate who fails more than once in a state in a given year is counted only once, but should he also fail in a succeeding year he is counted in that year also The same is true of successful candidates who migrate to other states This group represents a recapitulation of the statistics computed annually and assembled for comparative purposes It gives only a fair approximation of the number of physicians added to the profession in five years by the written examination method Table 13, page 122, gives the corrected compilation of the number of physicians representing additions to the medical profession

TABLE 21.—*Registration 1904-1945*

| Year | Examined | Passed | Per centage Failed | Reciprocity or Endorsement | Total Registered |
|---|---|---|---|---|---|
| 1904 | 7 093 | 5 693 | 19.3 | 1 005 | 6 698 |
| 1905 | 7 178 | 5 688 | 20 8 | 394 | 6 082 |
| 1906 | 8 040 | 6 378 | 20 7 | 1,502 | 7 875 |
| 1907 | 7,270 | 5 731 | 21.3 | 1 427 | 7 158 |
| 1908 | 7 770 | 6 089 | 21 7 | 1 284 | 7,373 |
| 1909 | 7 293 | 5,863 | 19 6 | 1,381 | 7,240 |
| 1910 | 7 011 | 5 719 | 18 4 | 1 640 | 7 359 |
| 1911 | 6,964 | 5,482 | 19.8 | 1,243 | 6 825 |
| 1912 | 6,850 | 5 407 | 20 5 | 1,273 | 6 740 |
| 1913 | 6 453 | 5,253 | 18 6 | 1,292 | 6,545 |
| 1914 | 5 679 | 4,319 | 21 5 | 1 439 | 5 818 |
| 1915 | 5,334 | 4 507 | 15.5 | 1 399 | 5,906 |
| 1916 | 4,878 | 4 151 | 14.9 | 1,353 | 5,504 |
| 1917 | 4 753 | 4 084 | 14.1 | 1,360 | 5 444 |
| 1918 | 3 607 | 3,184 | 13 2 | 1 047 | 4,231 |
| 1919 | 4 750 | 4 074 | 14 2 | 2,546 | 6 620 |
| 1920 | 4 796 | 4 062 | 15 3 | 2 558 | 6 620 |
| 1921 | 4 825 | 4 225 | 12.4 | 2 189 | 6 414 |
| 1922 | 4 031 | 3,539 | 12.2 | 2 073 | 5 612 |
| 1923 | 4 727 | 4 028 | 14.8 | 2 405 | 6 433 |
| 1924 | 5,392 | 4 706 | 11 8 | 1 921 | 6 679 |
| 1925 | 6 002 | 5 450 | 9.2 | 1,861 | 7,311 |
| 1926 | 5 770 | 5 314 | 7 9 | 1,955 | 7,269 |
| 1927 | 5,389 | 5 002 | 7.2 | 2 176 | 7 178 |
| 1928 | 5 458 | 5 090 | 6 7 | 2 228 | 7,318 |
| 1929 | 5 629 | 5,282 | 6.2 | 2,420 | 7 702 |
| 1930 | 5 671 | 5 295 | 5 7 | 2 306 | 7 621 |
| 1931 | 5 611 | 5,263 | 6.2 | 2,211 | 7 476 |
| 1932 | 5 675 | 5 247 | 7 6 | 1,885 | 7 132 |
| 1933 | 5 673 | 5,244 | 7 6 | 1,989 | 7 233 |
| 1934 | 6,145 | 5 628 | 8 4 | 2 161 | 7 789 |
| 1935 | 6 443 | 5,859 | 9 1 | 2 196 | 8 055 |
| 1936 | 6 917 | 6,223 | 10 0 | 2 776 | 8,998 |
| 1937 | 7,334 | 6 604 | 10 0 | 3,203 | 9,807 |
| 1938 | 7 461 | 6 589 | 11 7 | 2,956 | 9 545 |
| 1939 | 7 764 | 6 493 | 16.3 | 2,872 | 9 365 |
| 1940 | 7 925 | 6,290 | 20 7 | 2,805 | 9 195 |
| 1941 | 7 539 | 6 051 | 19 7 | 2 769 | 8 816 |
| 1942 | 7,221 | 6 118 | 15 4 | 2 469 | 8 587 |
| 1943 | 8 398 | 7 484 | 10.9 | 2,337 | 9,821 |
| 1944 | 6 814 | 6 008 | 11.9 | 2,589 | 8,597 |
| 1945 | 5 929 | 5 341 | 9.9 | 3 612 | 8 953 |

REGISTRATION 1904 1945

A study of totals and percentages for forty-two years (1904–1945) is included in table 21 This tabulation covers physicians registered by written examination and by reciprocity or endorsement of credentials There is no definite trend in the numbers annually registered

TABLE 22.—*Graduates of Approved Schools and Others Registered 1922-1945*

| | Graduates of Approved Schools | | Others | | |
|---|---|---|---|---|---|
| | Number | Per Cent of Total | Number | Per Cent of Total | Totals |
| 1922 | 4,519 | 80 o | 1 093 | 10 5 | 5 612 |
| 192: | 5 196 | 80 8 | 1 237 | 19 2 | 6 433 |
| 1924 | 5 687 | 85 1 | 992 | 14 9 | 6 6 9 |
| 192. | 6 314 | 86 4 | 997 | 13 6 | 7 311 |
| 1926 | 6 441 | 88 7 | 828 | 11.3 | 7 °69 |
| 192. | 6 410 | 89 4 | 768 | 10 6 | 7 178 |
| 1928 | 6,5.. | 90 1 | 733 | 9.9 | 7,318 |
| 1929 | . 003 | 91 0 | 699 | 9 0 | 7 702 |
| 1930 | 7 011 | 92 1 | 610 | 7 9 | 7 621 |
| 193.1 | 6,932 | 92 8 | 544 | 7 2 | 7 476 |
| 1932 | 6 67. | 93 7 | 4.7 | 6.3 | 7 172 |
| 1933 | 6 774 | 93 7 | 4.9 | 6.3 | 7 223 |
| 1934 | 7 172 | 92.1 | 617 | 7 9 | 7 789 |
| 193. | . 362 | 91 5 | 693 | 8.5 | 8 0.. |
| 1936 | 7 032 | 88 2 | 1 066 | 11 8 | 8,998 |
| 1937 | 8,389 | 85 6 | 1 418 | 14 4 | 9 807 |
| 1938 | 8 31. | 87 1 | 1 230 | 12 9 | 9,54. |
| 1939 | 8 067 | 86 2 | 1,298 | 13 8 | 9,36. |
| 1940 | 7 780 | 85 0 | 1 37. | 1. 0 | 9 15. |
| 1941 | 7 767 | 88 1 | 1 049 | 11 9 | 8 816 |
| 1942 | 7 289 | 84.9 | 1 29. | 15 1 | 8 .87 |
| 1943 | 8 034 | 87.8 | 1 187 | 12 2 | 9 821 |
| 1944 | 7 .27 | 89 9 | 870 | 10 1 | 8,.97 |
| 194. | 8,22. | 91.9 | 72. | 8 1 | 8 9.3 |
| Totals | 170 .06 | 88 4 | 22 246 | 11 6 | 192 4.. |

from 1904 to 1933, although in 1918 the number registered dropped to the all time low record of 4,231 After 1933 there was an upward trend for a time, followed by a decline during the years 1941 and 1942 The sudden withdrawal of more than 1,200 in 1918 was due to the sudden withdrawal of physicians and recent graduates from civilian life during World War I

TABLE 23.—*Graduates of Unapproved School Registered 1940 1945*

| | Examination | | | | | | Reciprocity and Endorsement | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1940 | 1941 | 194. | 1943 | 1944 | 194. | 1940 | 1941 | 1942 | 1943 | 1944 | 194. | Total |
| California | 1 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | |
| Illinois | 48 | .1 | 51 | 57 | 4. | 11. | 0 | 0 | 0 | 0 | 0 | 0 | 307 |
| Indiana | 0 | 0 | .0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 3 |
| Iowa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Kentucky | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| Massachusetts | 9. | 90 | 10. | 17. | 102 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 610 |
| Mississippi | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Missouri | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 |
| Nevada | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| New Hampshire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| New Jersey | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 8 | 0 | 0 | 0 | 0 | 21 |
| New Mexico | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 3 |
| New York | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 8 |
| Pennsylvania | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Texas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Virginia | 0 | 0 | 0 | 1 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Wisconsin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Hawaii | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Puerto Rico | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Totals | 1.0 | 144 | 1.7 | 239 | 1.3 | 1.6 | 27 | 9 | 1 | 1 | 2 | 10 | 1 0.. |

By contrast in 1943 the number registered increased 1,234 over the preceding year The increase is a result of the accelerated curriculum and the universal effort on the part of the medical leaders of the country to maintain a steady flow of physicians for both civilian and military practice In 1943 more physicians were examined than in any previous year A large majority of these were recent graduates who secured licenses before assuming military duties

There was a large increase in registration on the basis of credentials in 1945 It is presumed that medical officers returning to civilian practice are making use of this means of obtaining licensure if they are planning to relocate rather than return to their former practice

The percentage of failures gradually dropped from 19 3 in 1904, when a great many proprietary medical schools were functioning to 5 7 in 1930 Improvements in the standards of medical education are reflected in this decrease of failures in licensing examinations With the migration of European physicians to this country beginning in 1936 and the resultant licensure difficulties, the proportion of failures began to rise, reaching a peak of 20 7 per cent in 1940 In the last two years the number of foreign graduates and graduates of unapproved schools applying for licensure has considerably decreased

In analyzing this table it should be remembered that the figures represent multiple examinations by individuals in some instances rather than actual additions to the profession

GRADUATES OF APPROVED SCHOOLS AND OTHERS REGISTERED 1922 1945

The educational fitness of physicians registered for the practice of medicine in twenty-four years is recorded in table 22 In the computation of these figures, schools

TABLE 24.—*Graduates of Schools of Osteopathy Registered by Medical Boards 1940-1945*

| | Examination | | | | | | Reciprocity and Endorsement | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | Total |
| Colorado | 1. | 2 | 9 | 9 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
| Connecticut | 0 | 0 | 0 | 5 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Delaware | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Dist Columbia | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 7 |
| Indiana | 7 | 3 | 4 | 2 | 3 | 0 | 1 | 3 | 2 | 3 | 3 | 4 | 3. |
| Massachusetts | 27 | 26 | 13 | 5 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 80 |
| Nebraska | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 9 |
| New Hampshire | 2 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 1 | 1 | 2 | 0 | 11 |
| New Jersey | 47 | 32 | 9 | 18 | 30 | 1. | 0 | 0 | 0 | 0 | 0 | 0 | 1.1 |
| Ohio | 0 | 0 | 0 | 158 | 72 | 48 | 0 | 0 | 0 | 0 | 3 | 1 | 28. |
| Oregon | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 5 | 3 | 8 | 13 | 3. |
| Texas | 20 | 13 | 17 | 18 | 38 | 29 | 1 | 1 | 1 | 2 | 1 | 1 | 142 |
| Virginia | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |
| Wisconsin | 1 | 2 | 5 | 6 | 0 | 1 | 0 | 0 | 1 | 16 | 5 | 1. | 52 |
| Wyoming | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 6 |
| Totals | 121 | 83 | 60 | 227 | 16. | 109 | 5 | 9 | 13 | 27 | 24 | 35 | 8.. |

rated as class A and B by the Council on Medical Education and Hospitals of the American Medical Association since 1907 are classified as approved In the column "Others" are included individuals who graduated prior to 1907, when the first classification of schools was made, graduates of foreign faculties of medicine, class C graduates, osteopaths given recognition by medical licensing boards and graduates of schools not approved by the Council In 1928 the classification A, B and C by the Council was discontinued and a list of approved medical schools has since been maintained

There were 8,953 candidates registered in 1945 of whom 8,225 91 9 per cent, represented graduates of approved schools and 728, 8 1 per cent, the group designated as others

In the twenty-four year period 192,452 were registered, including 170,206 approved graduates (88 4 per cent) and 22,246 others (11 6 per cent) Since 1922 the number of graduates of approved schools has increased well beyond 4,500, representing 80 to 90 per cent of those annually registered Until the influx of foreign graduates in 1936, those in the second group since 1924 have been fewer than 1,000 The number

in this group was considerably decreased in 1944, and in 1945 there were 142 fewer registered than in the preceding year

### GRADUATES OF UNAPPROVED SCHOOLS REGISTERED 1940-1945

Recorded in table 23 are data regarding graduates of institutions which do not meet the standards outlined by the House of Delegates of the American Medical Association and administered by the Council on Medical Education and Hospitals. This table shows the numbers registered as medical licentiates in the United States, Hawaii and Puerto Rico by written examination or endorsement of credentials in the past six years, 1940 to 1945 inclusive. Figures are given separately for those licensed by written examination and by endorsement of credentials. In the six years shown seventeen states, Hawaii and Puerto Rico registered 1,008 by examination and 50 by endorsement of credentials. In 1945 there were 166 so registered, 156 by examination and 10 without written examination in nine states, namely California, Illinois, Massachusetts, Missouri, Nevada, New Hampshire, New Mexico, Virginia and Wisconsin.

The large numbers of unapproved graduates licensed in Illinois and Massachusetts result from the nature of the licensing laws in these two states, which accounted for over 90 per cent of these licenses. However, 81 graduates of substandard schools have been licensed in other states in the past five years.

### GRADUATES OF SCHOOLS OF OSTEOPATHY REGISTERED BY MEDICAL EXAMINING BOARDS 1940-1945

The numbers of graduates of schools of osteopathy granted the privilege of practicing medicine or surgery or both by the examining boards of fourteen states and the District of Columbia for six years (1940-1945) are given in table 24. There have been 878 such individuals registered since 1940, 765 by examination and 113 by endorsement. In 1945 there were 144 so registered, 109 by examination and 35 without written examination in ten states, namely Colorado, Connecticut, Indiana, Massachusetts, Nebraska, New Jersey, Ohio, Oregon, Texas, Wisconsin, and in the District of Columbia.

Following is a summary of the situation in the fourteen states and the District of Columbia providing for the licensure of osteopaths by the medical examining board.

In Colorado an osteopath receives a license to practice medicine. In Connecticut any registered osteopath

TABLE 25.—*Requirements of Candidates for Medical Licensure on the Basis of Credentials Obtained in Countries Other Than the United States and Canada*

| | Admitted to Examination | Admitted by Endorsement of State License* | Citizenship | Basic Science Certificate | Internship in Hospital in United States | Further Medical Training | Examination Fee Dollars | Other Requirements |
|---|---|---|---|---|---|---|---|---|
| Alabama | + | | + | | + | | 10 | 1 |
| Arizona | Not accepted | | | | | | | |
| Arkansas (reg. and homeo. boards) | Not accepted | | | | | | | |
| California | + | +[21] | | | +[18] | +[18] | 25 | 11 |
| Colorado | + | | 1st P | + | | | 25[4] | |
| Connecticut (*regular board*) | + | | 1st P | + | | | 25 | |
| Delaware (regular board) | + | | + | | + | | 25 | 5 2 |
| District of Columbia | + | +[6] | | + | + | | 25 | 10 |
| Florida | + | | + | + | | +[7] | 25 | |
| Georgia | + | | + | | | +[7] | 20 | |
| Idaho | + | | + | | + | | 25 | |
| Illinois | + | | 1st P | | + | | 10 | 8 |
| Indiana | + | + | | | | +[7] | 25 | |
| Iowa | +[10] | | + | + | +[2] | +[2] | 25 | |
| Kansas | + | | + | | | | 25 | 11 |
| Kentucky | Not accepted[7] | | | | | | | |
| Louisiana (reg. and homeo. boards) | Not accepted | | | | | | | |
| Maine | + | + | + | | + | | 27 | 11 |
| Maryland (reg. and homeo. boards) | + | | 1st P | | +[26] | | 25 | 10 |
| Massachusetts | + | | 1st P | | | | 25 | |
| Michigan | + | + | + | + | + | +[7] | 25 | |
| Minnesota | Not accepted | | | | | | | |
| Mississippi | + | | + | | + | | 10 | 8 |
| Missouri | + | + | + | | + | | 15 | |
| Montana | Not accepted[2] | | | | | | | |
| Nebraska | + | + | + | + | | | 25 | |
| Nevada | Not accepted | | | | | | | |
| New Hampshire | + | +[12] | + | | + | | 20 | |
| New Jersey | + | + | + | | +[17] | | 25 | |
| New Mexico | Not accepted | | | | | | | |
| New York | + | + | 1st P | | | | 25 | 14 |
| North Carolina | Not accepted | | | | | | | |
| North Dakota | + | | + | | + | | 25 | 11 |
| Ohio | + | + | + | | | | 25 | |
| Oklahoma | Not accepted | | | | | | | |
| Oregon | Not accepted | | | | | | | |
| Pennsylvania | + | | 1st P | | + | | 25 | |
| Rhode Island | + | | 1st P | + | +[16] | +[16] | 20 | 13 |
| South Carolina | Not accepted[27] | | | | | | | |
| South Dakota | + | | 1st P | + | + | | 20 | |
| Tennessee | Not accepted | | | | | | | |
| Texas | + | | + | | | | 25 | |
| Utah | Not accepted | | | | | | | |
| Vermont | Not accepted[23] | | | | | | | |
| Virginia | + | | + | 16 | | + | 25 | 24 |
| Washington | + | | 1st P | + | + | +[7] | 25 | 9 |
| West Virginia | Not accepted | | | | | | | |
| Wisconsin | Not accepted | | | | | | | |
| Wyoming | Not accepted | | | | | | | |
| Alaska | + | + | + | | + | | 25 | |
| Hawaii | + | | + | | + | | 25 | 12 |
| Puerto Rico | + | + | + | | + | + | 25 | |

* Refer to chart of Reciprocity and Endorsement Policies for further data

1 Certificate of National Board of Medical Examiners and licensure in country in which school of graduation is located.
2 Internship or one year in medical school in United States
3 Certificate of National Board of Medical Examiners
4 For graduates of last five years. If more than five years $50
5 Residence of one year in Delaware
6 If similar privileges are accorded licentiates of District of Columbia by licensing agency of jurisdiction from which applicant comes
7 Senior year in class A medical school in United States
8 Graduates of European medical colleges after July 1 1936 Switzerland excepted shall not be eligible for licensure. Graduates prior to this date may be accepted for the regular written and clinical examination after completing rotating internships in approved hospitals in the United States
9 Enemy aliens not accepted
10 Application must be filed six months prior to date of examination
11 Licensed to practice medicine and surgery in country in which school of graduation is located, otherwise required to complete senior year in approved medical school in United States
12 Diplomates of National Board of Medical Examiners eligible
13 License to practice medicine and surgery in the country in which the school of graduation is located
14 Matriculants after Jan. 1 1940 not accepted
15 At the discretion of the board
16 Internship and graduate work
17 Internship completed in foreign countries after July 1 1934 not acceptable
18 Rotating internship in approved hospital in the United States or completion of senior year in class A medical school in the United States
19 *These requirements apply also to graduates of Canadian schools*
20 Graduates from foreign medical colleges accepted if they present also a diploma from an approved medical school in the United States
21 Provided standard was the same as California on the same date
22 Degree from an American medical college acceptable to the Medical Council of Delaware required
23 Diplomates of the National Board of Medical Examiners accepted. Citizenship required
24 Very limited number contracting to practice in rural districts may be accepted
25 Effective July 1 1943
26 Homeopathic board requires one year internship in homeopathic hospital in the United States
27 Will consider limited license for applicant with acceptable credits from National Board of Medical Examiners and states maintaining reciprocity

TABLE 26—*Physicians Examined on the Basis of Credentials Obtained*

| Marginal Number | | 1 Alabama | | 2 California | | 3 Colorado | | 4 Connecticut | | 5 Dist. of Columbia | | 6 Florida | | 7 Illinois | | 8 Indiana | | 9 Maine | | 10 Maryland | | 11 Massachusetts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | BELGIUM | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Université Libre de Bruxelles | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Universiteit Gent | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Université de Liege | | | | | | | | | | | | | | | | | | | | | | |
| | CHILE | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Universidad de Chile | | | | | | | 1 | 0 | | | | | | | | | | | | | | |
| | COLOMBIA | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Nacional Universidad Bogota | | | | | | | | | | | | | 1 | 1 | | | | | | | | |
| 6 | Universidad de Cartagena | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| | CUBA | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Universidad de la Habana | | | | | | | | | | | | | 1 | 4 | | | | | | | 2 | 2 |
| | CZECHOSLOVAKIA | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Deutsche Universität Prag | | | | | | | | | | | | | 0 | 1 | | | | | | | | |
| 9 | Universita Karlova Praha | | | 2 | 1 | | | | | | | | | | | | | | | | | 0 | 2 |
| | DENMARK | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Kobenhavns Universitet | | | | | | | 1 | 1 | | | | | | | | | | | | | | |
| | DOMINICAN REPUBLIC | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Universidad de Santo Domingo | | | | | | | | | | | | | | | | | | | 0 | 1 | | |
| | ECUADOR | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Universidad de Guayaquil | | | | | | | | | | | | | 1 | 1 | | | | | | | | |
| | EL SALVADOR | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Universidad de El Salvador | | | 0 | 1 | | | | | | | | | | | | | | | | | | |
| | ENGLAND | | | | | | | | | | | | | | | | | | | | | | |
| 14 | University of Bristol | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Licentiate in Medicine Surgery and Midwifery of the Apothecaries Society of London | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Licentiate of the Royal College of Physicians of London Member of the Royal College of Surgeons of England | | | | | | | | | | | | | | | | | | | | | | |
| | ESTONIA | | | | | | | | | | | | | | | | | | | | | | |
| 17 | Université de Tartu | | | | | | | | | | | | | | | | | | | | | 0 | 1 |
| | FRANCE | | | | | | | | | | | | | | | | | | | | | | |
| 18 | Université de Montpellier | | | | | | | | | | | | | | | | | | | 1 | 0 | | |
| 19 | Université de Paris | | | | | | | 1 | 1 | | | | | | | | | | | | | 0 | 1 |
| 20 | Université de Strasbourg | | | | | | | | | | | | | | | | | | | | | | |
| | GERMANY | | | | | | | | | | | | | | | | | | | | | | |
| 21 | Friedrich Wilhelms Universität Berlin | | | | | | | | | | | | | 0 | 2 | 1 | 0 | | | 2 | 0 | | |
| 22 | Rheinische Friedrich Wilhelms Universität Bonn | | | 1 | 0 | | | | | | | | | | | | | | | 0 | 1 | | |
| 23 | Schlesische Friedrich Wilhelms Universität Breslau | | | | | | | | | | | | | 1 | 0 | | | | | 1 | 0 | | |
| 24 | Friedrich Alexanders Universität Erlangen | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 25 | Albert Ludwigs Universitat Freiburg | | | 0 | 1 | | | | | | | | | 0 | 2 | | | | | | | | |
| 26 | Georg August Universität Göttingen | | | | | | | | | | | | | | | | | | | | | 1 | 0 |
| 27 | Universität Heidelberg | | | 1 | 0 | | | | | | | | | 1 | 1 | | | | | | | | |
| 28 | Christian Albrechts Universität Kiel | | | | | | | | | | | | | | | | | | | | | | |
| 29 | Albertus Universität Königsberg | | | | | | | | | | | | | 0 | 1 | | | | | | | 0 | 1 |
| 30 | Universität Leipzig | | | | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | | |
| 31 | Ludwig Maximilians Universität München | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Universität Rostock | | | | | | | | | | | | | | | | | 0 | 1 | | | | |
| 33 | Eberhard Karls Universität Tubingen | | | | | | | | | | | | | | | | | | | | | | |
| 34 | Julius Maximilians Universität Würzburg | | | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 0 |
| 35 | Hamburgische Universität | | | | | | | | | | | | | 0 | 1 | | | | | 1 | 0 | 1 | 0 |
| 36 | Universitat Köln | | | | | | | | | | | | | | | | | | | | | | |
| 37 | Johann Wolfgang Goethe Universität Frankfurt am Main | | | | | | | | | | | | | | | | | | | | | | |
| 38 | Universität Wien | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 3 | | | | | 1 | 0 | | | | | 2 | 1 | 0 | 3 |
| 39 | Karl Franzens Universität Graz | | | | | | | | | | | | | 0 | 1 | | | | | | | | |
| | GREECE | | | | | | | | | | | | | | | | | | | | | | |
| 40 | National University of Athens | | | | | | | | | | | | | 0 | 1 | | | | | | | 0 | 2 |
| | HAITI | | | | | | | | | | | | | | | | | | | | | | |
| 41 | Ecole National de Médecine Port au Prince | | | | | | | | | | | | | 0 | 1 | | | | | | | | |
| | HUNGARY | | | | | | | | | | | | | | | | | | | | | | |
| 42 | Magyar Királyi Pázmány Petrus Tudományegyetem Budapest | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| 43 | Magyar Királyi Ferenez József Tudományegyetem Szeged | | | | | | | | | | | | | | | | | | | | | | |
| 44 | Magyar Királyi Erzsébet Tudományegyetem Pecs | | | | | | | | | | | | | | | | | | | | | | |
| 45 | Magyar Királyi Tisza István Tudományegyetem Debrecen | | | | | | | | | 1 | 0 | | | 1 | 0 | | | | | | | | |
| | IRELAND | | | | | | | | | | | | | | | | | | | | | | |
| 46 | University of Dublin | | | | | | | | | | | | | | | | | | | | | | |
| | ITALY | | | | | | | | | | | | | | | | | | | | | | |
| 47 | Regia Università di Bologna | | | 0 | 1 | | | | | | | | | | | | | 0 | 1 | 0 | 1 | 0 | 1 |
| 48 | Regia Università di Genova | | | | | | | | | | | | | | | | | | | | | | |
| 49 | Regia Università di Napoli | | | | | | | | | | | | | | | | | | | 0 | 1 | | |
| 50 | Regia Università di Padova | | | | | | | | | | | | | | | | | 0 | 1 | | | | |
| 51 | Regia Università di Palermo | | | | | | | | | | | | | | | | | | | | | | |
| 52 | Regia Università di Pavia | | | | | | | | | | | | | | | | | | | | | | |
| 53 | Regia Università di Pisa | | | | | | | | | | | | | | | | | | | | | | |
| 54 | Regia Università di Roma | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 |
| 55 | Regia Università di Torino | | | | | | | | | | | | | | | | | | | | | | |
| | LEBANON | | | | | | | | | | | | | | | | | | | | | | |
| 56 | American University of Beirut | | | | | | | | | | | | | | | | | | | | | 2 | 0 |
| 57 | Université de St Joseph Beyrouth | | | | | | | | | | | | | | | | | | | | | | |
| | MEXICO | | | | | | | | | | | | | | | | | | | | | | |
| 58 | Universidad Nacional México D F | | | | | | | | | | | | | | | | | | | | | | |
| 59 | Universidad de Guadalajara | | | 1 | 2 | | | | | | | | | 0 | 1 | | | | | | | | |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |

P—Passed F—Failed

*in Countries Other Than The United States and Canada, 1945*

| 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | | 22 | | 23 | | 24 | | 25 | | 26 | | 27 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Michigan | | Mississippi | | Missouri | | Nebraska | | New Hampshire | | New Jersey | | New York | | Ohio | | Pennsylvania | | Rhode Island | | South Dakota | | Tennessee | | Texas | | Virginia | | Washington | | Puerto Rico | | | | | | |
| P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | Totals | Examined—Passed | Examined—Failed | Percentage of Failures | Number of Boards Examined by | Marginal Number |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 | 2 | 2 | 0 | 0 0 | 2 | 1 |
| | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100.0 | 1 | 2 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | 12 | 4 | 8 | 66 7 | 4 | 7 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | 1 | 0 | | | | | 10 | 4 | 6 | 60 0 | 4 | 8 |
| | | | | | | | | | | | | 3 | 3 | | | | | | | | | | | | | | | | | | | 6 | 2 | 4 | 66 7 | 2 | 9 |
| | | | | | | | | | | | | 0 | 3 | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 10 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 11 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 12 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 13 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 14 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 15 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 16 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 17 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0 0 | 2 | 18 |
| | | | | | | | | | | | | 8 | 9 | | | | | | | | | | | | | | | | | | | 20 | 9 | 11 | 55 0 | 3 | 19 |
| | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 20 |
| | | | | | | 0 | 1 | 0 | 1 | | | 11 | 13 | | | | | | | | | | | | | | | | | | | 31 | 14 | 17 | 54.8 | 6 | 21 |
| | | | | 0 | 1 | | | | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | 7 | 3 | 4 | 57 1 | 4 | 22 |
| | | | | | | | | | | | | 3 | 3 | | | | | | | | | | | | | | | | | | | 8 | 5 | 3 | 37.5 | 3 | 23 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 3 | 2 | 1 | 33.3 | 2 | 24 |
| | | | | | | | | | | | | 2 | 7 | | | | | | | | | | | | | | | | | | | 12 | 2 | 10 | 83 3 | 3 | 25 |
| | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0 0 | 2 | 26 |
| | | | | | | | | | | | | 2 | 2 | | | | | | | | | | | 1 | 0 | | | | | | | 8 | 5 | 3 | 37.5 | 4 | 27 |
| | | | | | | | | | | | | 0 | 2 | | | | | | | | | | | | | | | | | | | 2 | 0 | 2 | 100 0 | 1 | 28 |
| | | | | | | | | | | | | 1 | 4 | | | | | | | | | | | | | | | | | | | 7 | 1 | 6 | 85 7 | 3 | 29 |
| | | | | | | | | | | | | 0 | 4 | | | | | | | | | | | | | | | | | | | 6 | 1 | 5 | 83 3 | 3 | 30 |
| | | | | | | | | | | | | 1 | 7 | 0 | 1 | | | | | | | | | | | | | | | | | 9 | 1 | 8 | 88 9 | 2 | 31 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 32 |
| | | | | | | | | | | | | 0 | 2 | | | | | | | | | | | | | | | | | | | 2 | 0 | 2 | 100 0 | 1 | 33 |
| | | | | | | | | | | | | 0 | 2 | | | | | | | | | | | | | | | | | | | 4 | 1 | 3 | 75 0 | 3 | 34 |
| | | | | | | | | | | | | 0 | 3 | | | | | | | | | | | | | | | | | | | 6 | 2 | 4 | 66 7 | 4 | 35 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 36 |
| | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | 3 | 1 | 2 | 66 7 | 1 | 37 |
| 1 | 0 | 1 | 0 | | | | | 1 | 0 | | | 10 | 28 | | | 0 | 2 | | | 1 | 0 | 1 | 0 | | | | | | | | | 75 | 37 | 38 | 50 7 | 14 | 38 |
| | | | | | | | | | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 2 | 39 |
| | | | | | | | | | | | | 2 | 0 | | | | | | | | | | | | | | | | | | | 5 | 2 | 3 | 60 0 | 3 | 40 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 41 |
| | | | | | | | | | | | | 2 | 1 | | | | | | | | | | | | | | | | | | | 5 | 3 | 2 | 40 0 | 2 | 42 |
| | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | 0 | 1 | | | | | | | 2 | 0 | 2 | 100 0 | 2 | 43 |
| | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | 3 | 1 | 2 | 66 7 | 1 | 44 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 0 | 0 0 | 2 | 45 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 46 |
| | | | | | | | | | | 2 | 2 | 3 | 13 | 1 | 0 | | | | | | | | | | | | | | | | | 20 | 6 | 10 | 76 0 | 7 | 47 |
| | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 48 |
| | | | | | | | | | | 0 | 2 | 3 | 11 | | | | | | | | | | | | | | | | | | | 17 | 3 | 14 | 82.3 | 3 | 49 |
| | | | | | | | | | | 0 | 1 | 3 | 2 | | | | | | | | | | | | | | | | | | | 7 | 3 | 4 | 57 1 | 3 | 50 |
| | | | | | | | | | | | | 0 | 3 | | | | | | | | | | | | | | | | | | | 3 | 0 | 3 | 100 0 | 1 | 51 |
| | | | | | | | | | | | | 0 | 2 | | | | | | | | | | | | | | | | | | | 2 | 0 | 2 | 100 0 | 1 | 52 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 53 |
| | | | | | | | | | | 1 | 1 | 3 | 5 | | | | | | | | | | | | | | | | | | | 12 | 6 | 6 | 50 0 | 4 | 54 |
| | | | | | | | | | | | | 0 | 1 | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 55 |
| | | | | | | | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | 3 | 3 | 0 | 0 0 | 2 | 56 |
| | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 57 |
| | | | | 1 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 0 | 3 | 3 | 0 | 0 0 | 2 | 58 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 1 | 3 | 75 0 | 2 | 59 |
| 12 | | 13 | | 14 | | 15 | | 16 | | 17 | | 18 | | 19 | | 20 | | 21 | | 22 | | 23 | | 24 | | 25 | | 26 | | 27 | | | | | | |

TABLE 26—*Physicians Examined on the Basis of Credentials Obtained*

| Marginal Number | | 1 Alabama | | 2 California | | 3 Colorado | | 4 Connecticut | | 5 Dist of Columbia | | 6 Florida | | 7 Illinois | | 8 Indiana | | 9 Maine | | 10 Maryland | | 11 Massachusetts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F | P | F |
| | POLAND | | | | | | | | | | | | | | | | | | | | | | |
| 60 | Uniwersytet Jana Kazimierza Lwów | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 61 | Uniwersytet Jozefa Pilsudskiego Warszawa | | | | | | | | | | | | | | | | | | | | | | |
| 62 | Uniwersytet Stefana Batorego Wilno | | | | | | | | | | | | | | | | | | | | | | |
| | SCOTLAND | | | | | | | | | | | | | | | | | | | | | | |
| 63 | University of St Andrews St Andrews and Dundee | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| 64 | Licentiate of the Royal College of Physicians and Surgeons Edinburgh Licentiate of the Royal Faculty of Physicians and Surgeons Glasgow | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| | SPAIN | | | | | | | | | | | | | | | | | | | | | | |
| 65 | Universidad de Barcelona | | | | | | | | | | | | | | | | | | | | | | |
| 66 | Universidad Central de Espana Madrid | | | | | | | | | | | 1 | 0 | | | | | | | | | | |
| | SWITZERLAND | | | | | | | | | | | | | | | | | | | | | | |
| 67 | Universität Basel | | | | | | | | | | | | | | | | | | | | | | |
| 68 | Universitat Bern | | | 1 | 1 | | | 1 | 0 | | | | | | | | | | | | | | |
| 69 | Université de Geneve | | | 1 | 0 | | | | | | | | | | | | | | | | | 1 | 0 |
| 70 | Université de Lausanne | | | | | | | | | | | | | | | | | | | | | 1 | 1 |
| 71 | Universität Zürich | | | | | | | | | | | | | 1 | 0 | | | | | | | | |
| | TURKEY | | | | | | | | | | | | | | | | | | | | | | |
| 72 | University of Istanbul | | | | | | | | | | | | | | | | | | | | | | |
| | UNION OF SOCIALIST SOVIET REPUBLICS | | | | | | | | | | | | | | | | | | | | | | |
| 73 | Voronezh Medical Institute | | | 1 | 0 | | | | | | | | | | | | | | | | | | |
| 74 | Kiev Medical Institute | | | | | | | | | | | | | 0 | 1 | | | | | | | | |
| 75 | First Moscow Medical Institute | | | | | | | | | | | | | | | | | | | | | | |
| 76 | Severo-Kavka Medical Institute Rostov on Don | | | | | | | | | | | | | | | | | | | | | | |
| 77 | Second Moscow Medical Institute | | | | | | | | | | | | | | | | | | | | | | |
| | YUGOSLAVIA | | | | | | | | | | | | | | | | | | | | | | |
| 78 | Beogradskog Universiteta | | | | | | | | | | | | | | | | | | | | | 1 | 0 |
| 79 | Totals | 1 | | 2 | | 1 | | 11 | | 1 | | 1 | | 29 | | 1 | | 4 | | 1 | | 27 | |
| 80 | Totals—Examined—Passed | 1 | | 17 | | 1 | | 6 | | 1 | | 1 | | 10 | | 1 | | 1 | | 8 | | 12 | |
| 81 | Totals—Examined—Failed | 0 | | 8 | | 0 | | 5 | | 0 | | 0 | | 19 | | 0 | | 3 | | 7 | | 15 | |
| 82 | Percentage Failed | 0 0 | | 32 0 | | 0 0 | | 45.5 | | 0 0 | | 0 0 | | 65 6 | | 0 0 | | 75 0 | | 46 7 | | 55 6 | |
| | Marginal Number | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |

P—Passed F—Failed

may practice either medicine surgery or both as the case may be if he passes a satisfactory examination before the medical examining board In Delaware osteopaths are licensed as "osteopathic physicians" In the District of Columbia osteopaths are granted the right to practice surgery In Indiana the licenses issued to osteopaths under a 1945 amendment to the medical practice act authorize the holders to practice medicine and surgery Licentiates in osteopathy prior to 1945 have now been authorized to practice osteopathy, surgery and obstetrics In Massachusetts the medical practice act, by definition includes osteopathy in the practice of medicine and does not differentiate the type of license issed to an osteopathic applicant According to a law passed in Nebraska in 1943 "any person now licensed to practice osteopathy may, if application is made prior to July 1, 1948 and upon payment of the prescribed fee, take the first regular examination given after the application is made before the Board of Examiners in Medicine If successful he or she shall receive a license to practice medicine and surgery in the state" In New Hampshire osteopaths are granted the right to practice medicine and surgery New Jersey provides that osteopaths licensed prior to Nov 1, 1941 who furnish proof, prior to that date, of having served for a period of two years as an intern or resident surgeon in an osteopathic or medical hospital approved by the board of medical examiners, of having completed a postgraduate course of two years in a college of osteopathy or medicine approved by the board or of having had at least three years of practice in a hospital approved by the board can be admitted to an examination in pharmacology therapeutics and surgery and, if successful, can obtain a license to practice medicine and surgery Since 1941 all osteopathic applicants who have met the requirements of the medical practice act have been licensed to practice medicine and surgery

A law passed in Ohio in 1943 gives osteopaths who obtain their licenses under that act the right to practice osteopathic medicine and surgery In Oregon they are granted the right to practice "in the subjects" covered by the examination, which includes surgery The medical practice act of Texas provides for the issuing of a license to practice medicine only and osteopaths are issued licenses unrestricted in scope In Virginia osteopaths may obtain the right to use drugs and perform surgery with the use of instruments if they satisfy the board of medical examiners that they are qualified to do so Wisconsin grants osteopaths the privilege to practice surgery and in Wyoming the statutes contain no specific provision for the licensing of osteopaths The medical practice act of the latter state provides that the certificate issued to all applicants "shall be deemed licenses to practice medicine in all branches in which the applicant has taken examination in the state"

## PHYSICIANS EXAMINED ON BASIS OF CREDENTIALS OBTAINED IN COUNTRIES OTHER THAN THE UNITED STATES AND CANADA

The Council on Medical Education and Hospitals does not grade or classify medical schools outside the United States and Canada It does not attempt to evaluate institutions which it is not in a position to visit to determine whether they meet the minimal essentials of an acceptable medical school as outlined by the Council This was true even before the war

*in Countries Other Than The United States and Canada, 1945—Continued*

| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Michigan | Mississippi | Missouri | Nebraska | New Hampshire | New Jersey | New York | Ohio | Pennsylvania | Rhode Island | South Dakota | Tennessee | Texas | Virginia | Washington | Puerto Rico | Totals | Examined—Passed | Examined—Failed | Percentage of Failures | Number of Boards Examined by | Marginal Number |
| P F | P F | P F | P F | P F | P F | P F | P F | I F | P F | P F | P F | P F | P I | P F | P F | | | | | | |
| | | | | | | 0 1 | | | | | | | | | | 2 | 1 | 1 | 50 0 | 2 | 60 |
| | | | | | | 1 1 | | | | | | | | | | 2 | 1 | 1 | 50 0 | 1 | 61 |
| | | | | | | 0 2 | | | | | | | | | | 2 | 0 | 2 | 100 0 | 1 | 62 |
| | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 63 |
| | | | | | 2 0 | 6 1 | | | | | | | | | | 10 | 9 | 1 | 10 0 | 3 | 64 |
| | | | | | | 2 0 | | | | | | | | | | 2 | 2 | 0 | 0 0 | 1 | 65 |
| | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 66 |
| | | | | | | 8 8 | | 0 1 | | | | | | | | 17 | 8 | 9 | 52.9 | 2 | 67 |
| | | | | 1 0 | | 2 7 | | | | | | | | | | 9 | 5 | 4 | 44 4 | 4 | 68 |
| | | | | | | 4 6 | | | | 1 0 | | | | | | 13 | 7 | 6 | 46.2 | 4 | 69 |
| | | | | | | 18 9 | | | | | | | 0 1 | | | 27 | 16 | 11 | 40 7 | 3 | 70 |
| | | | | | | 5 4 | | | | | | | | 1 0 | | 11 | 7 | 4 | 36 4 | 3 | 71 |
| | | | | | | 0 1 | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 72 |
| | | | | | | 0 2 | | | | | | | | | | 3 | 1 | 2 | 66 7 | 2 | 73 |
| | | | | | | 0 1 | | | | | | | | | | 2 | 0 | 2 | 100 0 | 2 | 74 |
| | | | | | | 2 3 | | | | | | | | | | 5 | 2 | 3 | 60 0 | 1 | 75 |
| | | | | | | 0 1 | | | | | | | | | | 1 | 0 | 1 | 100 0 | 1 | 76 |
| | | | | | 0 1 | 0 1 | | | | | | | | | | 2 | 0 | 2 | 100 0 | 2 | 77 |
| | | | | | | | | | | | | | | | | 1 | 1 | 0 | 0 0 | 1 | 78 |
| 1 | 1 | 2 | 1 | 3 | 13 | 370 | 2 | 3 | 1 | 2 | 1 | 2 | 2 | 1 | 4 | 475 | | | | | 79 |
| 1 | 1 | 1 | 0 | 2 | 6 | 126 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | | 209 | | | | 80 |
| 0 | 0 | 1 | 1 | 1 | 7 | 102 | 1 | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | | | 266 | | | 81 |
| 0 0 | 0 0 | 50 0 | 100 0 | 33.3 | 53.8 | 60 0 | 50 0 | 100 0 | 0 0 | 0 0 | 0 0 | 50 0 | 50 0 | 0 0 | 25 0 | | | | 56.0 | | 82 |
| 10 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | | | | | | |

For a period of twelve years beginning in 1926 the credentials of physicians coming from abroad were verified by the Council through official correspondence with the medical schools directly or through the diplomatic services Prior to the onset of the war in Europe it was necessary to discontinue this effort and on the licensing boards rests the responsibility of evaluating the credentials presented by these graduates In the 1942 edition of the American Medical Directory a symbol in the biographic data of foreign graduates indicates when the information given is the licensing board's record of the credential accepted as meeting the educational qualifications for licensure The absence of the symbol may be interpreted to indicate that official verification is on file in the office of the Council

The requirements of candidates for medical licensure in the United States, Alaska Hawaii and Puerto Rico on the basis of credentials obtained in countries other than the United States and Canada are given in table 25 Eighteen states report that the holders of such credentials are not eligible for licensure Eighteen states, Alaska, Hawaii and Puerto Rico require full citizenship and ten naturalization papers as a condition precedent to taking the examination California, Indiana and the District of Columbia make no reference to citizenship In some states the recognition or nonrecognition of such individuals is by rule of the board, in others the provision is by statute Ten states that will admit foreign graduates to practice require a certificate from the state board of examiners in the basic sciences In nineteen states, Alaska, Hawaii and Puerto Rico an internship in a hospital in the United States is a prerequisite Additional qualifications of individual states are given in footnotes No state has changed its laws regarding these graduates or relaxed its requirements in recent years

Table 26 presents figures relating to physicians examined on the basis of credentials obtained in countries other than the United States and Canada by licensing boards in 1945 The figures represent both American and foreign born physicians educated abroad Seventy-five faculties of medicine and three licensing corporations of eighteen European countries and nine other countries are represented There were 475 physicians examined by twenty-five states, the District of Columbia and Puerto Rico, of whom 209 passed and 266,

TABLE 27—*Physicians Examined on the Basis of Credentials Obtained in Countries Other Than the United States and Canada, 1930-1945*

| Year | Number Examined | Passed | Percentage Failed |
|---|---|---|---|
| 1930 | 167 | 92 | 44 9 |
| 1931 | 108 | 91 | 42 4 |
| 1932 | 182 | 96 | 47.3 |
| 1933 | 200 | 129 | 35.5 |
| 1934 | 285 | 170 | 40 2 |
| 1935 | 437 | 303 | 30 7 |
| 1936 | 588 | 382 | 35 0 |
| 1937 | 920 | 637 | 30 8 |
| 1938 | 1 164 | 716 | 38.5 |
| 1939 | 1 091 | 839 | 50 4 |
| 1940 | 2 088 | 945 | 54 7 |
| 1941 | 1 717 | 608 | 59 2 |
| 1942 | 1 630 | 890 | 45 4 |
| 1943 | 1 031 | 518 | 49.8 |
| 1944 | 691 | 325 | 53 0 |
| 1945 | 475 | 209 | 56 0 |
| Totals | 13 424 | 7 043 | 47.5 |

56.0 per cent, failed. Graduates of the University of Vienna represented the largest group, 75, who were examined in fourteen states, with a failure percentage of 50.7. Six states examined 31 graduates of the University of Berlin, of whom 54.8 per cent failed. Twenty or more graduates of the Universities of Paris,

OFFICERS OF STATE BOARDS OF MEDICAL EXAMINERS

| | |
|---|---|
| Alabama | Dr. B. F. Austin, 519 Dexter Ave., Montgomery 4 |
| Arizona | Dr. J. H. Patterson, 826 Security Bldg., Phoenix |
| Arkansas | Dr. L. J. Kosminsky, Texarkana |
| California | Dr. Frederick N. Scatena, 1020 N. St., Sacramento 14 |
| *Colorado* | *Dr. J. B. Davis, 831 Republic Bldg., Denver* |
| Connecticut | Dr. Creighton Barker, 208 Church St., New Haven. |
| Delaware | Dr. J. S. McDaniel, 229 S. State St., Dover |
| District of Columbia | Dr. G. C. Rubland, 6150 E. Municipal Bldg., Washington |
| Florida | Dr. Harold D. Van Schaick, 2736 S. W. 7th Ave., Miami 36 |
| Georgia | Mr. R. C. Coleman, 111 State Capitol, Atlanta 3 |
| Idaho | Miss Agnes Barnhart, 350 State Capitol Bldg., Boise |
| Illinois | Mr. Philip Harman, Springfield |
| Indiana | Miss R. V. Kirk, 301 State House, Indianapolis 4 |
| Iowa | Mr. H. W. Grefe, Capitol Bldg., Des Moines 19 |
| Kansas | Dr. J. F. Hassig, 905 N. Seventh St., Kansas City 10 |
| Kentucky | Dr. P. E. Blackerby, 620 S. Third St., Louisville 2. |
| Louisiana | Dr. R. B. Harrison, 1507 Hibernia Bank Bldg., New Orleans 12. |
| Maine | Dr. A. P. Leighton, 192 State St., Portland |
| Maryland. | Dr. J. T. O'Mara, 1210 Cathedral St., Baltimore 1 |
| Massachusetts | Dr. H. Q. Gallupe, 413 F. State House, Boston |
| Michigan | Dr. J. E. McIntyre, 100 W. Allegan St., Lansing 8 |
| Minnesota | Dr. J. F. Du Bois, 230 Lowry Medical Arts Bldg., St. Paul 2 |
| Mississippi | Dr. R.N. Whitfield, Jackson 113 |
| Missouri | Dr. R. M. James, State Capitol Bldg., Jefferson City |
| Montana | Dr. O. G. Klein, First National Bank Bldg., Helena |
| Nebraska | Mr. Oscar F. Humble, 1009 State Capitol Bldg., Lincoln 9 |
| Nevada | Dr. G. H. Ross, 215 N. Carson St., Carson City |
| New Hampshire | Dr. John S. Wheeler, 107 State House, Concord |
| New Jersey | Dr. E. S. Hallinger, 28 W. State St., Trenton. |
| New Mexico | Dr. LeGrand Ward, 141 Palace Ave., Santa Fe |
| New York | Dr. J. L. Lochner, Education Bldg., Albany |
| North Carolina | Dr. Ivan Procter, 226 Hillsboro St., Raleigh |
| North Dakota | Dr. G. M. Williamson, 4½ S. Third St., Grand Forks |
| Ohio | Dr. H. M. Platter, 21 W. Broad St., Columbus |
| Oklahoma | Dr. J. D. Osborn, Jr., Frederick |
| Oregon | Miss L. M. Conlee, 608 Failing Bldg., Portland 4 |
| Pennsylvania | Mrs. M. G. Steiner, 351 Education Bldg., Harrisburg |
| Rhode Island | Mr. Thomas B. Casey, 360 State Office Bldg., Providence |
| South Carolina | Dr. N. B. Heyward, 1329 Blanding St., Columbia |
| South Dakota | Dr. Gilbert Cottam, Capitol Bldg., Pierre |
| Tennessee | Dr. H. W. Qualls, 130 Madison Ave., Memphis 3 |
| Texas | Dr. T. J. Crowe, 918-20 Texas Bank Bldg., Dallas 2 |
| Utah | Mr. W. R. McEntire, 324 State Capitol Bldg., Salt Lake City 1. |
| Vermont | Dr. F. J. Lawliss, Richford |
| Virginia | Dr. J. W. Preston, 30½ Franklin Rd., Roanoke. |
| Washington | Mr. Harry C. Huse, Olympia |
| West Virginia | Dr. John E. Offner, State Capitol, Charleston 5 |
| Wisconsin | Dr. C. A. Dawson, Tremont Bldg., River Falls |
| Wyoming | Dr. G. M. Anderson, Capitol Bldg., Cheyenne. |
| Alaska | Dr. W. M. Whitehead, Box 140, Juneau |
| Canal Zone | Dr. M. C. Stayer, Balboa Heights. |
| Hawaii | Dr. S. E. Doolittle, 881 S. Hotel St., Honolulu |
| Puerto Rico | Dr. O. C. Mandy, Box 3854, Santurce |
| Virgin Islands | Dr. K. Knud Hansen, Charlotte Amalie |

Bologna and Lausanne also were examined in the United States last year. Fewer than 5 graduates of fifty-one foreign schools appeared for licensure last year.

The greatest number of foreign graduates examined by any one state was 320 in New York, of whom 128 passed and 192 (60.0 per cent) failed. No other state tested more than 29 of these physicians. Fewer than 5 were examined by nineteen states and Puerto Rico.

Table 27 records the number of graduates of faculties of medicine abroad examined for medical licensure in the United States in the sixteen years 1930 to 1945 inclusive. In this period 13,424 were examined, of whom 7,043 passed and 47.5 per cent failed. There has been a decrease of 216 in the number examined in 1945 as compared with the previous year. Although there has been a considerable reduction in the number of foreign graduates seeking licensure in recent years the percentage of failures has not changed significantly. The greatest number of failures occurred in 1941, when 59.2 per cent failed. At no time in this sixteen year period did fewer than 30.7 per cent fail.

From 1936 to 1940 there were large annual increases in foreign graduates examined, so that in 1940 there were over three times as many tested as in 1936. Since 1940 there have been annual decreases. The number examined last year was 1,613 fewer than that of 1940, but the annual total has not yet reached the average number of foreign graduates examined prior to 1935 and before the increased migration of foreign physicians to this country from Europe.

## BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Seventeen states and the District of Columbia have adopted by legislative action basic science requirements underlying the practice of the healing art. A basic science law provides for the establishment of a board of examiners and requires that each person who desires to practice the healing arts appear before that board and demonstrate his knowledge. Such boards are distinct from licensing boards. A certificate of proficiency in the basic sciences does not authorize the possessor to practice the healing art, it enables him only to apply for licensure so to practice. Some states provide for reciprocal agreements.

TABLE 28.—*States Having Basic Science Laws and Year of Enactment*

| | | | |
|---|---|---|---|
| Arizona | 1936 | Nebraska | 1927 |
| Arkansas | 1929 | New Mexico | 1941 |
| Colorado | 1937 | Oklahoma | 1937 |
| Connecticut | 1925 | Oregon | 1933 |
| District of Columbia | 1929 | Rhode Island | 1940 |
| Florida | 1939 | South Dakota | 1939 |
| Iowa | 1935 | Tennessee | 1943 |
| Michigan | 1937 | Washington | 1927 |
| Minnesota | 1927 | Wisconsin | 1925 |

Connecticut and Wisconsin were the first states to adopt such legislation. Laws were passed in these states in 1925. Other states comprising the group, together with the year of enactment of their basic science law, are recorded in table 28.

The subjects in which examinations are conducted by the respective states and the District of Columbia are shown in table 29. These subjects are specified by statute. The examining boards are not authorized to add any subjects or to fail to examine in any subject specified by the law. All eighteen boards examine in anatomy, pathology and physiology, sixteen examine in chemistry, fourteen in bacteriology, eight in hygiene, two in diagnosis and one in public health.

The results of examinations held in these states and the number of certificates issued on the basis of reciprocity or endorsement during 1945 are presented in tables 30 and 31 as reported by the respective boards. A candidate in applying for a basic science certificate

is not required to mention his school of practice However, by checking the biographic records of physicians and medical student records of the American Medical Association and various directories it has been possible to determine the profession of the majority of candidates Thus it has been possible to tabulate the figures in four groups, namely physicians and medical students, osteopaths, chiropractors and unclassified applicants The latter category includes those for whom it was not possible to determine the profession represented In Rhode Island doctors of dentistry represent the unclassified group It may be assumed that others in this unclassified group include osteopaths, chiropractors and also naturopaths who have not been identified by the reference material available

A total of 2,979 candidates (table 30) were examined by the eighteen boards in operation in 1945 Of this number 2,559 were physicians or medical students, 183 were osteopaths, 33 were chiropractors and 181 were placed in the unclassified group Of all applicants 21 7 per cent failed Of the physicians and medical students examined 16 4 per cent failed, osteopaths 43 7 per cent, chiropractors 75 8 per cent and unclassified 54 7 per cent If a candidate failed more than once in a given year in a state he is regarded as a single

TABLE 29—*Subjects Included in Basic Science Examinations*

| | Examinations Required in | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Anatomy | Bacteriology | Chemistry | Diagnosis | Hygiene | Pathology | Physiology | Public Health |
| Arizona | + | + | + | | + | + | + | |
| Arkansas | + | + | + | | | + | + | |
| Colorado | + | + | + | | | + | + | |
| Connecticut | + | | | + | + | + | + | |
| Dist Columbia | + | + | + | | | + | + | |
| Florida | + | + | + | | | + | + | |
| Iowa | + | + | + | | + | + | + | |
| Michigan | + | + | + | | + | + | + | + |
| Minnesota | + | + | + | | + | + | + | |
| Nebraska | + | + | + | | + | + | + | |
| New Mexico | + | + | + | | | + | + | |
| Oklahoma | + | + | + | | | + | + | |
| Oregon | + | | + | | + | + | + | |
| Rhode Island | + | + | + | | | + | + | |
| South Dakota | + | + | + | | | + | + | |
| Tennessee. | + | + | + | | | + | + | |
| Washington | + | | + | | + | + | + | |
| Wisconsin.. | + | | | + | | + | + | |

failure Among those who passed there were 2,139 physicians and medical students, 103 osteopaths, 8 chiropractors and 82 unclassified candidates The basic science boards of Florida and Michigan examined the greatest number of applicants In each of these two states 398 were tested In Florida this group represented 363 physicians and medical students and 35 others, while in Michigan there were 381 physicians or medical students and 17 others Of those examined in Florida 25 9 per cent failed and in Michigan 28 9 per cent Iowa, Minnesota and Wisconsin also examined more than 300 candidates The percentage of failures in these states was 47 9, 13 1 and 9 2 respectively Three states reported no failures

Osteopaths were tested in all states except Arkansas, District of Columbia, Nebraska, Rhode Island, Tennessee and Wisconsin Chiropractors appeared for examination in Connecticut, Florida, Iowa, New Mexico, Rhode Island, Tennessee, Washington and Wisconsin

It is the policy of the Arizona Board of Examiners in the Basic Sciences to omit the names of applicants who fail examinations Failures for this state are recorded only in the total column

Thirteen states issued 584 certificates by reciprocity, endorsement or waiver, and the boards of all states granted 2,315 certificates after examination Altogether, 2 899 certificates of proficiency were issued The number of successful applicants by both of these methods are recorded in table 31 Among the successful candidates were 2,534 physicians, 263 osteopaths,

TABLE 30—*Applicants Examined in Basic Sciences 1945*

| | Physicians and Medical Students | | Osteopaths | | Chiropractors | | Unclassified | | Totals Examined | Passed | Failed | Percentage Failed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | F | P | F | P | F | P | F | | | | |
| Arizona | 42 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 67 | 44 | 23* | 34 3 |
| Arkansas | 115 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | 115 | 0 | 0 0 |
| Colorado | 160 | 22 | 2 | 0 | 0 | 0 | 2 | 3 | 189 | 164 | 25 | 13 2 |
| Connecticut | 73 | 4 | 2 | 1 | 0 | 3 | 1 | 1 | 85 | 76 | 9 | 10 6 |
| District of Columbia | 18 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 18 | 4 | 18.2 |
| Florida | 242 | 91 | 13 | 4 | 6 | 3 | 4 | 5 | 368 | 295 | 103 | 25.9 |
| Iowa | 89 | 31 | 34 | 40 | 0 | 5 | 42 | 76 | 317 | 165 | 152 | 47.9 |
| Michigan | 278 | 103 | 2 | 9 | 0 | 0 | 3 | 3 | 398 | 283 | 115 | 28 9 |
| Minnesota | 233 | 24 | 30 | 16 | 0 | 0 | 1 | 0 | 304 | 264 | 40 | 13 1 |
| Nebraska | 105 | 18 | 0 | 0 | 0 | 0 | 1 | 0 | 124 | 106 | 18 | 14.5 |
| New Mexico | 6 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 10 | 7 | 3 | 30 0 |
| Oklahoma | 71 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 72 | 72 | 0 | 0 0 |
| Oregon | 102 | 37 | 2 | 1 | 0 | 0 | 0 | 1 | 143 | 104 | 39 | 27 3 |
| Rhode Island | 43 | 4 | 0 | 0 | 0 | 1 | 24 | 2 | 74 | 67 | 7 | 9.5 |
| South Dakota | 26 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 29 | 29 | 0 | 0 0 |
| Tennessee | 126 | 45 | 0 | 0 | 1 | 1 | 0 | 1 | 174 | 127 | 47 | 27 0 |
| Washington | 89 | 21 | 12 | 9 | 0 | 1 | 0 | 1 | 133 | 101 | 32 | 24 1 |
| Wisconsin | 291 | 15 | 0 | 0 | 1 | 9 | 3 | 6 | 325 | 295 | 30 | 9 2 |
| Totals Examined | 2 559 | | 183 | | 33 | | 181 | | 2,979 | | | |
| Totals—Passed | 2 139 | | 103 | | 8 | | 82 | | | 2,332 | | |
| Totals—Failed | 420 | | 80 | | 25 | | 99 | | | | 647 | |
| Percentage Failed | 16 4 | | 43 7 | | 75 8 | | 54 7 | | | | | 21 7 |

* Nature of practice undeterminable since names of failures not supplied

19 chiropractors and 83 others New Mexico certified the most applicants without examination, numbering 111, of whom 43 were physicians, 61 osteopaths and 7 chiropractors Florida and Washington have no

TABLE 31—*Basic Science Certificates Issued by Examination Reciprocity and Endorsement 1945*

| | Examination | | | | | Reciprocity, Endorsement or Waiver | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Physicians and Medical Students | Osteopaths | Chiropractors | Unclassified | Totals | Physicians and Medical Students | Osteopaths | Chiropractors | Unclassified | Totals | Registered |
| Arizona | 50 | 2 | 0 | 0 | 52 | 19 | 17 | 0 | 0 | 36 | 88 |
| Arkansas | 115 | 0 | 0 | 0 | 115 | 12 | 0 | 0 | 0 | 12 | 127 |
| Colorado | 160 | 2 | 0 | 2 | 164 | 45 | 14 | 0 | 0 | 59 | 223 |
| Connecticut | 73 | 2 | 0 | 1 | 76 | 0 | 0 | 0 | 0 | 0 | 76 |
| District of Columbia | 18 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 18 |
| Florida | 242 | 13 | 6 | 4 | 295 | 0 | 0 | 0 | 0 | 0 | 295 |
| Iowa | 89 | 34 | 0 | 42 | 165 | 28 | 2 | 0 | 0 | 30 | 195 |
| Michigan | 278 | 2 | 0 | 3 | 283 | 8 | 29 | 0 | 0 | 37 | 320 |
| Minnesota | 233 | 30 | 0 | 1 | 264 | 84 | 0 | 3 | 0 | 87 | 351 |
| Nebraska | 105 | 0 | 0 | 1 | 106 | 10 | 0 | 0 | 0 | 10 | 116 |
| New Mexico | 6 | 1 | 0 | 0 | 7 | 43 | 61 | 7 | 0 | 111 | 118 |
| Oklahoma | 71 | 1 | 0 | 0 | 72 | 1 | 0 | 0 | 0 | 1 | 73 |
| Oregon | 102 | 2 | 0 | 0 | 104 | 21 | 21 | 0 | 0 | 42 | 146 |
| Rhode Island | 43 | 0 | 0 | 24 | 67 | 0 | 0 | 0 | 0 | 0 | 67 |
| South Dakota | 26 | 2 | 0 | 1 | 29 | 3 | 0 | 0 | 0 | 3 | 32 |
| Tennessee. | 101 | 0 | 1 | 0 | 102 | 61 | 0 | 0 | 0 | 61 | 163 |
| Washington | 89 | 12 | 0 | 0 | 101 | 0 | 0 | 0 | 0 | 0 | 101 |
| Wisconsin | 291 | 0 | 1 | 3 | 295 | 77 | 16 | 1 | 1 | 95 | 390 |
| Totals | 2 122 | 103 | 8 | 82 | 2 315 | 412 | 169 | 11 | 1 | 584 | 2,899 |

reciprocal relations None were certified without examination in Connecticut, District of Columbia, and Rhode Island

The figures for certificates issued by examination in Arizona and Tennessee in table 31 do not agree with the examination figures of the preceding table In Arizona 8 candidates were examined in 1944 and certi-

fied in 1945, while in Tennessee 25 were examined in 1945 and were not certified until 1946. The latter group will be included in next year's compilation of basic science tests.

Altogether, 2,899 candidates received basic science certificates in seventeen states and the District of Columbia, ranging from 18 in the District of Columbia to 390 in Wisconsin.

TABLE 32.—*Total Candidates for Basic Science Certification 1927-1945*

| | No. of Boards | Physicians and Medical Students | | | | | | Other Practitioners | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Examined | Passed | Failed | Percentage Failed | Endorsement | Totals Certified | Examined | Passed | Failed | Percentage Failed | Endorsement | Totals Certified |
| 1927 | 5 | 360 | 270 | 90 | 25.0 | 20 | 290 | 22 | 15 | 7 | 31.8 | 1 | 16 |
| 1928 | 5 | 646 | 586 | 60 | 9.3 | 19 | 605 | 59 | 31 | 28 | 47.5 | 0 | 31 |
| 1929 | 7 | 668 | 610 | 58 | 8.7 | 75 | 685 | 66 | 11 | 55 | 83.0 | 0 | 31 |
| 1930 | 7 | 685 | 600 | 70 | 11.5 | 118 | 721 | 78 | 30 | 48 | 61.5 | 4 | 34 |
| 1931 | 7 | 680 | 586 | 94 | 13.8 | 141 | 727 | 107 | 48 | 59 | 55.1 | 0 | 48 |
| 1932 | 7 | 657 | 580 | 67 | 10.2 | 106 | 686 | 78 | 34 | 44 | 56.4 | 12 | 56 |
| 1933 | 8 | 601 | 527 | 74 | 12.3 | 121 | 648 | 60 | 30 | 30 | 50.0 | 10 | 40 |
| 1934 | 9 | 815 | 725 | 90 | 11.0 | 124 | 849 | 51 | 26 | 25 | 49.0 | 11 | 37 |
| 1935 | 10 | 882 | 761 | 121 | 13.7 | 110 | 871 | 74 | 33 | 41 | 55.4 | 4 | 37 |
| 1936 | 10 | 1,032 | 891 | 141 | 13.6 | 230 | 1,121 | 66 | 26 | 40 | 60.6 | 13 | 39 |
| 1937 | 12 | 1,231 | 1,061 | 170 | 13.8 | 192 | 1,253 | 113 | 41 | 72 | 63.7 | 10 | 51 |
| 1938 | 12 | 1,169 | 1,070 | 119 | 12.2 | 207 | 1,277 | 109 | 70 | 89 | 55.7 | 26 | 96 |
| 1939 | 14 | 1,141 | 1,014 | 127 | 11.2 | 727 | 1,740 | 218 | 97 | 121 | 55.5 | 201 | 291 |
| 1940 | 16 | 1,303 | 1,140 | 163 | 12.6 | 191 | 1,331 | 280 | 153 | 127 | 119 | 22 | 175 |
| 1941 | 17 | 1,708 | 1,500 | 208 | 11.8 | 280 | 1,840 | 196 | 101 | 105 | 46.2 | 73 | 201 |
| 1942 | 17 | 1,624 | 1,476 | 219 | 14.4 | 21 | 1,680 | 404 | 249 | 218 | 49.9 | 91 | 340 |
| 1943 | 18 | 2,830 | 2,608 | 242 | 10.0 | 280 | 2,991 | 389 | 211 | 178 | 45.8 | 86 | 297 |
| 1944 | 18 | 2,284 | 1,868 | 416 | 18.2 | 222 | 2,012 | 165 | 276 | 189 | 40.6 | 87 | 363 |
| 1945 | 18 | 2,559 | 2,139 | 420 | 16.4 | 414 | 2,553 | 397 | 193 | 204 | 51.4 | 172 | 365 |
| Totals | | 22,480 | 19,542 | 2,938 | 13.1 | 4,016 | 23,558 | 3,534 | 1,795 | 1,739 | 49.2 | 916 | 2,711 |

In table 32 is included the number of candidates examined and certified by basic science boards for each year since and including 1927. In 1928, when five boards were functioning, there were 646 physicians examined, of whom 9.3 per cent failed and 59 other practitioners of whom 47.5 per cent failed. By comparison, in 1945 the eighteen boards in operation examined 2,559 physicians of whom 16.4 per cent failed and 397 other practitioners, with 51.4 per cent failures.

In the nineteen year period 22,480 physicians and medical students were examined, of whom 19,542 were successful in these examinations. In the same period 3,534 other practitioners took the test and 1,795 were successful. Of the physicians or medical students examined during these years, 13.1 per cent failed and 49.2 per cent of the other practitioners were unsuccessful. There were in this same period 4,016 physicians and 916 others certified without examination.

In nineteen years 26,164 certificates have been granted by basic science boards. These certificates were awarded to 23,453 physicians and medical students and 2,711 other practitioners.

No new basic science legislation was enacted in 1945.

There was created a basic science examining board in Virginia in 1944 to consist of three members appointed by the governor from the faculties of the accredited colleges and universities of the state. None of the members may be a practitioner of any branch of the healing art. The board will cease to function July 1, 1949. It was created solely to examine a group of naturopaths and chiropractors who were practicing in the state without benefit of license during the twelve month period prior to July 1, 1944. Such practitioners must within the five year period either pass an examination given by this board in anatomy, bacteriology, elementary chemistry, pathology and physiology or must pass the examination given by the state board of medical examiners. The basic science board has no function whatever in connection with any other applicant for a license.

The basic science acts in two states were amended in 1945. In Arizona the act was amended to provide that an applicant who is a citizen of the United States who furnishes proof of a certification, registration or license issued to him "within any state or territory of the United States in which the requirements for the registration of said applicant at the date of issuance of his license shall be deemed by the board to be equivalent to those of Arizona shall be eligible for registration by reciprocal endorsement at the discretion of the board." In Tennessee the amendment now in effect imposes a basic science requirement on osteopaths, chiropractors and naturopaths in addition to physicians.

The principle of basic science legislation is to provide a means of insuring that all who seek licensure to care for sick and injured persons shall first possess a reasonable knowledge of the sciences fundamental to the healing art. The enforcement of such laws affects mostly the group classified as "other practitioners." This is particularly significant when one takes into account that the testing of individuals for basic science registration is made by nonmedical examiners. The results demonstrate that, in general practitioners other than regular physicians are poorly equipped in the fundamentals of medicine and should not be entrusted to care for the health of the people.

Efforts are being made by the American Association of Basic Science Boards to provide information based on experience to states contemplating new basic science board legislation and to develop procedures to facilitate reciprocity arrangements. In some instances basic science certification by reciprocity is unnecessarily difficult because of otherwise unimportant differences in the laws of the various states. At the February 1946 meeting of the Federation of State Medical Boards a resolution was adopted authorizing the President to appoint a committee of three to meet with a similar committee representing the state basic science boards in an effort to integrate better the operation of basic science laws with the system of medical licensure now existing in the various states.

OFFICIALS OF BASIC SCIENCE BOARDS

| | |
|---|---|
| Arizona | Dr. R. J. Nugent, Science Hall, University of Arizona, Tucson |
| Arkansas | Mr. J. F. Gebauer, 701 Main Street, Little Rock |
| Colorado | Dr. Esther B. Starks, 1450 Ogden Street, Denver |
| Connecticut | Dr. C. M. Bakewell, 240 Church Street, New Haven |
| District of Columbia | Dr. G. C. Ruhland, 616 F. Municipal Building, Washington |
| Florida | Dr. J. F. Conn, John B. Stetson University, Deland |
| Iowa | Mr. H. W. Grefe, Capitol Building, Des Moines 19 |
| Michigan | Miss Eloise LaBeau, 101 N. Walnut Street, Lansing |
| Minnesota | Dr. Raymond N. Bieter, 196 Millard Hall, University of Minnesota, Minneapolis 14 |
| Nebraska | Mr. Oscar F. Humble, 1009 State Capitol Building, Lincoln 9 |
| New Mexico | Miss Marion M. Rhea, State Capitol, Santa Fe |
| Oklahoma | Dr. J. D. Osborn, Jr., Frederick |
| Oregon | Mr. C. D. Byrne, University of Oregon, Eugene |
| Rhode Island | Mr. Thomas B. Casey, 200 State Office Building, Providence |
| South Dakota | Dr. G. M. Evans, Yankton |
| Tennessee | Dr. O. W. Hyman, 874 Union Avenue, Memphis |
| Washington | Mr. Harry C. Huse, Olympia |
| Wisconsin | Professor R. N. Bauer, 152 W. Wisconsin Avenue, Milwaukee 3 |

## NATIONAL BOARD OF MEDICAL EXAMINERS

The licensing authorities of forty-four states, the District of Columbia and the territories and possessions of Alaska, Hawaii, Puerto Rico and the Canal Zone accept the certificate of the National Board of Medical Examiners as an adequate qualification for a medical license The National Board certificate is not recognized by the licensing boards of Florida, Indiana, Montana and Wisconsin At present Louisiana exempts diplomates of the National Board from the state examination if they have been licensed in some other state with which Louisiana reciprocates Additional examinations are required of those who hold the certificate of the National Board by some of the states recognizing the certificate These are oral examinations in Illinois Maine Rhode Island and Wyoming, and a brief supplemental examination in Michigan States, territories and possessions endorsing the certificate of the National Board are listed in table 33

The examinations of the National Board in the basic sciences are accepted in lieu of the examinations in those subjects required by the basic science boards of Connecticut Iowa, Minnesota Nebraska, New Mexico, Oklahoma, Tennessee and the District of Columbia

Diplomates of the National Board are admitted to the final examination of the Examining Board in England, of the Triple Qualification Board of Scotland and of the Conjoint Board in Ireland These final examinations are both written and oral and correspond to parts II and III of the National Board The National Board admits directly to parts II and III the

TABLE 33.—*States Endorsing Certificates of the National Board of Medical Examiners*

| | | | |
|---|---|---|---|
| Alabama | Illinois | Nebraska | Puerto Rico |
| Alaska | Iowa | Nevada | Rhode Island |
| Arizona | Kansas | New Hampshire | South Carolina |
| Arkansas | Kentucky | New Jersey | South Dakota |
| California | Louisiana | New Mexico | Tennessee |
| Canal Zone | Maine | New York | Texas |
| Colorado | Maryland | North Carolina | Utah |
| Connecticut | Massachusetts | North Dakota | Vermont |
| Delaware | Michigan | Ohio | Virginia |
| Dist of Columbia | Minnesota | Oklahoma | Washington |
| Georgia | Mississippi | Oregon | West Virginia |
| Hawaii | Missouri | Pennsylvania | Wyoming |
| Idaho | | | |

diplomates of these boards of Great Britain and Ireland, provided they hold a degree in medicine from an acceptable university The certificate of the National Board has in the past been recognized in Lebanon,

TABLE 34.—*National Board Examinations, 1916-1921*

| Date | Total Examined | Failed | Percentage Failed |
|---|---|---|---|
| October 1916 | 10 | 5 | 50 0 |
| June 1917 | 12 | 3 | 25 0 |
| October 1917 | 28 | 6 | 21 4 |
| January 1918 | 20 | 2 | 10 0 |
| April 1918 | 23 | 5 | 21 7 |
| December 1918 | 16 | 1 | 6 3 |
| June 1919 | 52 | 1 | 1.9 |
| February 1920 | 48 | 12 | 25 0 |
| May 1920 | 60 | 14 | 23.3 |
| February 1921 | 16 | 5 | 31.3 |
| June 1921 | 40 | 3 | 7 5 |
| Totals | 325 | 57 | 17 5 |

Spain, Turkey and other foreign countries It is also recognized under certain conditions by the South African Medical Council Diplomates are also admitted without further examination to the Mayo Foundation (Graduate School of the University of Minnesota) and are exempt from some of the qualifications required by the United States Public Health Service

Requirements for admission to the National Board examinations include a standard four year high school course, two years of acceptable college work including English, physics, chemistry, biology and a foreign language, and a medical education satisfactorily completed in an approved school in this country or Canada Graduates of the university medical schools of Great Britain and Ireland are admitted to the examination provided these graduates have been licensed to practice in the country in which the school attended is located

TABLE 35.—*National Board Examinations in Part I in 1945 and in the Years 1922-1945*

| Date | Total Examinations | Passed | Incomplete | Failed | Percentage Failed |
|---|---|---|---|---|---|
| February | 723 | 444 | 230 | 49 | 9.0 |
| May | 841 | 405 | 398 | 38 | 8 6 |
| July | 1,302 | 745 | 641 | 116 | 13.6 |
| November | 799 | 512 | 206 | 81 | 13 7 |
| Totals | 3,665 | 2 106 | 1 475 | 284 | 11.8 |
| 1922 | 388 | 263 | 58 | 67 | 20.3 |
| 1923 | 607 | 349 | 77 | 81 | 18 8 |
| 1924 | 591 | 415 | 69 | 107 | 20.5 |
| 1925 | 608 | 400 | 50 | 158 | 28.3 |
| 1926 | 625 | 436 | 104 | 85 | 16.8 |
| 1927 | 702 | 452 | 159 | 91 | 16 8 |
| 1928 | 843 | 533 | 231 | 79 | 12 9 |
| 1929 | 1,006 | 675 | 331 | 90 | 11.8 |
| 1930 | 1 260 | 801 | 345 | 114 | 12.5 |
| 1931 | 1,277 | 780 | 425 | 97 | 11 4 |
| 1932 | 1,307 | 847 | 371 | 89 | 9.5 |
| 1933 | 1 234 | 782 | 316 | 136 | 14.8 |
| 1934 | 1,241 | 809 | 347 | 85 | 9.5 |
| 1935 | 1 964 | 785 | 410 | 69 | 8 1 |
| 1936 | 1 344 | 808 | 363 | 123 | 12.5 |
| 1937 | 1 435 | 871 | 415 | 149 | 14 6 |
| 1938 | 1 604 | 986 | 508 | 160 | 14 0 |
| 1939 | 1 733 | 1,048 | 460 | 225 | 17 7 |
| 1940 | 1 603 | 1 069 | 375 | 209 | 16 4 |
| 1941 | 1 640 | 1 087 | 846 | 207 | 10 0 |
| 1942 | 1 807 | 1,204 | 471 | 192 | 13.8 |
| 1943 | 2 606 | 1,441 | 962 | 253 | 14.9 |
| 1944 | 4 227 | 2,324 | 1 465 | 438 | 15 9 |
| 1945 | 3,665 | 2 106 | 1 475 | 284 | 11.8 |
| Totals | 35 017 | 21 206 | 10,133 | 3 678 | 14 4 |

The almost universal recognition of the examinations of the National Board is evidenced by the acceptance of the board's examinations by many medical schools as part of their own examination and promotion procedure At some of the schools the students are required to pass part I at the end of the second year and part II at the end of the fourth year Other schools require that part II be passed at the end of the fourth year Candidates who fail to pass the National Board examinations are given a supplemental examination at most schools The schools that require practically all of their students to take the National Board's examinations under one plan or another are Albany, Boston Buffalo, Duke, George Washington, Harvard, Long Island, New York Medical College, Tufts and Yale In addition to the schools named there are a few others at which those students who voluntarily take and pass the National Board's examinations, either in part I or in part II, are excused from the corresponding final school examinations This group of schools includes Colorado, Georgetown Illinois, Loyola, Minnesota, Pennsylvania and the Woman's Medical College

In the following paragraphs data are presented for the twenty-eighth consecutive year regarding the examinations conducted and the issuance of certificates by the National Board of Medical Examiners These data are based on official reports received periodically from the executive office of the board The awarding of certificates to candidates forms a part of their biographic records maintained by the American Medical Association

The first examination was given by the National Board in October 1916. From then until the test held in June 1921, eleven examinations were held and 268 candidates were certified. The results of each examination during this period are given in table 34.

TABLE 36.—*National Board Examinations in Part II in 1945 and in the Years 1922-1945*

| Date | Total Examinations | Passed | Incomplete | Failed | Percentage Failed |
|---|---|---|---|---|---|
| May | 1,296 | 1,276 | 0 | 20 | 1.5 |
| July | 150 | 149 | 0 | 1 | 0.7 |
| November | 152 | 139 | 0 | 13 | 8.6 |
| Totals | 1,598 | 1,564 | 0 | 34 | 2.1 |
| 1922 | 109 | 90 | 0 | 19 | 17.4 |
| 1923 | 192 | 170 | 2 | 20 | 10.5 |
| 1924 | 267 | 227 | 0 | 40 | 15.0 |
| 1925 | 342 | 309 | 0 | 33 | 9.6 |
| 1926 | 381 | 334 | 1 | 46 | 12.1 |
| 1927 | 361 | 314 | 1 | 46 | 12.8 |
| 1928 | 410 | 371 | 1 | 38 | 9.3 |
| 1929 | 465 | 399 | 19 | 47 | 10.5 |
| 1930 | 620 | 543 | 7 | 70 | 11.4 |
| 1931 | 719 | 630 | 2 | 87 | 13.1 |
| 1932 | 783 | 674 | 0 | 58 | 7.9 |
| 1933 | 714 | 651 | 0 | 63 | 8.8 |
| 1934 | 633 | 583 | 0 | 50 | 7.9 |
| 1935 | 689 | 620 | 0 | 69 | 10.0 |
| 1936 | 768 | 716 | 2 | 50 | 6.5 |
| 1937 | 855 | 803 | 1 | 51 | 6.0 |
| 1938 | 861 | 815 | 0 | 46 | 5.3 |
| 1939 | 938 | 884 | 0 | 54 | 5.8 |
| 1940 | 1,028 | 903 | 9 | 56 | 5.5 |
| 1941 | 1,001 | 954 | 1 | 46 | 4.6 |
| 1942 | 1,072 | 1,031 | 0 | 41 | 3.8 |
| 1943 | 1,860 | 1,804 | 0 | 56 | 3.0 |
| 1944 | 1,405 | 1,350 | 0 | 55 | 3.9 |
| 1945 | 1,598 | 1,564 | 0 | 34 | 2.1 |
| Totals | 18,020 | 16,709 | 46 | 1,170 | 6.5 |

Since 1922 the examination of the National Board has been divided into three separate parts which must be taken and completed in the following sequence: part I, consisting of a written examination in the basic sciences, part II, a written examination in five major clinical subjects, and part III, a clinical and practical examination in six major clinical divisions and their component subjects or subdivisions.

TABLE 37.—*National Board Examinations in Part III, 1922-1945*

| | Total Examinations | Passed | Failed | Percentage Failed |
|---|---|---|---|---|
| 1922 | 22 | 22 | 0 | 0.0 |
| 1923 | 82 | 81 | 1 | 1.2 |
| 1924 | 126 | 120 | 6 | 4.8 |
| 1925 | 219 | 206 | 13 | 5.9 |
| 1926 | 255 | 243 | 12 | 4.7 |
| 1927 | 293 | 272 | 21 | 7.2 |
| 1928 | 322 | 306 | 16 | 5.0 |
| 1929 | 352 | 337 | 15 | 4.3 |
| 1930 | 420 | 401 | 19 | 4.5 |
| 1931 | 437 | 419 | 18 | 4.1 |
| 1932 | 550 | 522 | 28 | 5.1 |
| 1933 | 551 | 526 | 25 | 4.5 |
| 1934 | 567 | 548 | 19 | 3.4 |
| 1935 | 598 | 578 | 20 | 3.3 |
| 1936 | 576 | 547 | 29 | 5.0 |
| 1937 | 668 | 630 | 38 | 5.7 |
| 1938 | 706 | 682 | 24 | 3.4 |
| 1939 | 770 | 729 | 41 | 5.3 |
| 1940 | 791 | 770 | 21 | 2.7 |
| 1941 | 910 | 885 | 25 | 2.7 |
| 1942 | 1,054 | 1,041 | 13 | 1.2 |
| 1943 | 1,230 | 1,213 | 17 | 1.4 |
| 1944 | 1,167 | 1,145 | 22 | 1.9 |
| 1945 | 1,231 | 1,218 | 13 | 1.1 |
| Totals | 13,899 | 13,443 | 456 | 3.3 |

The tables that are presented herewith enumerate the results of examinations in parts I, II and III for each calendar year since 1922, including those who passed and failed examinations and those certified.

During 1945 four examinations were given in part I and three in part II in various approved medical schools. Examinations in part III are given under the direction of local subsidiary boards at times sufficiently frequent to accommodate all eligible candidates. Boards have been organized for this purpose in twenty-four centers throughout the United States. Such examinations were held in 1945 during the months of January, June and July and in October.

A candidate is eligible for part I who has completed successfully the first two years of the medical course. An incomplete examination is allowed candidates at the end of their second medical year in schools whose third year curriculums include courses in one or two subjects of this part. These subjects may be taken at any examination period after the candidate has completed them in his medical school. They are recorded in these statistics under the heading "Incomplete Examinations."

A candidate is eligible for part II after completing a four year medical course and passing part I.

The figures in tables 35, 36 and 37 cover details of each examination given during 1945 and include some who fail and are reexamined during the same year and those who pass parts I and II in the same year. They

TABLE 38.—*Parts I, II and III, Excluding Duplications 1922-1945*

| | Total Examined | Passed | Incomplete | Failed | Percentage Failed |
|---|---|---|---|---|---|
| 1922 | 525 | 381 | 58 | 86 | 18.4 |
| 1923 | 775 | 594 | 79 | 102 | 14.7 |
| 1924 | 978 | 756 | 69 | 153 | 16.8 |
| 1925 | 1,167 | 915 | 50 | 202 | 18.1 |
| 1926 | 1,161 | 930 | 105 | 126 | 11.9 |
| 1927 | 1,248 | 947 | 142 | 159 | 14.4 |
| 1928 | 1,430 | 1,101 | 211 | 118 | 9.7 |
| 1929 | 1,723 | 1,280 | 319 | 124 | 8.8 |
| 1930 | 2,044 | 1,547 | 322 | 175 | 10.2 |
| 1931 | 2,218 | 1,632 | 410 | 176 | 9.7 |
| 1932 | 2,342 | 1,850 | 355 | 137 | 6.9 |
| 1933 | 2,277 | 1,806 | 280 | 191 | 9.6 |
| 1934 | 2,261 | 1,801 | 330 | 130 | 6.7 |
| 1935 | 2,308 | 1,831 | 408 | 129 | 6.6 |
| 1936 | 2,517 | 1,989 | 353 | 175 | 8.1 |
| 1937 | 2,735 | 2,151 | 397 | 187 | 8.0 |
| 1938 | 2,992 | 2,808 | 493 | 191 | 7.6 |
| 1939 | 3,221 | 2,478 | 448 | 302 | 10.9 |
| 1940 | 3,188 | 2,907 | 363 | 228 | 8.1 |
| 1941 | 3,318 | 2,749 | 332 | 237 | 7.9 |
| 1942 | 3,607 | 3,014 | 391 | 202 | 6.3 |
| 1943 | 4,513 | 3,670 | 606 | 237 | 6.1 |
| 1944 | 5,363 | 4,235 | 769 | 359 | 8.0 |
| 1945 | 5,014 | 4,468 | 896 | 200 | 5.5 |
| Totals | 59,085 | 47,028 | 8,171 | 4,396 | 8.6 |

represent, therefore, examinations conducted and not individuals examined.

Since 1922 there have been 35,017 examinations given in part I and 18,020 in part II. During this twenty-four year period 21,296 were successful tests in part I and 16,799 in part II. The percentage of failures was 14.4 in part I and 6.5 in part II. The wartime accelerated program in operation in all medical schools is evidenced by the increase in the number of candidates taking the examination since 1942. The greatest number of examinations in part I were given in 1944 and in 1945 there were 362 fewer than in the preceding year. Those given in part II in 1945 were 193 in excess of the previous year.

During the year 1944, 3,865 examinations were given in part I, 2,106 were passed and 284, or 11.8 per cent, failed. During the year 1,475 incomplete examinations were given. In part II, 1,598 examinations were held. Thirty-four of this number, 2.1 per cent, were failures. Incomplete examinations are only rarely given in part II. There were none last year.

Part III, the final examination of the National Board, is given when the candidate has received the M.D. degree and has satisfactorily completed an internship

in a hospital approved by the Council on Medical Education and Hospitals or by the Canadian Medical Association or has served in a laboratory acceptable to the National Board During the war period candidates were permitted to take part III after nine months of internship, but their certificates were withheld until three additional months had been served as a hospital intern or resident or on active duty in the medical department of the armed forces In 1945 1 231 tests were given in part III, 13 of which (1 1 per cent) were unsuccessful Results of examinations in this part during twenty-four years are given in table 37 and indicate that 13 899 were tested of whom 13,443 were granted certificates The percentage of failures in twenty-four years was 3 3 Since the inception of the National Board in 1916 13,711 certificates have been awarded

Physicians who earn the certificate are designated Diplomates of the National Board and are privileged to use the designating initials D N B

The tabulations thus far presented represent examinations given The number of individuals tested during any one year is recorded for the twenty-four year period in table 38 The classification as "passed" or "failed" in cases in which more than one examination has been taken in a given year was based on the results of the last examination during the year in question For example, if in 1945 a candidate passed part I but later in 1945 failed part II he is computed in the tabulation as having failed By this computation figures indicate that there were 5 614 who took at least one of the tests of the National Board in 1945, as compared with 525 in 1922 The trend has been steadily upward, especially since 1942 Last year the number of candidates was 251 greater than in the previous year which exceeded the 1943 figure by 850 A total of 59 585 were examined in one or more of the annual examinations in the twenty-four years shown of whom 47,028 passed, 8,171 took incomplete examinations and 4,396, or 8 6 per cent, failed

TABLE 39.—*Diplomates from Individual Medical Schools 1945*

| | | | |
|---|---|---|---|
| University of Arkansas | 2 | New York Medical College | 85 |
| College of Medical Evangelists | 20 | New York University | 83 |
| Stanford University | 2 | Syracuse University | 17 |
| University of So California | 2 | University of Buffalo | 60 |
| University of Colorado | 1 | University of Rochester | 39 |
| Yale University | 49 | Duke University | 71 |
| George Washington University | 52 | Ohio State University | 1 |
| Georgetown University | 25 | University of Cincinnati | 4 |
| Howard University | 3 | Western Reserve University | 1 |
| Loyola University | 3 | University of Oklahoma | 1 |
| Northwestern University | 0 | University of Oregon | 3 |
| University of Chicago | 3 | Hahnemann Medical College | 6 |
| University of Illinois | 4 | Jefferson Medical College | 10 |
| Indiana University | 3 | Temple University | 3 |
| State University of Iowa | 11 | University of Pennsylvania | 27 |
| University of Louisville | 10 | Woman s Medical College | 10 |
| Johns Hopkins University | 6 | Meharry Medical College | 7 |
| University of Maryland | 2 | University of Tennessee | 3 |
| Boston University | 48 | Vanderbilt University | 3 |
| Harvard Medical School | 100 | University of Vermont | 8 |
| Tufts College Medical School | 99 | Medical College of Virginia | 2 |
| University of Michigan | 8 | University of Virginia | 1 |
| Wayne University | 1 | Marquette University | 6 |
| University of Minnesota | 7 | University of Wisconsin | 1 |
| St Louis University | 9 | McGill University | 6 |
| Washington University | 2 | Queen s University | 1 |
| Creighton University | 1 | University of Toronto | 1 |
| University of Nebraska | 2 | Extinct Medical School | 1 |
| Albany Medical College | 42 | Foreign | 3 |
| Columbia University | 87 | | |
| Cornell University | 45 | Total | 1 218 |
| Long Island College of Medicine | 62 | | |

The 1,218 physicians certified as diplomates of the National Board of Medical Examiners last year represented graduates (table 39) from fifty-six existing and one extinct medical school in the United States three in Canada and 3 graduates of faculties of medicine abroad The National Board reports that it awarded diplomas from February 1922 to March 31, 1944 to 100 or more candidates from each of forty-five medical schools Harvard heads the list with 2,048 graduates

In 1945, 1,103 diplomates were granted licenses to practice medicine on the basis of their National Board certificate in 39 states the District of Columbia Hawaii and Puerto Rico The number so registered in each state is reported in table 40 Since the National Board was formed 10,028 physicians have been licensed to practice medicine on the basis of their credentials from the board In the same period 13 443 received the certificate of the board It would appear that 3,415 have not used the credential as a licensing medium

TABLE 40.—*Licenses Granted on the Basis of National Board Certificates 1945*

| | | | |
|---|---|---|---|
| Alabama | 5 | Nebraska | 1 |
| Arizona | 3 | New Hampshire | 6 |
| Arkansas | 1 | New Jersey | 62 |
| California | 95 | New Mexico | 3 |
| Colorado | 8 | New York | 407 |
| Connecticut | 52 | North Carolina | 23 |
| District of Columbia | 47 | Ohio | 10 |
| Georgia | 2 | Oklahoma | 6 |
| Idaho | 2 | Oregon | 2 |
| Illinois | 20 | Pennsylvania | 30 |
| Indiana | 9 | Rhode Island | 18 |
| Iowa | 5 | South Carolina | 2 |
| Kansas | 3 | Tennessee | 4 |
| Kentucky | 4 | Texas | 1 |
| Maine | 8 | Utah | 5 |
| Maryland | 17 | Vermont | 27 |
| Massachusetts | 143 | Virginia | 3 |
| Michigan | 11 | Washington | 4 |
| Minnesota | 20 | West Virginia | 3 |
| Mississippi | 2 | Hawaii | 3 |
| Missouri | 7 | Puerto Rico | 7 |
| Total | | | 1 103 |

The constitution of the National Board of Medical Examiners provides for a membership of thirty representing the federal services, the Federation of State Medical Boards of the United States, the Association of American Medical Colleges, the Council on Medical Education and Hospitals of the American Medical Association and members elected at large The president of the board is Major Gen M W Ireland, M D the medical secretary J S Rodman M D, and the executive secretary and treasurer Mr Everett S Elwood The address of the board is 225 South 15th Street Philadelphia

## EXAMINING BOARDS IN THE MEDICAL SPECIALTIES

Examining and certifying boards have been established in fifteen specialties and all of these boards have been in operation since 1940 In 1934 the Council on Medical Education and Hospitals of the American Medical Association formulated minimal standards governing specialty boards, and these fifteen boards are fully approved

Two boards certify candidates in subspecialties The American Board of Internal Medicine certifies in allergy cardiovascular disease, gastroenterology and tuberculosis Similarly the American Board of Surgery certifies specialists in proctology Regular board certification is a prerequisite for certification in the subspecialty This function of the boards in internal medicine and surgery is also approved by the Council

The "Essentials of Approved Examining Boards in Medical Specialties," as prepared by the Council, outlines the type of organization and the responsibilities of such boards as well as the minimum qualifications deemed necessary for certification as a specialist Such qualifications include graduation from an approved

medical school, completion of an internship in a hospital approved by the Council, and a period of specialized training in a selected specialty Three years of special training and a further period of two years devoted to specialty study and/or practice are considered by the Council to be the minimal training required before specialty practice Some boards require more than this amount of training and education Each board publishes a booklet containing information regarding its organization personnel, purposes and requirements for certification A statement of these requirements for each board was given in detail in the Educational Number of THE JOURNAL in 1942 [4] Only a few minor changes have been made by some of the boards since these regulations were published in 1942

The Advisory Board for Medical Specialties was organized in 1933-1934 to coordinate graduate education and certification of medical specialists in the United States and Canada This board reports directly to the various boards and functions in close collaboration with the Council on Medical Education and Hospitals of the American Medical Association

The majority of the boards grant some credit for military service The policies adopted by the boards vary One board grants an indefinite amount of credit, to be determined by an evaluation of the experience of individual applicants Another grants full credit for work done in the surgical division of a regularly constituted army or navy hospital Most boards limit the credit allowed to one year of training and/or one year of experience The special provisions for military credit made by each board were published in the 1943 Educational Number of THE JOURNAL [5]

The 9-9-9 wartime graduate program curtailed the number of physicians desiring specialty certification The various boards are taking this into consideration and will probably allow credit for the actual time spent by the candidate in house officer training in approved hospitals for nine month periods

The Council on Medical Education and Hospitals cooperates with the various specialty boards in the approval of residencies and fellowships acceptable for certification The Council inspects and evaluates new residencies in most instances, it approves residency programs jointly with the specialty boards This program has been established so that approved services may be equally acceptable to the Council and to the respective specialty boards

An analysis of questionnaires returned by 21,029 medical officers pertaining to their future educational plans [6] indicates that over 12,000 medical officers will seek specialty certification after the war The Council working with specialty boards, hospitals, medical schools and the Committee on Postwar Medical Service, has made notable progress in meeting these educational needs of the future in the advanced training of specialists, particularly physician veterans

Because of the large number of applications for approval of residency training programs submitted by hospitals developing these programs in response to the increased demand for training by returning medical officers, the Council on Medical Education and Hospitals of the American Medical Association has approved a plan for the temporary approval of residencies This plan was developed in collaboration with the Advisory Board for Medical Specialties through its executive committee A majority of the American boards has already indicated an approval of the proposal The program is as follows

1 The Council on Medical Education and Hospitals of the American Medical Association has temporarily delegated to its secretary the authority to grant temporary residency approval on behalf of the Council subject to concurrence by the appropriate American board as described in No 2

2 Each participating American board has appointed representatives (usually one individual for each board) to consider new residencies for temporary approval with authority to act on behalf of the board

3 Temporary approval will be based on information from the hospital concerning the personnel facilities and educational program of the hospital service involved without immediate inspection Such approval will be granted only if the representatives of the Council and of the board are reasonably satisfied that the education program fulfils the standards of both bodies

4 Subsequently employing the usual procedures an inspection of the hospital will be carried out by the Council's staff On the basis of the inspection report the Council will consider the temporarily approved hospital for transfer to the regularly approved list in the usual manner The inspection report and the recommendations of the Council will be submitted to the appropriate board and the board will return its concurrence or disagreements with the Council The result of this procedure would be either (*a*) transfer of the temporarily approved residency to a fully approved status or (*b*) withdrawal of the temporary approval

5 In the event of withdrawal of temporary approval and failure to grant regular approval credit toward board certification will be given to physicians for that part of their training received while the residency was on a temporary approval status After such withdrawal of approval residents seeking board certification will be given a reasonable time to obtain another acceptable residency without loss of time credit. This means that no resident would be penalized so far as board credit is concerned for time spent in a temporarily approved residency

TABLE 41.—*Specialty Board Credit for Preceptorship Training*

| | Credit Awarded | Preceptors Limitations: Any Certified Board Member | Preceptors Limitations: Other Than Certified Board Member | Preceptors Limitations: List of Preceptors Maintained | Maximum Training Credit |
|---|---|---|---|---|---|
| Anesthesiology | Yes | No[1] | Yes (rarely)[1] | No | 2 years |
| Dermatology and syphilology | Yes | No[1] | No | Yes | 2 years |
| Internal medicine[2] | | | | | |
| Neurologic surgery | Yes | No[1] | No | No | No limit set |
| Obstetrics and gynecology | Yes | Yes | Yes[1] | No | Average 6 mos |
| Ophthalmology | Yes | No[1] | Yes[1] | No | No limit set |
| Orthopedic surgery | Yes | Yes | No | No | Entire 3 years |
| Otolaryngology | Yes | Yes | Yes[1] | No | 5 years |
| Pathology | No | | | | |
| Pediatrics | No | | | | |
| Plastic surgery | Yes | Yes | No | No | Full credit |
| Psychiatry and neurology | No | | | | |
| Radiology | No | | | | |
| Surgery | Yes | Yes[3] | Yes[1] | No | 5 years |
| Urology | Yes | No[1] | No | No | 3 years |

1. Facilities and teacher qualifications must be approved by board
2. To be considered at May 1946 meeting
3. Institution must be approved for graduate training

In seeking approval by the Council on Medical Education and Hospitals, those hospitals which organize new residencies should initially make no distinction between regular versus temporary approval Applications should be transmitted to the Council in the regular manner In the immediate future most applications will be considered at once for temporary approval The Council's staff will proceed with regular inspections as rapidly as possible, so that tranfer of acceptable hospital residencies from the temporarily approved to the regular approved list will take place as rapidly as possible if the inspection report seems to warrant such transfer in the

4 J A M A **119** 1345 (Aug 15) 1942
5 J A M A **122** 1085 (Aug 14) 1943
6 J A M A **127** 759 (March 31) 1945

opinion of the representatives of the Council and of the American board concerned

As a substitute for special training, service with a qualified preceptor is recognized by some of the specialty boards The policies of the boards toward the acceptance of such training are briefly outlined in table 41 The exact time credit varies and in all instances is decided on an individual basis, depending on the amount of clinical responsibility and activity The individual facilities and teacher qualifications of the preceptor must be approved by the respective board This type of training is not acceptable to four boards, and one board has the matter under consideration Only five of the boards will give consideration to preceptor training carried out under a qualified specialist who is not himself certified by the appropriate board

Table 42 gives the annual number of specialists certified by all boards for the past five years The largest number (2,172) obtained certificates in the year ended March 1943 In the two succeeding years there were progressive decreases primarily because of the war Of all those physicians now certified, 39 per cent received their specialty credentials in the past five years

A list of the specialty boards and their officers and the number of certificates awarded prior to March 1,

TABLE 42.—*Annual Specialty Board Certifications Since 1940*

| Year (Ended March) | Number of Boards in Existence | Number Certified That Year | Accumulated Totals |
|---|---|---|---|
| 1940 | 14 | | 16,853 |
| 1941 | 15 | 2,055 | 17,908 |
| 1942 | 15 | 1,756 | 19,664 |
| 1943 | 15 | 2,172 | 21,836 |
| 1944 | 15 | 1,578 | 23,414 |
| 1945 | 15 | 1,305 | 24,752 |
| 1946 | 15 | 1,356 | 26,108 |

1945 and the number certified until March 1, 1946 respectively appear in table 43 On March 1, 1945 there were 24,752 physicians certified by the fifteen boards, and in the following year 1,356 were certified Up to March 1, 1946 a total of 26,108 certificates had been awarded Included in these figures are 809 who had been certified in the subspecialties mentioned, namely allergy 81, cardiovascular disease 338, gastroenterology 171, proctology 72 and tuberculosis 147

In the specialties of internal medicine and surgery, 3,906 and 2,620 respectively have received the certificate of these boards However, the greatest number in any one specialty certified was in otolaryngology In this specialty 3,886 have received the board's certificate since its organization in 1927 The oldest board in existence, ophthalmology (organized in 1917), has to date certified 2,490

A key number has been assigned to each approved board, such as A B 1, and the biographic records of physicians published in the American Medical Directory includes by these means reference to those certified

The Council on Medical Education and Hospitals and representatives of the various boards, and the Advisory Board for Medical Specialties, annually hold a joint session for the interchange of ideas and the discussion of problems of mutual interest These meetings have proved to be worth while contributions to the improvement of medical education and medical practice in this country

TABLE 43.—*Approved Examining Boards in Medical Specialties*

| Key No | Name of Board | Year of Incorporation | Total Certificates Awarded to March 1 1945 | Total Certificates Awarded to March 1, 1946 |
|---|---|---|---|---|
| A B 1 | American Board of Pediatrics<br>Pres Edward B Shaw 381 Post St San Francisco<br>Sec Lee F Hill, 3309 Forest Ave Des Moines Iowa | 1933 | 2,318 | 2,420 |
| A B 2 | American Board of Psychiatry and Neurology<br>Pres Hans H Reese Wisconsin Psychiatric Institute Madison<br>Sec Walter Freeman 1025 Connecticut Ave N W Washington 6 D C | 1934 | 1,899 | 2,027 |
| A B 3 | American Board of Orthopaedic Surgery<br>Pres Guy A Caldwell 3303 Prytania St, New Orleans<br>Sec Col F M McKeever 1136 W 6th St Los Angeles 14 | 1934 | 890 | 940 |
| A B 4 | American Board of Dermatology and Syphilology<br>Pres Howard Fox 140 E 54th St New York City<br>Sec George M Lewis 66 E 66th St New York City | 1932 | 710 | 753 |
| A B 5 | American Board of Radiology<br>Pres J W Pierson 1101 St Paul St, Baltimore<br>Sec B R Kirklin 102 110 Second Ave S W Rochester, Minn | 1934 | 2,095 | 2,198 |
| A B 6 | American Board of Urology<br>Vice Pres Clarence G Bandler 440 Park Ave New York City<br>Sec Gilbert J Thomas 1400 Willow St Minneapolis | 1935 | 1,018 | 1,060 |
| A B 7 | American Board of Obstetrics and Gynecology<br>Pres Walter T Dannreuther 580 Park Ave New York City<br>Sec Paul Titus 1015 Highland Bldg Pittsburgh 6 | 1930 | 1,871 | 1,965 |
| A B 8 | American Board of Internal Medicine<br>Chairman Reginald Fitz 319 Longwood Ave Boston<br>Asst Sec William A Werrell 1 West Main St Madison 3 Wis | 1936 | 3,541 | 3,906 |
| A B 9 | American Board of Pathology<br>Pres A H Sanford 102 Second Ave S W Rochester Minn<br>Sec F W Hartman Henry Ford Hospital Detroit | 1936 | 1,047 | 1,240 |
| A B 10 | American Board of Ophthalmology<br>Chairman Edward C Ellett 130 Madison Ave Memphis Tenn<br>Sec S Judd Beach 56 Ivie Rd Cape Cottage Me. | 1917 | 2,437 | 2,490 |
| A B 11 | American Board of Otolaryngology<br>Pres Harris P Mosher 127 Front St Marblehead Mass<br>Sec Dean M Lierle University Hospital Iowa City | 1924 | 3,848 | 3,886 |
| A B 12 | American Board of Surgery<br>Chairman Vernon C David 59 E Madison St Chicago<br>Sec. J Stewart Rodman 225 S 19th St Philadelphia | 1937 | 2,499 | 2,620 |
| A B 13 | American Board of Anesthesiology<br>Pres Philip D Woodbridge Reading Hospital Reading Pa<br>Sec Paul M Wood 745 Fifth Ave New York City 22 | 1938 | 249 | 276 |
| A B 14 | American Board of Plastic Surgery<br>Chairman George M Dorrance 2101 Spruce St Philadelphia<br>Sec Gordon B New 102 Second Ave S W Rochester Minn | 1937 | 161 | 163 |
| A B 15 | American Board of Neurological Surgery<br>Chairman Howard C Naffziger 384 Post St San Francisco<br>Sec Paul C Bucy 912 S Wood St Chicago 12 | 1940 | 163 | 174 |
| | Totals | | 24,752 | 26,108 |

Advisory Board for Medical Specialties
*Pres Paul Titus 1015 Highland Bldg Pittsburgh 6*
Sec B R Kirklin 102 110 Second Ave S W Rochester Minn

Certification in the subspecialties By the American Board of Internal Medicine allergy 81 cardiovascular disease 338 gastroenterology 171 tuberculosis 147 By the American Board of Surgery proctology 72 Total certified in the subspecialties 809 These figures are included in the foregoing tabulation

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street Chicago 10, Ill

Cable Address "Medic, Chicago

Subscription price Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY MAY 11, 1946

## MEDICAL LICENSURE, 1945

Each of the special issues of The Journal containing material prepared by the Council on Medical Education and Hospitals reflects the cooperation of many institutions and agencies with the Council throughout the year The annual Hospital Number depends on the collaboration of more than six thousand hospitals The Educational Number would be impossible without the help of every medical and basic science school in the United States and Canada The medical licensure statistics for the calendar year 1945 appearing on pages 109 to 139 of this issue are based on reports transmitted to the Council throughout the year by every medical examining and licensing board in the United States, the District of Columbia and the territories and possessions of the United States, as well as all boards of examiners in the basic medical sciences, the National Board of Medical Examiners and each examining board in the medical specialties

The candidates whose examination results are reported represented sixty-nine approved medical schools in the United States, nine approved medical schools of Canada, seventy-five faculties of medicine and three licensing corporations of other countries, six medical schools now extinct, five unapproved institutions, six colleges of osteopathy and one individual who had not completed the medical course

During the year 1945 there were 9,153 licenses issued, 5,541 after examination and 3,612 by reciprocity and endorsement Of those licensed 5,707 represented real additions to the profession in this country, since many previously held licenses elsewhere The latter figure may be compared with the 3,815 physician deaths in 1945, indicating an increase of 1,892 in the net physician population

Never in the past four decades have there been as many licenses issued by reciprocity and endorsement as in the past year This is probably because unprecedented numbers of physicians are seeking new locations after the disrupting influence of the war

Failures of candidates in various categories in examinations given by state licensing boards followed the familiar pattern Only 2 5 per cent of graduates of existing approved medical schools failed On the other hand 40 8 per cent of those from unapproved schools failed and 56 0 per cent of the graduates of schools outside the United States and Canada did not pass

The upward trend in numbers of physicians certified by the American boards in the specialties has not yet become apparent but should become noticeable in a year or two as returning medical officers complete their educational programs Assistance to these men in fulfilling their plans has been provided not only by greatly increasing the regular residency openings but also by the adoption of a plan of temporary approval of residencies as well, which plan is described in this issue In addition, the policies of the specialty boards regarding the acceptance of preceptor training are given

The Council and The Journal greatly appreciate the contributions of the many agencies which made this material available Besides publication in The Journal, a reprint will be available Reprints of certain separate tables are also made to assist the Council in replying to the thousands of requests for information on licensure and related subjects received annually

## THE USE OF RADIOACTIVE IODINE IN THYROTOXICOSIS

When the biologists and medical scientists learned from the physicists that various elements can be made *temporarily radioactive by bombardment with streams* of certain particles, investigators sought for radioactive forms of those elements of most particular interest to them By means of radioactive isotopes the course of any element may be followed through the body, thus many old problems of metabolism have been restudied by physical, instead of chemical, means New explorations have been undertaken to which only the physical method is applicable

*In therapeutics also isotopes may be used* Radioactive phosphorus has been used in the treatment of leukemia and polycythemia Elsewhere in this issue appear two reports on the use of radioactive iodine in the treatment of thyrotoxicosis Because of the specific avidity of the thyroid for iodine it is possible, by making iodine radioactive, to place radiation directly within the cells which it is desired to irradiate Such application might be expected to be more effective than that of x-rays introduced from without

The papers of Hertz and Roberts and of Chapman and Evans indicate that a new and effective method of causing permanent remission in hyperthyroidism has become available Whether or not it will prove superior to all other forms of therapy for the malady in question cannot be foretold now Much more data must be accumulated before it can be asserted that radioactive

iodine gives the patient a better chance of permanent cure and freedom from untoward side effects than does subtotal thyroidectomy or prolonged treatment with an antithyroid drug The possibility, however, that treatment with radioactive iodine may possess such superiority makes extended study desirable

From the evidence thus far available it would appear that treatment with radioactive iodine can produce remissions in cases of thyrotoxicosis associated with hyperthyroidism However, the use of any form of radiation may be accompanied by late untoward side effects The late development of cancer as a result of irradiation, although perhaps unlikely, is certainly within the realm of possibility Thus far exact evidence is not available as to the effects of excretion of radioactive material by the kidney on the cells of that vital organ Until sufficient time has elapsed to permit the necessary studies of tissues of the body long after treatment with radioactive iodine has been given, no one can predict the exact place that it will occupy in the control of this disease

## ASCORBIC ACID IN TOMATO JUICE

Certain foods have attained a special position in the national dietary as vehicles for one or another nutritional essential Thus milk and milk products represent the best source of calcium, liver is outstanding in providing vitamin D and eggs are a favored item where protein and vitamin A are concerned In much the same way tomato juice has established itself not only as an appetizer but also because it is an excellent source of ascorbic acid, and for this reason its manufacture is an important phase of the food industry From the nutritional point of view the dietitian, the pediatrician and the consuming public are interested in the quality of the product with respect to the content of vitamin C Indeed, this interest has been recognized by the recent decision of the Council on Foods and Nutrition [1] in which a minimum standard of 20 mg of ascorbic acid per hundred cubic centimeters of juice was recommended That some such standard is desirable is indicated by the observations of Pressley and her associates [2] on the vitamin C content of seventy-nine samples of canned tomato juice, a variation of from 2 5 to 25.2 mg was recorded in this study

The factors which may influence the content of ascorbic acid in tomatoes have been examined The small fruited varieties—the so-called grape or pear tomatoes—contain much more vitamin C than the large fruited commercial varieties, the former group may contain as much as 63 mg per hundred grams of fruit whereas the latter averages closer to 25 mg [3] In general, variety appears to be an unimportant factor in influencing the vitamin C content of commercial types of tomato Hamner and his associates [4] found that the degree of ripeness, storage at temperatures of 65 to 90 F for ten to fourteen days, fertilization of the ground or humidity play an insignificant part in causing a variation of ascorbic acid content of tomatoes On the other hand, the Cornell investigators showed that the intensity of light to which the mature green fruit is exposed is a highly important factor in the production of a high content of vitamin C in tomatoes Other studies [5] have demonstrated that losses of ascorbic acid in picking, transportation and processing at the cannery are of minor importance, the greatest cause for variation of vitamin C in the finished product is the variation in the tomatoes themselves from which the juice is prepared

Other fruits are known which contain more ascorbic acid than do tomatoes, for instance, the West Indian cherry has 1,700 milligrams per hundred grams of edible portion [6] However, the extent to which the tomato enters into the American dietary emphasizes the value of the foregoing data It also illustrates the possibility for better national nutrition when the agricultural chemist, the geneticist, the agronomist and the food processor cooperate in producing superior foods

## JAUNDICE FOLLOWING YELLOW FEVER VACCINATION

The epidemiologic relationship between cases of so-called catarrhal jaundice, epidemic hepatitis and post-vaccinal cases has not been clearly elucidated Most observers agree that there is a striking similarity among cases of jaundice occurring in all three types, so that they are difficult to differentiate clinically or pathologically Some vaccines and serums were held responsible for epidemics of jaundice because of the high incidence of jaundice following the use of particular batches and not with others prepared similarly Another suggestive factor is the relative uniformity of the interval between inoculations and the appearance of jaundice A recent study by Freeman [1] offers statistical data to support the thesis that jaundice is a communicable disease

Freeman bases his conclusions on a study of spatial and temporal grouping of cases of jaundice in certain barracks and units at Camp Baker, Fort Belvoir, Virginia The epidemic coincided in time and duration with the large epidemic among American troops during 1942 It was preceded by mass inoculation of troops with yellow fever vaccine prepared by suspending the 17D strain of virus in presumably normal human serum The communicability of epidemic jaundice was sup-

1 Council on Foods and Nutrition Acceptability of Foods with High Natural Vitamin C Content J A M A **128**: 205 (May 19) 1945

2 Pressley Anne Ridder Clara Smith M C and Caldwell Emily J Nutrition **28** 107 (Aug) 1944

3 Reynard G B and Kanapanx M S Proc Am Soc. Hort Sc. **41** 298 1942

4 Hamner, K C Bernstein Leon and Maynard L A J Nutrition **29** 85 (Feb) 1945

5 Somers G F Hamner K C and Nelson W L J Nutrition **30** 425 (Dec) 1945 Robinson W B Stotz, E and Keretesz, Z I ibid p 435

6 Asenjo G F, and de Gusman A R F Science **103** 219 1946

1 Freeman G Epidemiology and Incubation Period of Jaundice Following Yellow Fever Vaccination Am J Trop Med **26** 15 (Jan) 1946

ported by a similar group of cases in units that received mildly "icterogenic" yellow fever vaccine at an earlier period and also by a thirty-six-fold attack rate in the unvaccinated population over the preepidemic rate during the major epidemic The inoculation period ranged from two to four weeks, with a mode and mean of 3 2 weeks, a standard deviation of ± 0 72 and a coefficient of variation of 22 5 per cent The particular yellow fever vaccine used in certain army posts appears to have had the property of predisposing its recipients to the communicable disease referred to as jaundice This property varied in degrees among the se eral lots of yellow fever vaccine The particular mode of transmission of jaundice has not been ascertained, but the common finding of personal association suggested dissemination by droplet or physical passage from hand to mouth Flies may act as mechanical factors Carriers and individuals apparently not infected probably play an important part in the epidemiology of jaundice Freeman stresses that the interval of time between administration of yellow fever vaccine and the epidemic appearance of jaundice should not be referred to as the "incubation period," since it is not directly related to the incubation of an infectious agent He concludes that all cases of jaundice at Camp Baker, whether or not yellow fever vaccine was administered, had a common origin, although proof must await isolation of the etiologic agent and the establishment of a specific diagnostic test

## Current Comment

### ANGINA PECTORIS AND TOBACCO

The term "tobacco angina" has been employed for many years, its importance lies in the concept that smoking tobacco may constrict the coronary arteries and thus adversely affect the heart Recently Pickering and Sanderson [1] studied several patients who developed cardiac pain of an anginal nature following smoking One patient was subjected to many tests and careful studies without evidence being found that smoking produced coronary vasoconstriction, when the patient smoked before or during exercise, tolerance to exercise was not reduced All the evidence, the authors say, was consistent with the view that smoking by this patient was a factor in producing anginal pain because it increased the work of the heart through the pulse rate and blood pressure The use of tobacco, most cardiologists agree, is not the primary cause of coronary sclerosis, which is the pathologic lesion underlying angina pectoris In the patient studied most completely, smoking produced anginal pain only in the period shortly after the disappearance of the pain produced by effort, and this occurred only if the pulse rate rose sufficiently The British investigators believe that their studies provide an alternate hypothesis to the theory that constriction of the coronary arteries by tobacco is the cause of anginal pain precipitated by smoking, namely, that tobacco acts in this respect only by its effect on increasing the work of the heart The investigation further casts doubt on the usefulness of the term "tobacco angina"

1 Pickering G W and Sanderson P H Angina Pectoris and Tobacco, Clin Science 5 275 (Dec 12) 1945

### PSYCHIATRIC SELF OBSERVATIONS BY A PSYCHIATRIST

Dr Frederic Wertham [1] reports an analysis of his mental state and his reactions in the course of a grave illness and two operative procedures The sickness was thrombophlebitis of the right leg, with high fever, a general toxic condition and scopolamine anesthesia The doctor was certain that emotional factors did not play a part in his reactions During the first operation, which consisted in ligation of the right femoral vein, his attention was focused on concern with his body He refers to Freud's well known statement that "the sick man withdraws his libido back upon his own ego and sends it forth again when he recovers" In the midst of the operation, during a period when the doctor was either anticipating pain or enduring it, he asked one of the physicians standing near him to find his wife and tell her that everything was going fine This preoccupation must have been strong, he sometimes afterward asked the same thing again although he knew his previous request had been fulfilled This would, in the doctor's opinion, indicate that Freud's formulation is an oversimplification of complicated levels and processes of emotional thinking In the course of the operation the doctor saw a clock on the wall but was unable to read it This particular symptom, known as agnosia, is seen in organic lesions of the occipital lobe such as occurs frequently in carbon monoxide poisoning Probably definite disorders of the higher processes of perception, such as agnosia, may be a component of the disorder of comprehension in scopolamine intoxication In the course of a second operation—ligation of the deep femoral vein in the left leg—the patient experienced what he characterizes as a form of scopolamine psychosis The state was characterized by euphoria, overtalkativeness, general lack of inhibition and euphoric misjudgment of the situation side by side with more or less clear consciousness of apprehension and pain and flashes of insight The doctor stresses the variety in the quality of pain and thinks that this aspect of pain has not been sufficiently appreciated by psychologists and physicians He felt that after this operation he could have enumerated six or eight different kinds of pain, each sharply distinguishable from the other in quality Some of the qualities of the pain were (1) localization, (2) duration, (3) after-image, (4) special qualities of pain, as when a nerve is touched, and (5) association with fear Wertham concludes that from a practical point of view his analysis shows that there are definite and diversified psychiatric aspects of physical disease Medical and surgical patients are in need of psychologic preparation for what they may expect The psychologic features of physical disease are a part of medical and nursing care

1 Wertham Frederic Thrombophlebitis with Multiple Pulmonary Emboli Psychiatric Self Observations Am J M Sc. **211** 166 (Feb) 1946

# MEDICINE AND THE WAR

## ARMY

### RELEASE CRITERIA FOR ARMY MEDICAL CORPS OFFICERS

Following are changes to War Department regulations that pertain to medical corps officers only

Effective May 1, 1946 the following criteria will govern the separation of medical officers except volunteers and regular army officers Adjusted service rating score sixty or thirty months' active service or 45 years of age to nearest birthday Exceptions are officers in critical specialties, which remain the same as before This category will be separated under the following criteria Adjusted service rating of 60, or length of service thirty-nine months, or 45 years of age to nearest birthday Medical corps officers on becoming eligible or relieved from active duty will be separated or board the fastest possible transportation for return to the United States within sixty days of date of eligibility Medical corps officers surplus to requirement of major commands are returned to zone of interior from overseas within six months of eligibility for release and will be separated under provisions of section 2, circular 290, War Department, 1945

### ARMY OFFERS PAID INTERNSHIPS TO UNIVERSITY MEDICAL STUDENTS

The War Department has announced that junior class medical students now in approved civilian medical schools will be offered internships in U S Army hospitals starting July 1, 1947 These internships will differ from those offered medical school graduates for the ten years prior to the war in that interns selected will be given a reserve commission of first lieutenant in the Army Medical Corps Under the former program interns in army hospitals were classified as civilian War Department personnel at an annual salary of about $1,000

Internships under the present plan will enable the intern to draw the salary of a first lieutenant, or about $3,404 annually if there are dependents If the intern has no dependents he will receive $2,972 a year These figures include rental allowances of about $60 per month which are not paid when government quarters are furnished

Designed to give the fifth or clinical year of training, the course will be of the conventional rotating type This service in approved army hospitals is recognized by the Council on Medical Education and Hospitals of the American Medical Association and state boards of registration which require the clinical year of training before granting a license to practice

"Medical school graduates are assured of an interesting and profitable career in army medicine if they elect to accept Regular Army commissions on completion of the clinical internship in army hospitals" Major Gen Norman T Kirk, the Surgeon General, declared "Selections will be based on scholastic attainment, physical fitness and aptitude for military service We expect to produce outstanding doctors through our educational program'

In notifying deans of accredited medical schools of the plan, the Surgeon General asked that they recommend not only men desirable as interns but men who will ultimately develop as Regular Army medical officers A professional examination will not be required before the internship is accepted

Applications may be submitted by students through the deans of their respective schools They must reach the Office of the Surgeon General between June 5 and June 15 this year Each applicant who successfully qualifies will be notified not later than July 1 He must accept or reject the appointment not later than July 8 Application blanks may be obtained from the deans of medical universities during May

An applicant must conform to the basic requirements of being a United States citizen, a prospective 1947 graduate of a recognized school of medicine approved by the Council on Medical Education and Hospitals, not over 30 years of age on July 1 1947, have no commitments to accept an internship appointment in any other institution and meet physical standards for appointment in the Medical Corps, U S Army Physical qualifications are printed in Army Regulation 40 105

### ARMY AWARDS AND COMMENDATIONS

#### Lieutenant Colonel Andrew R Hicks

Lieut Col Andrew R Hicks, commander of the 180th Medical Battalion, was recently awarded the Bronze Star "for meritorious service in connection with military operations against the enemy from July 10, 1944 to Feb 15, 1945" The citation stated, in part, "During the German counter offensive of December 1944 Lieutenant Colonel Hicks displayed marked professional skill and performed difficult surgical operations for a forty eight hour period When his outfit was captured by the enemy he negotiated for permission to continue operating on seriously wounded American soldiers On his recapture by friendly forces Lieutenant Colonel Hicks planned and supervised the expeditious evacuation of all personnel and patients of his unit" Dr Hicks graduated from the New York Medical College, Flower and Fifth Avenue Hospitals, New York, in 1939 and entered the service June 26, 1941

#### Colonel Joseph E Cox

The Legion of Merit was recently presented to Col Joseph E Cox, Waynesboro, Va., for exceptionally meritorious conduct in the performance of outstanding services in North Africa and Italy from Dec 1, 1943 to May 8 1945 Assigned the mission of converting his 250 bed station hospital into a 500 bed hospital to be used exclusively for the care of neuro psychiatric patients, Colonel Cox demonstrated outstanding ingenuity and professional knowledge in completing this assignment in a superior manner During the year 1944 the new installation created by him was designated as the theater center for neuropsychiatric study, with a School of Military Psychiatry for the training of American medical officers In addition, an extensive series of courses for the instruction of British nurses in neuropsychiatric nursing procedures was successfully completed When, subsequent to the removal of his organization to Italy, it became necessary to divert to it a large number of medical and surgical cases, Colonel Cox promptly adjusted his highly specialized primary function as a neuropsychiatric center Colonel Cox's contribution, both professional and educational to the field of neuropsychiatry despite exigencies of the military situation, which at times rendered his task extremely difficult are deserving of highest praise" Dr Cox graduated from the University of Virginia Department of Medicine, Charlottesville, in 1934 and entered the service March 1, 1941

#### Major Robert C Hunt

The Army Commendation Ribbon was recently awarded to Major Robert C. Hunt, Rochester, N Y, for superior performance of duty as neuropsychiatrist and chief of the consultation service of the command at Camp Wolters, Texas, from Nov 28, 1942 to Jan 9, 1946 "Because of his background of psychiatric knowledge intense interest in human behavior and ability to work with people," said the citation "Major Hunt has been of invaluable assistance to this center The problem of adjustment which confronted all incoming recruits was ever paramount in Major Hunt s mind and his preventive work here has been as great as, if not greater than his curative work This has been of great value to the training program and is responsible for many training hours

saved that would otherwise have been lost. Major Hunt has interviewed and clinically diagnosed over 5 000 cases requiring neuropsychiatric treatment during his assignment here at this center He has had to perform this work almost entirely by himself, competent assistants being lacking He has been of great assistance to all unit commanders in rendering advice, analyzing problems and diagnosing cases of mental behavior before they became extreme and discerning morale trends Major Hunt has been a tireless worker, aggressive yet considerate, loyal, tactful and resourceful He has proved to be a very creative officer with an inquisitive mind and an ability to visualize the need for corrective action plus the added ability to perform that action in a superior manner" Dr Hunt graduated from the University of Pennsylvania School of Medicine Philadelphia, in 1931 and entered the service Sept 28, 1942

### Captain William Kropf

Capt William Kropf, Bronx New York, received a number of decorations, among them the Purple Heart with Cluster, the Arrow Head for first landing on Luzon a Combat Medical Badge and a citation which read "For meritorious achievement in connection with military operations against the enemy at Luzon Philippine Islands, from June 1, 1945 to Aug 15, 1945 In the long sustained rapid advancement through Cagayan Valley with extended supply lines over difficult terrain, Captain Kropf as commanding officer of a medical collecting company provided excellent and uninterrupted medical service. Through the combat, troops were usually deployed over many miles in length Captain Kropf's skilful management, sound judgment and devotion to duty always resulted in speedy evacuation of sick and wounded from every position on the lines His service was an outstanding example of efficiency and exemplified the fine traditions of the Army Medical Corps" Dr Kropf graduated from the New York Medical College, Flower and Fifth Avenue Hospitals New York in 1933 and entered the service September 21, 1942

### Colonel Marcus D Kogel

The Legion of Merit was recently awarded to Col Marcus D Kogel Jamaica N Y "for exceptionally meritorious conduct in the performance of outstanding service as medical inspector, China Theater during the period March 29, 1945 to Nov 1, 1945 Colonel Kogel in a theater of operations noted for its numerous and unique tropical diseases and for its general insanitary condition did by the exercise of his splendid professional knowledge of preventive medicine and the rare judgment, enthusiasm and foresight which he put into his efforts materially lower the health hazards threatening American troops in China By the preparation of practical and appropriate preventive medical directives and by theaterwide inspections after their dissemination he caused the disease rates to be kept to a most satisfactory minimum and saved many United States troops from being ravaged by some of the most formidable diseases known to medical science. A great many American lives were undoubtedly saved as a direct result of Colonel Kogel s untiring efforts in disease prevention He has uniformly carried out his duties in a manner which reflects the highest credit on himself and on the Army of the United States" Dr Kogel graduated from the New York Medical College, Flower and Fifth Avenue Hospitals, New York, in 1927 and entered the service Feb 13, 1941

### Colonel William J McConnell

The Legion of Merit was recently bestowed on Col William J McConnell New York, who as chief of the Industrial Hygiene Branch, Safety and Security Division, Office of the Chief of Ordnance, from October 1942 to October 1945, served in the field of industrial health and hygiene. As a director representative of the Surgeon General, Colonel McConnell was charged with the development and supervision of a comprehensive program to prevent general illness and occupational disease and to promote maximum health and efficiency among civilian employees engaged in ordnance establishments throughout the United States, installations fraught with dangers of various toxic exposures requiring constant surveillance and control The citation accompanying the award called attention to the fact that "Colonel McConnell launched into an aggressive program with unusual energy, foresight, perspicacity and comprehension, successfully reducing disabling illness from toxic explosives to an insignificant level, thereby insuring full utilization of available manpower for ammunition production His cumulative accomplishments reflect great credit on himself and the military service" Dr McConnell graduated from the St Louis University School of Medicine in 1914 and entered the service Aug 28, 1942

### Captain John R Tobey

Capt. John R. Tobey, Newark, N J, was recently awarded the Bronze Star "for meritorious service in connection with military operations against the enemy on Okinawa, R. I, on May 1 and May 25, 1945 In the village of Awacha on May 1, 1945 Captain Tobey voluntarily exposed himself to heavy enemy mortar fire in order to give aid to the wounded. While the aid station was displacing, Captain Tobey received a message that 2 severely wounded men were held in a defiladed position in the village and could not be moved because of the enemy mortar fire With utter disregard for his own safety Captain Tobey went to the wounded men to administer plasma and medical treatment. While he was attending these men 3 more casualties, who were less seriously injured, had worked their way to the position Captain Tobey continued to work until the last of the casualties had been treated and only then did he seek cover Again on May 25, 1945 Captain Tobey moved forward to the vicinity of "Chocolate Drop Hill" near the town of Shuri, voluntarily subjecting himself to intense mortar and artillery fire in order to aid the wounded Because of the nature of the terrain and bad weather it was necessary to make long litter hauls to get the wounded to the aid station Captain Tobey therefore moved up just in rear of the position occupied by Company I so that immediate medical attention could be given before the long litter haul In moving from 1 casualty to another he subjected himself to heavy mortar and artillery fire Captain Tobey's courage and unselfish devotion to duty were an inspiration to all who witnessed his acts" Dr Tobey graduated from the University of Pennsylvania School of Medicine, Philadelphia, in 1940 and entered the service July 28, 1942

### Major Bernard J Mintz

Major Bernard J Mintz, New York, was recently commended by Brig Gen A Hornsby, who said "I wish to commend you for the outstanding manner in which you performed your duties as chief of orthopedic sections at Scott Field, Illinois, from March 17, 1944 to Feb 14 1946 The splendid record and relatively high degree of efficiency of the orthopedic section is largely due to the superior manner in which you fulfilled your assignment. The conscientious and diligent manner in which you performed your duties with the handicap of inexperienced assistants and enlisted personnel is a tribute to your capabilities Assistants and enlisted personnel requiring on-the-spot training were frequently transferred so that the responsibility of surgical treatment, administration and the performing of detailed tasks evolved on you Another commendable example of your work was the organization development and supervision of the physical therapy department, which has treated an average of 3,000 patients monthly since its development In view of these accomplishments and your subsequent honorable service, you are hereby authorized to wear the Army Commendation Ribbon by direction of the Secretary of War, in accordance with W D Circular 377, dated Dec. 18, 1945" Dr Mintz graduated from the Boston University School of Medicine in 1929 and entered the service May 26, 1942

### Major Harry R Chinigo

The Air Medal was recently awarded to Major Harry R Chinigo formerly of Flushing N Y, and he has been recommended for the Oak Leaf Cluster Dr Chinigo graduated from New York Medical College Flower and Fifth Avenue Hospitals, New York, in 1937 and entered the service August 6 1942

# NAVY

## BUREAU OF AGRICULTURE DEPARTMENT COMMENDED

The Bureau of Entomology and Plant Quarantine of the Department of Agriculture was recently commended by Secretary of the Navy James Forrestal and Vice Admiral Ross T McIntire, Surgeon General of the Navy for research conducted in the development of insect and mite repellents

In a letter to the Secretary of Agriculture Secretary Forrestal stated that the Bureau of Entomology and Plant Quarantine 'rendered a fundamental and outstanding contribution to naval forces which has changed the entire methodology in the control of insect borne diseases

Vice Admiral McIntire in letters of commendation to Dr P N Annand, chief of the bureau and thirty-two of his associates, said that the immediate recognition of the great military potentialities of insecticides, such as DDT aerosols, insect repellents and protective fabrics resulted in their conversion to maximal efficiency for military use.

The close cooperation and assistance rendered the Navy by the Bureau of Entomology and Plant Quarantine were in a large measure responsible for the successful development of the repellents which made it possible to carry on our military campaigns in tropical areas with a freedom from disease formerly thought impossible, the Surgeon General pointed out

## UNIVERSITY OF WISCONSIN MEDICAL SCHOOL CITED

A certificate citing the University of Wisconsin Medical School, Madison, for effective cooperation in the training of naval officer candidates was recently accepted by Dean Walter J Meek in a ceremony held in the campus naval base office The citation, signed by Secretary of the Navy James V Forrestal is "for effective cooperation with the United States Navy in the training of officer candidates in the Naval V-12 Program during World War II"

## NAVY AWARDS AND COMMENDATIONS

### Commodore Don S Knowlton

A Gold Star in lieu of a second Legion of Merit was recently awarded to Commodore Don S Knowlton, Washington, D C 'for exceptionally meritorious conduct in the performance of outstanding services as division surgeon of a Marine infantry division during the planning for and conduct of operations against the Japanese enemy on Okinawa Shima Ryukyu Islands, during the period from April 1 to June 21 1945" The citation accompanying the award stated that during the preparatory phase of the operation "Captain Knowlton with untiring efforts, supervised the organization and training of the medical battalion within the division With keen technical skill and professional ability he trained his command to a high state of readiness for amphibious operations During the assault phase of the operation the medical companies under his direction kept constantly in contact with the advancing front line troops, offering prompt and efficient medical aid and surgical treatment to those wounded or injured in action The ability of the individual corpsman the capabilities of the unit medical officers, the efficiency of the medical organization, the promptness of the evacuation of wounded all attested to his brilliant leadership Throughout the entire operation he demonstrated an extremely high degree of professional knowledge both as a member of the medical profession and as a naval officer He kept constantly in touch with the rapidly changing tactical situation so that he might better employ the men of his command His sound judgment, both tactically and medically his inspiring leadership and his intense devotion to duty were ever an inspiration to the men of the division and aided materially in the furtherance of the operation His actions throughout were in keeping with the highest traditions of the United States Naval Service." Dr Knowlton graduated from Tufts College Medical School Boston in 1921 and has been active in the Naval Reserve for twenty-seven years

### Commander Richmond J Beck

Lieut Comdr Richmond J Beck, Huntington L I, N Y, was recently commended 'for distinguished service in the line of his profession as psychiatrist and embarkation debarkation officer aboard the U S S *Solace* from November 1943 to July 1945 During this period he displayed professional skill and ability, demonstrating outstanding zeal and steadfast devotion to duty in his handling of casualties evacuated from beachheads He exhibited a high degree of physical fortitude and endurance in expert treatment of the wounded and was directly responsible for saving the lives of many men suffering from shock and other combat disabilities His personal attention to detail and leadership were an ever present source of inspiration His services and conduct throughout were in keeping with the highest traditions of the United States Naval Service Dr Beck graduated from George Washington University School of Medicine, Washington, D C, in 1921 and entered the service Oct 24, 1942

# MISCELLANEOUS

## HOSPITALS NEEDING INTERNS AND RESIDENTS

The following hospitals have indicated to the Council on Medical Education and Hospitals that they have not completed their house staff quota allotted by the Procurement and Assignment Service

CALIFORNIA

Greens Eye Hospital San Francisco Capacity 33 beds admissions 1 326 Miss Marion I Hamilton Superintendent (resident—otolaryngology)

CONNECTICUT

Greenwich Hospital Greenwich Capacity 151 admissions 2 915 Mr William J Donnelly Administrator (residents—mixed service)

DELAWARE

St Francis Hospital Wilmington Capacity 137 admissions 2 301 Sister M Philiberta R N, Superintendent (intern July 1)

ILLINOIS

Ravenswood Hospital Chicago Capacity 208 admissions 5 324 Mr George Swanson Superintendent (2 residents—obstetrics gynecology)

INDIANA

St Catherine s Hospital East Chicago Capacity 324 admissions 8 102 Sister M Cordula R N Superior (interns residents—mixed service)

NEW JERSEY

Cooper Hospital Camden Capacity 447 admissions 8 702 Mr LeRoi A Ayer Superintendent (2 interns)

NEW YORK

Kingston Hospital Kingston Capacity 223 admissions 2 904 Miss Jessie P Allan R N Superintendent (2 residents—mixed service)

SOUTH CAROLINA

Columbia Hospital Columbia Capacity 506 admissions 8 902 Mr P A Hodges Jr Acting Superintendent (interns)

VIRGINIA

Norfolk General Hospital Norfolk Capacity 397 admissions 11 459 Mr Richard J Stull Superintendent (interns)

WEST VIRGINIA

Charleston General Hospital Charleston Capacity 330 admissions 9 625 Dr John E Cannady Medical Director (interns)

## BRITISH ACHIEVEMENT IN THE ART OF HEALING

A thirty-five page pictorial booklet on the 'British Achievement in the Art of Healing,' by John Langdon-Davies, was recently published by the Pilot Press Ltd, London, and is being distributed by British Information Services (30 Rockefeller Plaza), New York The pamphlet depicts the progress of the British medical profession during World War II and is but a sketch of what war experience gives us by way of hope for the future It contains a story on the discovery of penicillin, its uses and methods of administration and also covers such subjects as wound shock, blood transfusions and the future, and rehabilitation

# PHYSICIANS SEPARATED FROM SERVICE

## ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

### Alabama

Teague, Eldred B 300 Oak St., Talladega
Terhune Samuel R, 2160 Highland Ave., Birmingham.
Warrick William D 2820 Fairway Dr, Birmingham
White, William E, 1130 Woodstock Ave, Anniston
Wilkerson, Arthur F Jr, 442 Washington St, Marion

### Arizona

Bernstein, David Major Vet Adm Facility, Tucson
Hall, Norman D, Lt Col, 845 N 4th Ave., Phoenix.
Holmes Fred W, Capt 94 E Monte Vista Phoenix
Matts, Robert M, Major Yuma County Health Service, Yuma
Montgomery, Robert E Jr, Capt 1250 10th St, Douglas
Schoch, William G Jr, Capt, 1748 S 6th Ave., Tucson

### Arkansas

Bogart, Clarence N, Capt., Forrest City
Brown, Thomas D, Major, 718 High St, Little Rock.
Campbell James H Jr, Lt Col, Joiner
Dailey, William M Capt. 703 9th St, Arkadelphia.
Galatzan Joe S Capt, 1719 Linden St., Pine Bluff
Hayes James D Capt, 202 Donaghey Bldg, Little Rock
McGehee, Edward P Jr, Capt. Lake Village.
Mayfield Hugh J, Major 801 W Main, El Dorado
Pinnell Robert, Lt. Col, Frederia Hotel Little Rock
Smallwood, Raymond E Major, 144 Park Hill, Hot Springs
Woods, William M, Huntington

### California

Baisinger, Leo F, Capt, 250 Holthy Rd., Bakersfield
Baldwin, L Grant Lt Col, 5 E Colorado St., Pasadena.
Bazzano, John J, Capt., 1270 Grove St., San Francisco
Beaver Meredith G, Col, Mariposa Dr, Redlands
Bell, Ralph M, Major, 600 E Hermosa St., Santa Maria
Bray, Eulys W, Capt 427 E Main St., Turlock.
Bruckman, Fred S, Major, 384 Post St, San Francisco
Campbell, Joseph G, Capt., 15 W Quinto St, Santa Barbara.
Campbell Roy, Major, 1218½ S Westmoreland, Los Angeles
Case, Robert B Capt., 6107 Harwood Ave., Oakland
Champion, John G, Capt, 1845 Purdue Ave., W Los Angeles
Collins Thomas A Capt, 1107 R St., Fresno
Crawford, William E Capt 1226 8th St, Oakland
Cutts, William F Major, 18 Dos Caminos Ave Ventura
Fishbon, Harry M, Major, 1660 Divisadero St, San Francisco
Friedlander, Richard D, Major 15 Mesa Ave, San Francisco
Friedman, Lawrence J, Capt. 130½ S Kings Rd, Los Angeles
Gilbert, Elmer W, Lt Col, 1153 S Garfield Ave., Alhambra
Grant, Reuben S, Capt. 1908 Wilshire Blvd Los Angeles
Hauser, Vernon F, Major, 3015 W Commonwealth Alhambra
Hawkins, Ralph L, Major, U of Calif Hosp San Francisco
Hayhurst, Joseph S, Major, 2 West Fern Ave., Redlands
Ingle, Vernon A, Capt 3501 Via Corona, Montebello
Ishikawa, Tokio, Capt., 616 N 6th St., San Jose
Johnson Harvey S Capt, 10484 Troop Ave. Los Angeles
Jones Donald J, Capt, Route 5, Box 8869, Sacramento
McClatchey Warren S, Capt., 1327 31st St. San Diego
McCloy, Neil P, Capt, 738 W 104th St, Los Angeles
McGuinness, Joseph S, Major, 126 6th Ave., San Francisco
Mandel, Charles, Major 216 N Ardmore Ave., Los Angeles
Manjos Peter Lt Col 1614 Cayuga Ave, San Francisco
Messenger, Thomas T Major 216 Fresno St Avenal
Misrack, Maury L Major, 578 Arguello Blvd San Francisco
Moore, Robert L Major 2103 Roanoke Rd., San Marino
Nador, George, Capt, 3632 W 59th Pl Los Angeles
Nahman, Morton S Capt 3440 Washington St, San Francisco
Netzley Ralph E, Capt., 851 E El Molino Ave, Pasadena
Newman Ben A Major 6610 W 6th St Los Angeles
Nichol Walter E Major 111 S Granville Ave, Los Angeles
Peery, Leslie T Capt., Rural Rt 2 Yuba City
Rogers, Thomas J, Major 6526 W 6th St., Los Angeles
Satterlee, William C, Capt 4651 Constance Dr San Diego
Schmela, W W, Major, 14 W Micheltorena St. Santa Barbara
Schneider, Herbert H Capt. 605 Yale Ave., Fresno
Shershow, Albert, Major, 420 11th St Paso Robles
Spalding William C Lt. Col, 947 W 8th St., Los Angeles
Streaker, Lee H Coast Highway, Goleta
Tat, Russell J, 539 Market St. San Francisco
Walker, Leon R, 152 E Garvey, Monterey Park
Weiss, Isidore I Stockton State Hosp Stockton
Wever, George K. 242 N Sutter St., Stockton
White, Alfred S, 516 Sutter St. San Francisco
Winn Lawrence R., 6337 Newell St. Huntington Park.
Wolfson Samuel A, 1317 Devon Ave, Los Angeles

### Colorado

Clark, Harry D, Lt Col, 629 Humboldt Denver
Gibbens, Murray E, Major, Childrens Hosp, Denver
Guggenheim Albert, Capt, 1520 Hudson St, Denver
Hinds, Ervin A, Lt Col 1616 Fairfax St., Denver
McCammon, Robert W, Capt., 1317 Birch, Denver
Stein, Hermann B, Major, 323 Bellaire St, Denver

### Connecticut

Szlemko, Emile A, 27 Poquonnock Rd, Groton.
Trantolo, Arthur, 2 Roberts Ct, East Hartford
Tylec, Leo L 359 N Main St, Union City
Weber, Frederick C Jr, 25 W Elm St Greenwich.
Weinstein Nathan, Cavray Rd, East Norwalk
Welt, Louis G, 789 Howard Ave. New Haven

### Delaware

Taylor, Harvey G, A-1 DuPont Institute, Wilmington

### District of Columbia

Wolford, Roy A, 5259 Nebraska Ave N W, Washington.

### Florida

Thompson Richard P, 120 La Quinta Pl, St Augustine
Wilhelm John A Orlando
Woodville, John B Jr, Vet Adm. Facility, Bay Pines

### Georgia

Brown, Stephen W, Major 201 Liberty St Milledgeville
Crowder, Miles S, Major, Prof Bldg, Griffin
Eberhart, Charles A, Major 1106 Med Arts Bldg, Atlanta.
Hendrix, Arthur M, Capt Ball Ground
Hill, Arthur W, Major Ga State Health Dept, Atlanta
Howard, Cluese L, Capt, PO Box 336, McIntyre.
Martin, Anthony J, 1st Lt., 2938 Lenox Rd., Atlanta
Mashburn, James S, 1st Lt, Cumming
Moore, Haywood L, Major 26 N Broad, Porterdale.
Thurmond Allan G 1345 Greene St, Augusta
Turk, William B, PO Box 27 Nelson
Williams, Charles R Box 67 Wadley
Withers, Samuel M Jr, 409 S E 9th Ave., Moultrie

### Idaho

Budge, Bruce C, Major, Eastman Bldg, Boise.

### Illinois

Baskerville, Edward M, Capt, 707 Buell Ave., Joliet.
Bates, Robert R., Capt 818 Manor Ct, Joliet
Beech, Robert D, Capt, 2110 W Fargo Ave Chicago
Behr, Samuel, Major, 1822 National Ave, Rockford.
Bennett, Joseph R, Major 7407 Kingston Ave, Chicago
Berger, Samuel, 1st Lt., 3907 W Adams St., Chicago
Berwick, Philip, Capt, 165 N Central Ave., Chicago
Bornstein, Johann S, Capt., 5454 Everett Ave., Chicago
Brennan, John F Capt, Kingston Dr, East St. Louis
Brosin, Henry W, Col 950 E 59th St., Chicago
Brown Francis J, Major, 134 W Prairie Ave., Decatur
Burt Elliott P, Major 409 W Melbourne Ave, Peoria.
Burten, Saul Capt, 100½ Cass St., Woodstock
Bushnell, Lowell F, Capt., 172 N Ridge Rd Highland Park
Campbell Everett W, Capt. 1117 W 61st St, Chicago
Conlin, Edward J, Capt. 4256 Sheridan Rd Chicago
Cortesi, Loli R Major 2800 Fullerton Ave Chicago
Cousens, Marshall A., Major, 1819 S Trumbull Ave., Chicago
Cox, Fred G Capt., 7310 Merrill Ave., Chicago
Cross, James H Capt Dahlgren
Ehrlich, Louis, Major 3925 W 16th St, Chicago
Eisenstaedt Werner F Lt Col 3520 Carmen Ave., Chicago
Friedberg, Stanton A, Major 650 Wellington Ave, Chicago
Gleason Maurice F Capt. 426 E 51st St., Chicago
Green, Martin W, Capt., 1908 St. Charles Rd Maywood.
Greenspahn, Gerald M Major, 66 E South Water St, Chicago
Haftkowski, Dominic J, Capt., 3222 S May St., Chicago
Halevy, Arthur A, Major, 5008 Sheridan Rd, Chicago
Hanson, John O, Major, 5804 N Maplewood Chicago
Helfrich, Loring S, Capt, 1640 Juneway Ter, Chicago
Hirsch, Donald A, Capt, 1333 W Rosedale Ave., Chicago
Hoban, Eugene T, Capt., 2053 Bissell St., Chicago
Hollander, John D, Capt., 734 N 23d St., East St. Louis
Irons Edwin N Major, 5830 Stony Island Ave. Chicago
Jenkins, David M, Capt, 1905 E Jackson Bloomington
Karay, George N, Capt., 516 S Austin Blvd, Oak Park.
Krupka, John M, Capt, 3012 S Maple Ave., Berwyn

# PHYSICIANS SEPARATED FROM SERVICE

### Illinois—Continued

McNally Howard J, Major, 7907 S Drexel Ave Chicago
Martin, Richard R, Major 4309 N Paulina St, Chicago
Meier, Francis X, Capt, 925 26th St, Moline
Morton, Joseph L, Major, Paris
Murphy, James P, Major, 105 S Linus St, Virden
Neiman, Benjamin H Lt Col, 901 N Euclid Ave, Oak Park.
Nelson, Thomas F, Major, 340 St James Bldg, Jacksonville
Noggle, Charles L Major, 6121 N Hamilton Ave, Chicago
North, F S Jr, Capt 1490 N Green Bay Rd Lake Forest
Pessis Benjamin H Capt, 1306 S Lawndale, Chicago
Peterson Ralph O, Major, 4869 N Hermitage Ave, Chicago
Pettry, Harvey H, Capt Cowden
Pomarane, Mark M, 1st Lt, 7727 N Hermitage Ave, Chicago
Poremski Thaddeus A, Capt, 5854 Wrightwood Ave, Chicago
Purcell, Paul W Capt 7701 W Belmont Chicago
Pyzik, Stanley W Major, 2538 N Kildare Ave, Chicago
Randell, Harold E, Capt, 1464 E 55th St Chicago
Ratner, Milton D Capt, P O Box 1, Maywood
Robbins, Joseph M, Capt, 4428 N Marmora Ave, Chicago
Robbins, Robert H, Major, 1101 Washington St Waukegan
Rodholm, Ansgar K, Capt, 950 E 59th St, Chicago
Sass, Louis A, Major 3710 W 70th Pl Chicago
Scheinberg Schayel, Capt., Michael Reese Hosp, Chicago
Schwartz, Bernard, Capt, 2709 Glenlake Ave, Chicago
Slater, Roland A Major 711 Ravine, Peoria
Sloan, Jack H Major, 551 W Roscoe St Chicago
Slott, Irving, Capt, 3048 Gunnison, Chicago
Smith, George W Jr, Capt 1825 W Harrison St, Chicago
Smollar Leo Major, 4309 W Flournoy Chicago
Speer Ralph E, Capt, 4342 Drexel Blvd, Chicago
Standish Myles 1st Lt, 3323 N Oak Park Ave Chicago
Steiner Louis M, Capt, 6141 N Talman Ave, Chicago
Stine, Leonard A 1st Lt. 5719 Kenwood Ave, Chicago
Sukas, Anthony E, 3537 W 111th St, Chicago
Sullivan Timothy 104 15th Ave, Sterling
Swiontek Henry S 2957 N Spaulding Ave Chicago
Szczurek, Edward W, 5417 S Paulina St, Chicago
Thompson, Ernest L 315 Hoff St Pekin
Tolentino Angel P 1354 S Halsted St, Chicago
Triolo, Anthony, 3900 W Chicago Ave Chicago
Turow, Irvin L 218 Barker Ave, Peoria
Walter, LeRoy E, 1340 N Dearborn St, Chicago
Walton, Joseph E., Homer
Weatherly, James A, Major, 108 N 14th St, Murphysboro
Webber, Max E El Paso
Webster, James R, 5226 Blackston Ave Chicago
Weil Harry R, 5434 Ridgewood Ct, Chicago
Weimer, James I, 621 Washington St, Pekin
Weisdorf William, 3101 Wabansia Ave Chicago
Weissbuch, Mitchell R, 5242 N Kimball Ave, Chicago
Willis, David A, 162 E Ontario St Chicago
Wilson, Nathaniel D, 200 Estes St, Chicago
Yacullo, William A, 3056 W Jackson, Chicago

### Indiana

Banks, Horace M Lt Col, 1604 N Capitol Ave., Indianapolis
Barkley, Douglas F, Major, 200 Main St., Odon.
Benz, Owen F, Capt, 1916 Superior Ave., Whiting
Birdzell, John P, Capt, 124 N Main, Crown Point.
Boughman, Joe D, Capt, 402 N Meridian St. Indianapolis
Buchmeier, J A. Capt., % Philip R Mille, RR 1, Frankfort
Covalt, Donald A, Lt Col 300 Winthrop, Muncie.
Crum, Marion M, Capt. 620 E Maumee, Angola.
Daniels Robert E, Lt Col., 127 N 3d St, Decatur
Folck, John K., Major, 328 N Hart St., Princeton
Hare Daniel M, Capt., Evansville State Hosp, Evansville.
Hartz, Francis M Major, 212 E Riverside Dr, Evansville.
Hasewinkle, A M, Major, 1307 E Rudisill Blvd., Ft Wayne.
Henderson Ramon A, Capt., Carlton Addition, Muncie.
Heritier Claude J, Capt, 320 N Chauncy St., Columbia City
Hetherington John A, Capt., 29 S Audubon Rd., Indianapolis
Hewlett, Thomas H, Capt., 36 Valley View Ct., New Albany
Hill, Robert E, Capt., 525 W North St, Muncie.
Hoover, J Guy Capt., W Locust St., Boonville.
Korn, Jerome M, Capt., 611 Spring St. Michigan City
McDonald Joseph D, Lt. Col 317 N Wabash Ave, Evansville.
McDowell G A Lt Col 2322 Forest Park Blvd, Ft. Wayne.
McEwen James W Lt. Col 670 Cherry St., Terre Haute.
Matthew, W B, Major, 1320 N Delaware St Indianapolis
Miller, Richard C, Capt., 245 W 38th St, Indianapolis
Mullin, Joseph E Capt. 1042 W Michigan St., Indianapolis
Norman William H Capt. 661 Berkley Rd Indianapolis
Paff, William A Major, 412 Equity Bldg, Elkhart.

### Indiana—Continued

Pilcher, Jack E, Lt Col, 5250 Woodside Dr, Indianapolis
Rhorer, Roger J, Major, 1706 W Sycamore St, Kokomo
Romberger, Floyd T Jr, Capt, 425 Little St, West Lafayette.
Rosenbaum, Lloyd E, Capt, 647 Citizens Bank Bldg, Anderson.
Rozelle, Clarence V, Capt, Forest Hills, RFD 8, Anderson
Saide, Robert A, Capt, 421 E 4th St, Michigan City
Snyder, Morris C, Major, 247 N Grahm St., Indianapolis
Springstun, Walter R, Major, 635 S Englewood, Evansville
Storey, Destiny E, Rural Route 1, Washington
Stucky, Elsworth K, 2342 N Alabama St, Indianapolis
Tanner, Henry S, 1142 N Pennsylvania St, Indianapolis
Thegze, Charles G, 2011 Clark St, Whiting
Tinsley, Frank W, 2623 Guilford Ave, Indianapolis
Tischer, E Paul, 4534 N Pennsylvania, Indianapolis
Willis, Charles F, 2100 Bayard Park Dr, Evansville
Woods, Halden C, 208 W Morse St., Markle.

### Iowa

Baltzell, Winston C, Major, 304 3d Ave., Charles City
Block, Walter M, Capt., 845 1st Ave. S E, Cedar Rapids
Brown, A W, Major, 6845 Ashworth Rd, West Des Moines
Campbell, R E, Capt, 2622 Country Club Pky, Cedar Rapids
Chestnut, Paul F, Major, 115 W Court, Winterset.
Clapsaddle, Dean W, Capt., Burt
Cummins, George M Jr, Capt, 215 Fernwood Ave, Davenport.
Dunn, Francis C, Lt Col, 533 Knollwood Dr, Cedar Rapids
Ellis Howard G, Capt., 3333 Grand Ave, Des Moines
Gaukel, Leo A, Capt., 716 W Iowa, Onawa.
Goenne, William C Jr, Major, 133 Forest Rd, Davenport
Harris, Donald M, Capt, 2970 Isabella St., Sioux City
Hungerford, William E, Capt Avoca
Hurevitz, Hyman M, Major, 1626 Marlo Ave., Davenport.
Johnson, Robert J, Capt., 712 W 4th St., Cedar Falls
McConkie, Edwin B, Major, 908 Merchants National Bank Bldg, Cedar Rapids
McQuiston, W O, Major, State U of Iowa Hosp, Iowa City
Martin, Lee R., Capt, 524 Harrison St., Council Bluffs
Mater, Dwight A, Major, Knoxville.
Mauritz, Emory L, 1st Lt, 922 Equitable Bldg, Des Moines
Ralston, Furman P, Capt. 917 Montgomery St., Knoxville
Shea, Thomas E, Capt, Cherokee.
Smith, Roland T, Capt., 2320 York St, Des Moines
Sternhill, Irving, Capt., 618 Forestere Blvd, Mason City
Thompson, Robert V, 2410 Court St., Sioux City
Todd, Vernon S, Eldora
Trotter, Richard W, Lake City
Walton, Seth G, Hampton
Wanamaker, Ambrose R, Hamburg
Wetrich, Max F, Manilla
Whitmer, Lysle H, Wilton Junction
Williams, Donald B, Vet Admin Facility, Knoxville
Wolfson, Harold Kingsley
Wolkin, Julius, Thornton
Zukerman, Cecil M, 1631 Pineacre Ave, Davenport

### Kansas

Wallace, Dean D, Norwich
Wallace, Wayne O, 317 N 3d St. Atchison
White, John P, 216 N 28th St., Parsons
Wood, Douglas H, 413 W Jefferson, Pittsburg

### Kentucky

Bush, Charles K. Jr, Capt., 4610 Southern Parkway, Louisville
Buttermore Willard M Capt. Bardo
Cameron, Donald B, Major, 1525 Dean Ave., Owensboro
Caywood, Beatty E, Capt., 369 Maple Ave., Danville
Cona, Joseph P, Capt., 334 Glendora Ave., Louisville.
Flowers, Samuel H, Capt., 2403 Cumberland Ave., Middlesboro
Hall, Russell L, Capt., Amba.
Hancock, James C., Capt, Mayfield Highway, Fulton
Hill, John C, Major, 4559 Southern Parkway, Louisville.
Houston, Wilbur R., Major, 37 Forrest Ave, Erlanger
Huey, James M, Capt., Highway 42, Union.
Hunt, John S, Capt., 239 N Broadway, Lexington
Jarrell, Charles R., 1st Lt, Russell
Mann Shelton H, Capt., 2001 Eastern Parkway, Louisville.
Schultze, Joseph H, Capt. 1612 Scott St., Covington.
Sergent, Warren F, 1st Lt., Whitesburg
Sloane, Augustus D, Capt., Paintsville.
Smith, Emery V Capt., 706 Main St., Greenup
Starr, Silas H, Major, 2339 Village Dr, Louisville.
Thompson, Morris H, 4628 Southern Parkway, Louisville.

# PHYSICIANS SEPARATED FROM SERVICE

### Maine

Tuttle, Charles L, 24 Storer St, Kennebunk

### Maryland

Bowie, Harry C Major, 14 E Madison St, Baltimore.
Cooch, Joseph W Capt., 38 Montgomery Ave, Kensington
Corner, George W Jr, Capt., 4 Merryman Ct, Baltimore.
Edmonds, C W, Capt, 614 Hastings Rd, Wiltondale, Towson
Harris, Thomas W Jr Capt, 24 Fleet St., Annapolis
Hecht, Manes S, Capt 717 Lake Dr, Baltimore
Mitchell, Robert B, Major 704 Cathedral St, Baltimore.
Nachlas, Israel W, Lt Col, 1814 Eutaw Pl, Baltimore.
Robinson, Harry M Jr, Major 244 N Hilton St., Baltimore.
Robinson, Raymond C V, Major, 6002 Harford Rd, Baltimore
Rose, Edwin J, Col 4701 Cortland Rd., Chevy Chase
Schochet, George, Major, York Rd Cockeysville
Stegmaier James G, Capt, 408 N Centre St., Cumberland
Waesche, Frederick S, Snow Hill

### Massachusetts

Baker, Donald V Jr, Capt, S Main St, Uxbridge
Banks, Benjamin M, Col, 416 Marlborough St Boston
Barone, William D, Capt, 2 Elmwood Ave, Winchester
Barry, John J, Capt, St Johns Hosp Lowell
Barton, Lewis W, Major, 15 Bloomfield St, Lexington
Bayles, T B, Lt Col, Robert B Brigham Hosp, Boston
Bengloff, Harold Major, 251 St Paul St, Brookline.
Bennett Nathaniel N, Capt, 174 Harvard St., Brookline.
Berenson, William Capt, 249 Summer St, Lynn
Berk, Morton S Capt, 52 Nottingham Rd, Brighton
Blodgett James T, 1st Lt, 125 Lexington St, Woburn
Bolduc, Robert A, Major, 358 Lincoln St, Worcester
Bragan, James A, Capt. 3 Nottingham St., Dorchester
Cassin, Benjamin I, Capt., 195 Chestnut St., Chelsea
Catino Andrew C, Capt, 12 Folsom St, Revere
Cave Edwin F, Col, 11 Laurel Rd Chestnut Hill
Cherkas, Benjamin Capt, 295 Concord Ave, Cambridge
Chernoff, Arthur H, Capt, Saugus
Coburn, Morton B, Capt., 48 Browne St, Brookline
Cohen, Manley B, Capt, 47 Bowdoin St, Dorchester
Cook, Aaron Capt., 23 High St, Waterville.
Cooper Francis L Jr, Major, 26 South St, Brockton
Corkery, James R, Capt 6 Hancock St, Everett.
Cummings, Vincent P, Major, 57 Main St North Adams
Ellis Victor Capt. 1289 Commonwealth Ave, Allston
Fiore Autino, Capt., 93 Endicott St, Boston
Frank Albert A Major 600 Main St Malden
Gardner Merrill F 1st Lt., 50 Union St, Fairhaven
Geller, Joseph, Capt, 48 Cedar St, Lawrence
Ginsburg Edward M, Major, 26 Euclid Ave, Quincy
Grande, Gaetano G Capt., 109 Chester Ave, Chelsea
Griffin, Julian P, Capt, 170 Berkshire St, Indian Orchard.
Higgins, Donald E, Major, Main St., Cotuit
Huber, William M, Major, 512 Beacon St, Boston
Hyfer, Harry J, Capt, 14 Charlesgate W, Boston
McCarthy, Charles J, Major 466 Medford St, Somerville.
Mace, Roswell G, Major, 167 Long Hill St Springfield
Mallory, Tracy B Lt Col, 61 Hedge Rd, Brookline
Nevitt, Francis W, Capt, E Maine St, Falmouth
Peckham, John M, Capt, 131 North Ave, North Abington
Radovsky, Everett S, Capt., 1316 Highland Ave, Fall River
Ragonetti, Victor V, Capt, 145 Court St, Plymouth
Ritvo Meyer, Capt, 485 Commonwealth Ave., Boston
Rothman, Maurice S, Capt, 827 Southern Artery, Quincy
Roy, Edward J Capt, 156 Oak St, Indian Orchard
Saccone, William A, Capt, 325 Malden St, Revere.
Saffran, Irving, Capt, 640 Adams St Dorchester
Schraffa, Francis P, Capt, 149 Putnam St, East Boston
Shpiner, Leonard B Capt 420 Memorial Dr Cambridge
Shuman Hyman, Col 107 Prichard St, Fitchburg
Spira, Bertram, Major, Worcester State Hosp, Worchester
Taylor Grantley W, 214 Buckminster Rd, Brookline
Teahan, John W, 133 Chestnut St. Holyoke.
Tedeschi, Pasquale R, 270 Pearl St, Newton.
Thibodeau Arthur A, 28 Bay View Rd, Wellesley
Thomas Jackson M, 102 Great Plain Ave, Wellesley
Tracy Robert J, 3 Monroe Pl Concord
Turner, John W, 20 Maple Springfield
Weiss, Louis R 137 Fuller St Brookline
Welch, Claude E., 264 Beacon St, Boston
Wetherbee, Winthrop Jr 24 School St., Boston
White, Seymour J 453 Railroad Ave., North Andover
Whitehead, Duncan, 1137 Main St., Leominster

### Michigan

Baird, Winston C, Capt., 209 Harriet St., Flint.
Baumer, Moe, Capt, 2901 2d Blvd, Detroit
Beckett, Morley B, Major, 19 Oak Ct, Allegan
Beeuwkes, Lambertus E, Capt., 7720 Calhoun, Dearborn.
Bringard, Elmer L, Capt, 18110 Fairfield, Detroit
Burroughs, Roswell G, Major, Grace Hosp, Detroit.
Callaghan, Thomas T, Major, 16126 Indiana, Detroit
Clyde, Ensign E, Capt, Mendon
Cochran William L, Major, 1313 E Ann St., Ann Arbor
Fisher, Dan W, Major, 918 Seymour St, Lansing
Fisher, Robert E, Major, 23 W Main St, Mayville
Ford, Sylvester, Capt, 7310 Grand River Ave, Detroit.
Gano, Avison Capt, 38 E Monroe St, Bangor
Goldhamer, Stanley M, Lt Col, University Hosp, Ann Arbor
Hammerberg, Kuno, Capt, Clare
Hammond, George, Major, University Hosp, Ann Arbor
Harrold, Jesse F, Capt., 1037 Glenhaven East Lansing
Hartwell, Shattuck W, Lt Col, 1665 Jefferson St., Muskegon.
Heath, Leonard P, Major, 1013 David Whitney Bldg, Detroit.
Horan, Thomas N, Major, 890 Blaine Ave, Detroit
Hummel, Arthur R, Major, 2239 Cadillac Blvd, Detroit.
McKean, Richard M, Col, 2984 Iroquois, Detroit
Maibauer, Frederick P, Major, 2966 Biddle Ave., Wyandotte.
Marks, Ben, Capt, 18200 San Juan Dr, Detroit.
Meyers, Solomon G, Major 16660 Baylis Ave., Detroit.
Miller, Perry L, Major, 121 E. Maumee St, Adrian
Mouw, Dirk, Capt, Route 1, Grandville
Nesbitt, William E, Capt, 312 S 2d Ave, Alpena
Penzotti, Stanley C, Capt, 235 Tecumseh St., Dundee.
Price, Alvin E, Lt Col, 20100 Picadilly, Detroit
Rypkema, Willard M, Capt., 1523 Sheldon Rd, Grand Haven.
Sargent, Leland E, 1st Lt., 114 N Thompson St, Jackson.
Schultz, Elmer C, Capt., 111 Walnut St., River Rouge.
Seybold, Edward G, Capt, 740 Woodlawn Ave., Jackson
Shulak, Irving B, Major, 16515 Baylis St., Detroit
Silverman, Irving E, Capt, 428 W Michigan, Lansing
Sleight, James D, Major, 401 Security Bank Bldg, Battle Creek.
Slowin, Edward P, Capt, 2295 W Grand Blvd, Detroit.
Spector, Maurice J, Major, 18910 Greenlawn, Detroit.
Stanley, William F, Capt, 381 W Woodland Ave, Ferndale.
Swartz, Fred G Jr, 612 6th St, Traverse City
Sylvan, Melvin M 4557 E Nine Mile Rd, Van Dyke.
Thompson, Hugh O, Arbutus Beach, Gaylord
Timm, Oreon K, 59 Rose St, Battle Creek
Wallace, Herbert C, 118 S Oakley St, Saginaw
Weller, Thomas H, 1130 Fair Oaks, Ann Arbor
Wessels, Robert R, Harper Hosp, Detroit
Wilcox, Leslie F, 505 Middlesex Blvd, Grosse Pointe.
Wreggit, Winston R, 79 Highland Ave., Highland Park
Zarafonetis, Chris J D, 944 E Fulton St, Grand Rapids

### Minnesota

Burchell, Howard B, Major, 524 5th St. S W, Rochester
Carlson Norman C, Major, Melrose.
Cress, Paul C, Capt, Ellsworth
Dargay, Cyril P, Capt., 1404 N E. University Ave, Minneapolis
Fleming Dean S, Capt, 2205 Newton Ave, Minneapolis
Frane, Donald B, Capt, 4333 Fremont Ave N, Minneapolis
Haisten, Arnold S, Capt, Mayo Clinic, Rochester
Hill, John R., Major, 827 W Center St, Rochester
Humphrey, Irving L Jr, Capt, 222 11th Ave. N E., Rochester
Mousel, Lloyd H, Major, 102 2d Ave S W, Rochester
Nesset Lawren B, Capt 214 E 19th St, Minneapolis
Priestley, James T, Lt Col, Mayo Clinic, Rochester
Reinecke, Roger M, Capt., 4500 Edmund Blvd, Minneapolis
Simons, Leander T, Lt Col, 350 St. Peter St, St. Paul
Watson, Richard E 1631 Brenner Pass, Minneapolis
Webster, LuVerne J Otter Tail County Sanat, Battle Lake
Weismann, Rodger E, Mayo Clinic, Rochester
Wiechman Fred H, Montgomery

### Mississippi

Campbell, George A, Major, Kosciusko
Hossley, William J Jr, Capt., 708 Farmer St, Vicksburg
Moore, Thomas L Jr, Capt, 303 N Front St, McComb
Nadeau, A T Jr, Capt., Jackson C Health Dept, Pascagoula
Ray, Robert B Lt. Col, Kosciusko
Rayburn, Charles W, Capt., Pontotoc
Sheffield, William E Capt, U S Vet Hosp, Gulfport
Sherman, Kenneth C, Major, 145 Elmer St Biloxi
Simpson, Rufus K., Major, 1603 36th Ave., Meridan
Wilson, Joseph C Route 1, Hollandale
Woodbridge, John H, Tchula

# PHYSICIANS SEPARATED FROM SERVICE

### Missouri

Barrett Ralph M S Lt Col, 607 N Grand, St Louis
Bassewitz Paul P, Capt, 216 S Kingshighway, St Louis
Bohrer, Edward R, Major, 111 W Main, West Plains
Bricker, Eugene M, Lt Col 105 W Parkway, Columbia
Brown Samuel H Capt 436 W 47th St, Kansas City
Buck, Robert E Capt 4166 Lindell Blvd St Louis
Crider, Russell J, Capt, 5565 Maple St, St Louis
Edelman Jack R, Major, 6557 University Dr, University City
Fleming Peter D, Capt., 4314 Lindell Blvd, St Louis
Gallant, Adolph L, Capt, 622 Eastgate Ave St Louis
Gollub, Samuel W, Major, 7414 N Euclid Ave, St Louis
Hall Robert A Capt, 1627 Tower Grove Ave., St Louis
Herman Allen I Lt Col, 467 E Walnut St, Springfield
Kennedy, I Hall Capt, RD 5 Springfield
McNamee William F, Capt 7029 Rock Hill Rd, Affton
Moore Ernest M Jr, Capt Farmers Bank Bldg, Higginsville.
Pelz, Mort D, Lt Col, 634 N Grand St Louis
Pipkin Francis G Major, 1318 Bryant Bldg Kansas City
Rosenberg Henry E, Capt 76 Lake Forest, Richmond Heights
Sachs Ernest Jr, Capt., 4475 W Pine St, St Louis
Taylor, Van W, Bonne Terre Hosp, Bonne Terre
Wepprich Michael S 512 W State Union
White, Harvey L 750 Yale Ave, University City
White, Stoughton F, 1103 Grand Ave Kansas City
Whitten Marion F, 636 Benton St, Poplar Bluff
Wood, B R 7367 Overbrook Dr Pasadena Hills, St. Louis
Wray, Rolla B, 701 S Adams, Nevada

### Montana

Honeycutt Charles F Jr, Major, West Mont. Clinic Missoula.
Weed, Vernon A Kalispell

### Nebraska

Borgmeyer, Henry J Capt Dodge.
Bryant Arthur R, Capt. 1415 S 3d St Beatrice.
Eagle, Frank L, Capt 408 E Military Ave Fremont
Fogarty, Charles J Major 1816 Wirt St Omaha.
Haffke Oscar W Capt, 3103 N 28th E Omaha
Hudgel Lawrence E, Lt Col 1111 W 4th St., North Platte.
McIllece, Raymond C, Capt., Lawrence.
Murdoch James W Jr, Capt. 826 S 36th St Lincoln
Ryder Frank D Lt Col 1902 W Charles, Grand Island.
Schneider, Albert L, Major Box 443 Brady
Schonberger Stanley H Capt. 221 N 49th St., Omaha
Scott Nathaniel C Capt 2511 S 35th St. Omaha
Tompkins Charles A 4201 William Omaha.
Tucker, John G 1630 Lincoln Ave, York

### New Hampshire

Holman Delavan V Lt. Col Franconia.
Russell, Walter A, Capt., 34 Lincoln St Somersworth
Wheeler John S, 116 School St. Concord.

### New Jersey

Agolia, Michael W Major, 2201 Palisade Ave., Union City
Bambara Aurelius J Capt. 6 N Main St. Flemington
Baum Lewis F, Major 46 Chancellor Ave Newark.
Benz George L Capt. 884 Bergen St Newark.
Burkhardt Hans E Capt 813 Central Ave Ocean City
Burstein Frank, Capt., 72 Osborne Ter Newark.
Calasibetta Charles J, Major 37 Longfellow Ave Newark.
Cricco, Carl F Capt 708 Jefferson St. Hoboken.
Dante, Pasquale R Capt 446 Millburn Ave Millburn.
Failmezger, Theodore R. Lt Col 125 Green Ave. Madison
Francy Donald G Capt. 34 Main St Matawan
Frank, Nathan Capt 180 Bowers St., Jersey City
Gebirtig Theodore, Major 35 Jefferson Ave. Morristown.
Groeschel August H Lt. Col 31 Bank St. Sussex.
Gross Charles N Capt. 319 Atlantic Ave. Atlantic City
Gross Irving J Capt 128 Lakeside Ave Verona.
Halnan John J Jr, Capt 631 Madison Ave., Paterson.
Halsted Harry C Capt., 102 Hawthorne Ave. Nutley
Hemphill E H Capt., 274 Kings Highway E Haddonfield.
Hirsch John J Capt, 191 Wallington Ave. Wallington.
Hoffman, C A, Major 1001 Sleepy Hollow Lane, Plainfield.
Horhovitz George I Capt 324 S Broad St., Trenton.
Hunter F D, Major, 3620 Nottingham Way, Hamilton Square.
Miller Samuel D Capt., 161 New St. New Brunswick.
Miranti, Paul J, Capt., 2700 Boulevard, Jersey City
Pasternack, Elroy Capt., 255 Harrison St. Passaic.
Pendexter, S E. Jr Capt., 11 S Arlington Ave., E. Orange.
Price Henry S Jr 1st Lt., 123 Washington Ave. Collingswood.
Probst, F W, Lt. Col 14 E Park Pl., Rutherford.

### New Jersey—Continued

Riddell, Richard V, Capt, 418 Grier Ave, Elizabeth
Rocco, John D, Capt, 171 Parker St, Newark
Rubba Russell R, Capt, 21 Horton St., Hammonton
Sadoff, Joseph, Capt., 116 Elmora Ave, Elizabeth
Saltus, Lloyd S, Capt., 11 Headley Rd, Morristown
Samuels, Sol L, Capt, 219 W 7th St, Plainfield
Sand Abraham B Capt 454 High St. Burlington
Shore Benjamin R, Lt Col 279 Audubon Rd Englewood
Siegel, Simeon Capt, 594 20th Ave Paterson
Suffness Gustave 8 Jefferson Ave Elizabeth
Trippe Morton F 702 Asbury Ave Asbury Park
Waldron, Edward L, 910 Stuyvesant Ave., Trenton
Tsucalas, James C, 629 Bergen Ave, Jersey City
Whinery Joseph F 53 Templar Way Summit
Woltmann Charles E, 806 Hudson St, Hoboken

### New York

Andriola Joseph C Major 3215 Netherland Ave Bronx.
Atkins, Joseph Capt 110 Devoe Ave Yonkers
Bader George B Lt Col 103 E 75th St, New York.
Baronas Albert A Capt, 28 Townsend St Rochester
Bassen Edward J, Major 654 Madison Ave New York.
Bauer Marshall A, 1st Lt 22 Lattin Dr Yonkers
Benin, Harry Capt, 1030 Carroll St. Brooklyn
Berkman, Henry S, 1st Lt 1732 E 28th St, Brooklyn.
Berman Benjamin Capt., 1907 Mermaid Ave Brooklyn.
Billow Bennett W 1st Lt 2039 Broadway New York.
Birkel Peter F Capt 303 Woodlawn Ave Albany
Blum Leon Capt. 1 Everdell Pl, Far Rockaway
Bodian Martin 1st Lt 665 St Johns Pl Brooklyn
Boorstein Maccabee, Capt 1150 Longfellow Ave. New York.
Brady Joseph P, Major 615 Sterling Pl Brooklyn
Brand David 1st Lt 429 4th Ave. New York
Braverman Abraham H Capt 317 W 89th St, New York
Breslow Leonard G Capt, 1076 Eastern Parkway Brooklyn.
Brown, Charles H, Capt 73 Kingsboro Ave, Gloversville
Brown Richard C Major Kings County Hosp Brooklyn
Brussel J A Major, Pilgrim State Hosp Brentwood L I
Carpenter Walter T Jr Lt. Col 445 E 65th St, New York.
Caruso, Lawrence J Capt., 616 Van Buren St, Brooklyn
Cheevers Owen J, Major, 2328 University Ave. New York.
Cheron Abraham J, 1st Lt, 275 Hooper St Brooklyn.
Chester Nicholas G, Capt 142 Lilac St., Syracuse
Clayton Edgar L Capt. 211-35 34th Rd. Bayside
Cohart, Edward M Major 245 Lenox Rd Brooklyn.
Cohen Clarence J, Capt 16 09 149th St. Whitestone L I
Cohen Harry Capt. 1383 Bronx River Ave Bronx
Cohen Nathan N Capt 1414 E Fayette St, Syracuse
Connors David A, Capt 134-06 86th Rd, Richmond Hill
Coyle Joseph A Capt, 197 05 89th Ave. Hollis
Crane George E Capt. 780 Madison Ave New York.
Cuthbert Richard B Jr Major 231 N Peterboro Canastota.
Datri Foster J, Capt 624 2d St Brooklyn.
Davenport, Fred M, Capt. 825 W 187th St New York.
Eckstein David, Major 233 E 54th St., New York.
Edelman, Morton H, Major 2 E 77th St., New York
Flater, Nathaniel F Capt. Latham
Flattery James F Capt., 427 Ft Washington Ave New York
Fleischner, Alois L Capt., 15 Clarke Pl New York
Frank, Seymour L Major 1525 E 10th St, Brooklyn
Frazin Bernard, Major, Vet. Adm Bath
Friedman, Benjamin, Major 320 E 42d St. New York
Friedman Harry, Capt., 2165 Ryer Ave. Bronx
Gabriel Nicholas J Capt. 1244 South Ave. Rochester
Gaghardi Francis A Capt 107-46 118th Richmond Hill L I
Gardine, William G Capt. 202 Wilson Ave., Brooklyn
Garrett Robert T, Capt., 65 Herrick Rd Southampton.
Geiger, John T Capt, Colonel Greene Rd Yorktown Heights
George, Roger H Capt. 260 Crittenden Blvd Rochester
Gering George, Capt 167 Centre Ave. New Rochelle
Gillman, Joseph H Major 484 Pennsylvania Ave Brooklyn
Gold Aaron M, Capt. 4751 40th St. Long Island City
Goldstein Louis A. Major 224 Vassar St Rochester
Graham Arthur V Capt 2045 E 18th St. Brooklyn
Greenberg Benjamin 1st Lt 10 Monroe St New York
Greenberg Milton Capt 808 Empire Ave. Far Rockaway
Greenberg Samuel I Major 291 E 49th St. Brooklyn.
Groben Elmer S Lt. Col 59 Irving Pl Buffalo
Grossman, Morris J Capt. 10 Ocean Parkway, Brooklyn.
Gruenberg Ernest M, Capt 418 Central Park W New York.
Halperin Meyer, Capt. 2820 Brighton St Brooklyn
Hanfling Seymour L Major 148-56 87th Ave., Jamaica.
Harris, Arthur E, Major, 939 Westcott St, Syracuse.

# PHYSICIANS SEPARATED FROM SERVICE

### New York—Continued

Harris, Louis H Capt. 1459 Wythe Pl., Bronx
Harrison, David A., Capt., Broadacres Sanatorium, Utica.
Hauptman Hyman A, Major, 354 E 18th St., Brooklyn
Heiden, Lionel M, Capt., 120 E. 17th St., New York.
Heilbrun Norman, Major, 15 Brantford Pl, Buffalo
Henne Frank R, Capt., Marcy State Hosp Marcy
Hershey, Maurice A, Major 460 Richmond Ave, Buffalo
Hobler, Ross E., Capt. 421 W Church St. Elmira
Hoenig, Robert B, Capt., 146 Central Park West, New York.
Hollis, John A, Capt., 77 E Main St Norwich.
Holzberg Ida R Capt, 121 E 60th St New York.
Horn, Henry, Lt Col, 74 E. 91st St., New York.
Howland Murray S Jr, Capt., 40 North St, Buffalo
Hylant, John P, Capt, 909 Tonawanda St, Buffalo
Iacovino Louis J, Capt., 18 Tompkins St, Cortland
Inguagiato Gerard J, Capt 229 E 5th St, New York
Israel Milton R, Capt, 310 W 89th St New York
Jacobson, Abraham S, Lt. Col, 1068 Findlay Ave New York
Julian Cyril J, Capt, 19 Manor Rd, West New Brighton, L I
Kaplan, Abraham I, Capt, 2200 Morris Ave, Bronx.
Kaplan Lawrence G, Capt., 109-15 Queens Blvd, Forest Hills
Kaye, Milton, Capt., 1692 Eastern Parkway, Brooklyn
Kelly, John A., Lt. Col, 3506 88th St., Jackson Heights, L I
Kendrick, Thomas D, Lt Col, FRD 1, New Hartford.
Kera Henry M, Major, 55 Park Ave., New York
Kinney, John J, Capt, 519 E 6th St, Jamestown
Klein, Joseph B, Capt., 41-08 43d St, Long Island City
Kopex, Leo E, Capt, 111 Metcalf St., Buffalo
McAuliffe, William J., Capt., 92 Prospect Park S W, Brooklyn
McBride, Robertson L, Capt., 279 Chelsea Pl, Buffalo
McGraw, John J Jr, Major, 1101 Stolp Ave, Syracuse.
McKenna, William F., Major, 125 Gates Ave., Brooklyn
McKnight, W K Major, York Ave at E 68th St, New York.
McVaugh Charles C, Major, 301 E 20th St., New York
MacFarland, William J, Major, 208 Main St., Hornell
Mackler, William, Capt, 1615 Avenue I, Brooklyn
Manfredonia C E, Major, 2599 Coney Island Ave, Brooklyn
Mark Stanley M., Capt, 36-43 212th St, Bayside.
Markowitz, Isidore, Major, 270 Troy Ave, Brooklyn
Mascara Gaetano A, Capt, 349 E 17th St, New York
Mason, John L H, Major, 127 N Jefferson, Pulaski
Matheke, Otto G Jr, Capt., 119 E 80th St., New York.
Mayer Hyman R., Major, 3009 Kingsbridge Ter, Bronx.
Mazzacano, Anthony F, Capt., 147-15 46th Ave., Flushing
Medlar Robert E., Capt., Mt. McGregor
Mehr, Robert J, Capt., 2830 Grand Concourse, Bronx.
Meltz, Sidney B, Major, 104-33 Lefferts Blvd Richmond Hill
Mendel, Walter H., Lt Col, 29A Broadway, Haverstraw
Merrick Theodore P, Capt., 1202 Lexington Ave., New York
Meyer, Herbert W Lt Col., 180 E 79th St, New York.
Milanese Nicholas P, Capt., 724 Bartholdi St. Bronx
Miles Anthony W, Major, 77 Woodhill St Brooklyn
Miller, Milton H, Capt 91 Central Park West, New York
Mindlin Rowland L. Capt., 88 Central Park West New York
Minella Alexander C, Capt., 187 Bedford Ave., Brooklyn
Miner, Walter W, Major, 100 N Grand Ave, Baldwin
Mitchell, Alfred A, Capt. 970 Walnut St., Elmira.
Mogavero Herman S Major 752 Niagara St, Buffalo
Moldover Aaron, Capt., 490 Pennsylvania Ave, Brooklyn.
Moore, Joseph M, Major, 2727 University Ave, Bronx.
Morris Max Major, 3090 Brighton 5th St., Brooklyn
Morrison, Thomas J, Capt., 170 E 77th, New York.
Morrock Samuel, Capt., 1700 Albemarle Rd., Brooklyn
Mufson, Samuel, Major 1185 Park Ave., New York
Myers Spencer, Capt., 8 Church St., Ossining
Newman H R, Capt. N Y Post-Graduate Hosp, New York.
Nitschke Richard E Capt 30 Hix Park, Rye
Nobiletti John B Capt., 77-09 Kew Forest Lane, Forest Hill
Nolan James F Capt., 444 E. 68th St., New York
Nowicki Valentine A Major, 215 Palisade Ave. Yonkers
Perry Harmon H Capt 65 S Regent St, Port Chester
Peterson, Stewart E., Major 1525 W Water St., Elmira
Piszczek, Edmund S, Major, Tuxedo Mem. Hosp., Tuxedo Pk
Putnoi, Martin Capt 77-11 35th Ave. Jackson Heights, L I
Rapisardo Philip J, Major 156 09 46th Ave Flushing L I
Reilert, Harold Capt, 57 Pennsylvania St., Brooklyn
Reissman, Seymour Major 8739 Bay 16th St., Brooklyn.
Ross Henry, Lt Col, 65 Central Park West New York
Rothstein Daniel, Major, 1901 84th St., Brooklyn.
Rutzler, Henry L, Major 46 Guion Pl, New Rochelle.
Samet, Sydney, Capt. 2325 Morris Ave., New York.
Sarullo, Joseph, Major, 419 E. 18th St., New York.

### New York—Continued

Schaffer, Abraham I, Capt, 1472 White Plains Rd Bronx
Schapiro, Isidore S, Capt, 101 W 58th St., New York
Schnee Albert E. Capt 1686 Bryant Ave, Bronx.
Schwartz, David G, Capt 320 Central Park West, New York
Schwartzberg, Seymour H, Capt., 1316 South Ave, Syracuse.
Sciortino, Joseph, 1st Lt 1044 79th St., Brooklyn
Seidenstein Howard R, Capt, 16 Winyah Ter, New Rochelle.
Seldeen, William Capt., 76 Union Ave, Amityville
Serlin Nathan J., Major, 1640 E 24th St, Brooklyn
Sharman Edward J, Capt., Franklin
Shaub, Solomon, Capt, 8811 Elmhurst Ave, Elmhurst L I
Siegel, Edward Capt, 16 Barnard Ave., Poughkeepsie
Siegel, Isadore M Capt. 2270 Mott Ave., Far Rockaway
Siglag, John J, Capt, 5118 11th Ave, Brooklyn
Simpson, Herbert S., Capt, 4 Foote St, Port Henry
Slatkin Meyer H, Major 1552 E. 28th St., Brooklyn
Smith Byron C., Major 27 E 62d St, New York
Smith Manuel, Major 1160 E New York Ave Brooklyn
Smith, Philip W, Capt., 1437 Lancaster Ave., Syracuse
Solomon, Saul, Lt Col., 162 W 54th St, New York
Stamm, Julian L., Capt, 32-26 86th St, Jackson Heights, L I
Stansbury, Frederick C., Lt. Col, 403 Cornstock Ave, Syracuse.
Stern, Leon, Capt., 610 W 186th St, New York
Surrey, David J, 1618 Walton Ave, Bronx, New York
Tabershaw, Arnold L, 65-41 Saunders St, Forest Hills
Tabor Sidney H., 278 Buffalo Ave, Brooklyn
Tarlau, Milton, 114-06 Queens Blvd, Forest Hills
Tascarella, James W, 715 Bushwick Ave, Brooklyn
Tauber, Leo J, 367 Vernon Ave., Brooklyn.
Tepfer, Milton, 1678 President St, Brooklyn
Tinker, Martin B Jr, 404 Savings Bank Bldg, Ithaca
Tocker, Albert M, 552 Crown St., Brooklyn
Tropp Oscar, 65 Central Park West, New York
Trubowitz, Sidney, 397 Linden Blvd, Brooklyn.
Tuby, Joseph J, 1310 Beverly Rd, Brooklyn
Tullis, James L 280 Riverside Dr, New York.
Tumiel, Joseph S 549 S Park Ave Buffalo
Wagoner, Stewart C, 1161 Ardsley Rd, Schenectady
Walder Allen J, 388 Vermont St, Brooklyn.
Ward Harrison F, 441 Genesee St., Rochester
Warshall, Hyman B, 435 Ocean Parkway, Brooklyn
Wassermann David, 559 New Jersey Ave, Brooklyn
Weichsel, Herbert S, 471 Park Ave., New York
Wein, Arthur, 5007 11th Ave, Brooklyn
Weiner, Leo, 1767 78th St, Brooklyn
Weinraub Edwin C Bellevue Hosp New York
Weinstock Irving, 1960 E 5th St, Brooklyn
Weiss, Henry W, 92 Center St., Ellenville
Weitzner, Herbert, 2255 E 18th St. Brooklyn
Welker, George J 114 New Hyde Park Rd, Garden City
Wender Herbert B, 4802 10th Ave., Brooklyn.
Wessell Elmer, Lt. Col 72 Clinton St, Plattsburg
West, Theodore S, 130 Columbus Ave, Port Chester
Wiesen Arnold M 1st St Riverhead L. I
Williams Richard P, 1990 7th Ave., New York
Willis, Willard H, 49 Sunnyside, Utica
Wilson, Harold L, 150 Burns St, Forest Hills
Wilson, Leo, 1749 Grand Concourse, Bronx, New York
Wilson, Robert O, 144 A Tulip Ave Floral Park
Winslow Philip M 197 Raleigh St., Rochester
Witt, Norman H, 14 Seneca St, Dobbs Ferry
Wolf, Morris J., 212 W 92d St New York.
Wood Everett H, 6 Easterly Ave Auburn
Zimmerman, Morris 705 E 9th St., New York

### Rhode Island

Warren, Jacob P 541 Hope St, Providence
Zooloomian, Hrad H, 51 Richard St., Cranston

### South Carolina

Workman, Joseph B Jr, 1515 Bull St., Columbia.

### South Dakota

Thompson, Arnold M, 1021 E. 3d Ave, Mitchell

### Tennessee

Thompson Robert C RFD 5 Lebanon
Trabue, Charles C. IV, 2122 W End Ave., Nashville
Weeks, Joseph C Jr, Health Dept, Murfreesboro
Weinberger Jacob Jamestown
Wilson, John M John Gaston Hosp Memphis
Wofford, Charles P, Llewellyn Wood, Johnson City

# ORGANIZATION SECTION

## THE WAGNER-MURRAY-DINGELL BILL

### Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*—ED.)

*(Continued from page 47)*

United States Senate, Committee on Education and Labor

APRIL 16, 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Pepper, Tunnell Smith and Donnell

#### Statement of Dr R L Sensenich, Chairman of the Board of Trustees, American Medical Association

DR. SENSENICH I have prepared Senator Murray in the interests of your committee, the members of which I know are very busy, a statement which I will ask be placed in the record The statement has frequently been made that the action of the American Medical Association represents only a small group a portion only of the Association, and it has variously and ungraciously been referred to as a clique, and comment has been made that it does not represent the attitude of the American medical profession

SENATOR MURRAY At the outset I would wish to say that the committee does not recognize that at all and we recognize the American Medical Association as representing the profession in this country almost completely and we are satisfied with that fact.

DR. SENSENICH I wish to state that the membership of the Association exceeds 125,000 physicians and that its policies are determined by its House of Delegates which numbers 175 This group is elected by the various state societies and the representatives to the state organizations are from the county and local component societies So that we do make the effort to have—

SENATOR PEPPER I do not like to interrupt you Doctor except that you were speaking about the organization of the American Medical Association. DR SENSENICH Yes sir

SENATOR PEPPER You say it starts with the county association? DR. SENSENICH That is right

SENATOR PEPPER And the next is the state association? DR. SENSENICH Yes, sir, Senator

SENATOR PEPPER And the next is the national House of Delegates, composed of representatives of the state associations? DR SENSENICH That is right, sir

SENATOR PEPPER Now, I was interested in the parliamentary procedure which prevails in the organization Suppose that a county medical society we will say in my county in Florida desires to come out in favor of a particular form of health insurance and they pass a resolution to that effect, in my county in Florida, that is the county medical association How long would it take before that resolution of this county medical association would come before the House of Delegates in the regular order? DR. SENSENICH That resolution might come first to the state House of Delegates the state association and from that group to the House of Delegates of the American Medical Association However there would be nothing preventing that county society from directly approaching a delegate to the House of Delegates of the American Medical Association and presenting to it this resolution or this action of the local component society

SENATOR PEPPER I got the impression from somebody and I wanted you to advise me about the accuracy of the impression that it took something like three years to get a matter of that sort finally before the House of Delegates and to get its decision on it. DR SENSENICH I am glad to discuss that, Senator Pepper, because the House of Delegates in each state meets at least annually, and on special occasions it may have extra sessions At the present time, there is much discussion as to the advisability of meeting regularly two times a year, but we are subject to call at any time

SENATOR PEPPER There is no rule about any length of time that has to elapse and there is no executive committee that has to give final approval of it? DR SENSENICH There is no screening there is nothing to prevent or even discourage any county society from taking any action that it wishes, and that action may then be taken to the governing body of the American Medical Association SENATOR PEPPER All right

SENATOR DONNELL May I ask the Doctor one question too at this time? Doctor, what proportion in percentage would you say the 125 000 physicians who are members of the American Medical Association represent with respect to the entire practicing profession of medicine and surgery in this country? DR SENSENICH There are probably as many as 50 000 or 60,000 graduate physicians that are not members of the American Medical Association Now, as to how many of them are actually in practice it is impossible to say There are men who graduate and then take executive positions in various life insurance companies or in this or that group but there is this number who are of themselves independent and are licensed to practice, and who can as frequently as they wish express their wishes and their ideas and their positions on medical matters

*(Dr Sensenich presented the action of the House of Delegates on the bill S 1606)*

SENATOR TUNNELL Could you tell us about the countries where this has been tried? Positive proof exists from experience in other countries you say, that inferior medical service results from compulsory health insurance DR SENSENICH I have visited Germany France and England and have had some opportunity to observe the operation of the plans However, I should prefer if you will Senator that you would wait until a little later, when Dr Walter Kennedy will go into that in detail SENATOR TUNNELL All right.

DR SENSENICH On page 4 of the brief there is the National Health Ten Point Program of the American Medical Association It is to be regretted that for some reason or other this action of the American Medical Association and the effort that has preceded this statement of program, throughout many, many years, has not received the general recognition to which it is entitled Too often the American Medical Association has been charged with being obstructionist and not in any way willing to accept any innovations or any changes in the matter of the provision of medical care

The American Medical Association urges a minimum standard of nutrition, housing clothing and recreation fundamental to good health The responsibility for the attainment of this standard should be placed as far as possible on the individual but the application of community effort compatible with the maintenance of free enterprise should be encouraged by governmental aid where needed. That is the background of the position that the American Medical Association has taken with reference to the Hill-Burton bill and other legislation which is pending

SENATOR PEPPER You would not think it would be socialistic for the federal government to aid in maintaining minimum standards of nutrition, housing clothing, recreation and so forth? DR SENSENICH No, I think not, if there is need and the community is unable to do that for itself I think Senator Pepper, that I believe your legislative efforts have been directed toward improving general standards of living Now,

of course, the manner in which that shall be attained is the point which determines whether or not it is socialistic or what it is The child should have throughout infancy proper attention, including scientific nutrition and immunization.

SENATOR PEPPER You say that you would like to see every mother and child get the care that they should have? DR. SENSENICH Yes, sir

SENATOR PEPPER And that would carry with it the provision of hospital care for every mother at childbirth? DR SENSENICH I think so, sir

SENATOR PEPPER And prenatal care also for the mother and the child? DR. SENSENICH Yes sir

SENATOR PEPPER And then the necessary care that the child should have after birth, in its health? DR SENSENICH Yes sir

SENATOR PEPPER And you would recommend that whenever a mother is not financially able to purchase the needed medical and hospital care in such cases the government could properly and should properly make those things available to them? DR SENSENICH Yes sir, however, I should distinguish there Senator Pepper, as between the local government and local units and the federal government. I should dislike to have that made the basis of an overall governmental policy which disregarded the responsibility locally, from the individual on up

SENATOR PEPPER Obviously there would have to be some more hospitals built to give that much care to the mothers and children DR SENSENICH Yes sir

SENATOR PEPPER And probably some more physicians and nurses and so on? DR SENSENICH But that should be determined on the local need That is the point which has been developed.

SENATOR PEPPER And you think the local government could afford all of that needed service without federal aid? DR. SENSENICH In most instances it could Out in my own city I happened to pick up the statement of the board of health for last year, and out of some 2,600 and some births there were only 20 that did not take place in a hospital and that is a mixed population, including Negroes and foreign and industrial elements

SENATOR MURRAY Are you familiar with the conditions in poorer states, in the South Doctor, where they claim that they have not the means to build and maintain hospitals even if the hospital was built by the federal government, and they would not be able to maintain it and support it through lack of sufficient means? DR. SENSENICH I think that that is no doubt true in areas Of course, Senator Murray we must not lose sight of the fact that there are other things which will enter into the situation outside the actual construction of hospitals You cannot have a community in good health that is not decently fed and clothed and cared for The attitude of the American Medical Association and the physicians locally has always been that the need should be determined. Many communities that now do not have hospitals are ready and not only ready but actually have built up funds looking toward their contribution in part at least to the creation of local medical facilities

SENATOR PEPPER Taking the country as a whole what percentage of the children are born in hospitals do you recall? DR. SENSENICH I do not have that We will have later in the day some statistics from Dr Joseph Howard, who was to have appeared on this program and unfortunately became ill

SENATOR PEPPER You say that you have not lost faith in the individual That does not mean that all doctors render service on credit however, does it? DR. SENSENICH I do not know of any

SENATOR PEPPER There are a lot of poor people that have told me that they do not get a doctor if they do not pay the cash on the barrel head when he comes to render the service DR. SENSENICH That I could not argue because I do not know all of your doctors I would only insist on this and I think that you would agree to it Senator Pepper, that after all that is not the attitude of most physicians

SENATOR PEPPER I think a lot of this charity service that is talked about is a lot of hooey and I think a lot of poor people can prove it.

SENATOR DONNELL I would like to be recorded as supplementing what Senator Pepper has said A good deal of talk about charity is the exact fact, because I have a profound respect for the charity and generosity of the medical profession. There may be instances to which the Senator refers in which he is quite correct, but my observation has been, and my view is that the medical profession has been characterized by generosity and charity

SENATOR SMITH I would like to record the same view I just heard this as I came in I want to protest against the suggestion anywhere in these hearings that the medical profession has not been a profession of out-giving service to the people of this country I lived in a medical atmosphere from my childhood up, and I have been inspired all of my life by what the doctors have done for the people That does not mean that there are not big gaps to be filled, but I do not like the suggestion that the doctors, as a whole, have not had the spirit of giving to the people of this country

SENATOR TUNNELL I do not see how they live if they do *not collect, that is a practical side of it.*

SENATOR MURRAY I think we are all in accord that the medical profession has been most generous and charitable but at the same time there is a limit beyond which it would be impossible to expect the medical profession to furnish medical care, proper medical care and hospitalization to people in various sections of the country There is no doubt about that. I think that the doctors would be willing to do what they could, but they simply cannot handle the whole problem and it would be unfair to ask them, because the average income of the medical profession is pretty low There are some parts of the country where they do not make enough money to continue in practice, and they have to leave there I know of cases of that kind So that you cannot expect a doctor to raise a family and maintain his family in a community where he cannot make a living and that situation exists, there is no doubt about that. That is no reflection on the medical profession at all

SENATOR PEPPER I would like to say by way of clarification of my remark that I happen to have been delivered by an old country doctor, and in my youth on a little Alabama farm I had a chance to see the character of the country doctor, and as I grew up later I had a chance to see the family doctor, who is the typical doctor in the American mind, but I have also seen as I have grown older and talked to more people and I have heard more pathetic cases of where the specialization and the general commercial tendency that has invaded all of our life and the demands of the doctor of course, for his own survival, have made it more and more common for the doctor not to come unless he knows he is going to get a fee for coming to visit the patient.

I have been in the homes of too many Negro servants that have worked in my house and I have talked to too many others, to have them tell me that the doctor will not come unless he knows he is going to get the cash to take home with him when he makes his visit.

Now, as Senator Murray has said, I am not complaining about that, and I do not think that he owes medical service free to the community any more than the lawyer or the merchant owes it to give his goods to the humble I do not think it is the problem of the grocer in a community to feed the hungry of the community If the hungry exist it is the community's obligation to feed them if they are needy What this bill proposes is to take the individual out of the ranks of charity so that it will not be a beneficence if the doctor comes to see him but to make it possible for the poor to provide in an honorable way for their medical and hospital care. But when time and again the proposition is made, in opposition to legislation like this, that the poor of this country can get medical care by charity, the statistics do not bear it out.

DR SENSENICH Senator Pepper, if I may ask you a question how would you provide for this low-income group other than on a charity basis, if the income is insufficient to pay its reasonable proportion of the premium?

SENATOR PEPPER I think the Wagner-Murray-Dingell bill would be the foundation of the answer to your question, and that would cover everybody who is in the payroll class and they would pay probably a certain percentage of their payroll and the employer would pay a certain percentage of his payroll, just as they do now in respect to unemployment compensation, and then those who were not employed, so that they could not pay through the payroll tax as this bill eventually contemplates, then they would be provided for by grants of federal funds and those grants would be contributed by the federal and the state and the local governments in my opinion if you were to make the proper arrangement

And it is certainly not socialized medicine and it is not as you suggest here, anything that is sinister in character for a

person to have an opportunity through a cooperative insurance system to provide in an honorable way for his own care, without being the beneficiary of charity

DR SENSENICH The reason for discussing the matter of the Wagner-Murray-Dingell insurance provisions is with reference to the low-income group One of them is that the insurance is not cheap from the estimates Of course I admit that there are no figures that have been given but taking from the testimony of Mr Altmeyer, if the individual even of a low-income family, with three earners, would contribute 3 times 27, or 81, and 3 earners it is no small contribution

SENATOR PEPPER You will admit that the more people in the system, the cheaper it will be is that not a fact actually? DR SENSENICH It should be, yes, sir

SENATOR PEPPER And the only way you can get the price down so that the low income group of people can participate is to have the largest possible number of people in the system is it not? DR SENSENICH Yes, sir

SENATOR PEPPER And the fewer the people in the system the higher the rate will have to be is that not true? DR SENSENICH It depends

SENATOR PEPPER Is not one of the basic principles of this compulsory insurance to bring in by public requirement the largest number of people so that we will have the lowest possible rate for the people who participate on ordinary actuarial principles? DR SENSENICH The point in question there Senator Pepper, and I think you and I have discussed this at other times is the fact that there is a tremendous concentration of poor insurance risks in this lower group which means that the rest of the contributors to the insurance fund will pay out of proportion to their own risk in order to support a very large number of those who are not good risks

SENATOR MURRAY Are you discussing a voluntary system?

DR. SENSENICH I am discussing any system in which you introduce into the picture a low-pay risk that goes in bad health and who will continue to contribute $27 a year and will be under continuous medical care and support, because the burden of that falls on the others

SENATOR PEPPER Have you not disclosed the real weakness of the voluntary plans? Just as I say the major risk is among the poorest category of the people DR SENSENICH They are not risks they are burdens

SENATOR PEPPER I mean the poorest health risk. The greatest health needs are among the people of the lowest income groups DR. SENSENICH That is right.

SENATOR PEPPER Now then, they are a burden as you say if you put them into a system, so is it not the tendency of the voluntary plans, in order to avoid that burden some category of the poorest of the poor, to attract primarily those in the upper income groups who are the best health risks? That emphasizes the very inherent weakness and failure of the voluntary plan. That leaves all of the people at the bottom of the ladder who need health care most, with the least ability to provide so this compulsory insurance plan budgets them all in together, and yes it does make the well-to-do and it makes those who need health care least come into the same system with those who are least able to pay and need the most. But is not that the only way that you are going to make it possible for those who need the most and are least able to pay to get adequate care? DR SENSENICH Senator Pepper the individual who does not have sufficient income and this very low group that you refer to should not and cannot properly be included in any insurance plan and we have advocated for all time that they should be properly taken care of In your own area, Senator Pepper, you discussed a moment ago the individual who could not receive medical care because he did not have funds Actually that reflects on the local government which should provide for every one who is unable to secure otherwise, but they are not properly an insurance plan

SENATOR PEPPER Is not public education on the same basis? There have always been throughout history a few healthy or well-to-do people who could send their children to private schools and have tutors in their homes with you that would have closed the doors of public education to the masses of the people I remember when I was a boy still hearing a lot of well-to-do people complain about having to pay to educate their neighbors' children, as they would have the power to do in the case of their own children

Yet we live in a democracy here, where we say not only the rich man who could educate his own child by tutor or in a private school, but the man who has no children shall pay according to his ability to pay to educate the children of America And I do not see any difference between that principle and the principle of compulsory insurance where we bring in those most able to pay, and those least needy of health care into a national insurance scheme so that the poor will be able to get not only education but health care

DR SENSENICH The condition is not comparable because the people in the school require a comparable amount of care and education and expense whereas the group that we are talking about who are continuously sick are not on the same basis, comparable with the other individuals

SENATOR PEPPER The bachelor who has no children at all he does not have any children to get the same amount of care, and yet he pays taxes on it

SENATOR MURRAY When you say "the group that are continuously sick," what do you mean by that? You do not mean that they are sick all of the time? DR SENSENICH Virtually so, there are many who are chronically ill

SENATOR MURRAY There are many yes sir I know

DR SENSENICH And those individuals they are the recipients of charity when you make public contribution to a fund or they are the recipients of charity contributed by other members of the same insurance plan if they are not fair and average risks

SENATOR MURRAY But we have a vast segment of our population that are not as poor as you indicate this group who are continually sick, that cannot afford the modern costly medical care and hospitalization, is that not true? DR SENSENICH Yes, in that case

SENATOR MURRAY You would not want to put them on the basis of having to accept charity, and to be classified as charity cases? DR SENSENICH Is the charity any different Senator Murray, to those individuals than it is to the money that you contribute to the care of crippled children or for rehabilitation or for any of the other special funds that are set up for individuals?

SENATOR MURRAY Yes I do I think that we have people in this country who are employed and working and raising good families and they should not be put in the position of having to be classified as paupers and unable to get proper medical care. I think that there should be some way of bringing that adequate medical care within their reach so that they can maintain their dignity as American citizens and I think if you will investigate as our subcommittee has investigated you will find that in a great majority of the cases where people do become perpetual paupers they started on that road through illness in their family and through debts which were accumulated as a result of their efforts to take care of themselves DR SENSENICH There are a great many who are mentally deficient and who never could get on well in competition with the average, normal individual There are many factors that enter into that and I think that we can state this definitely and all agree on it That we are all seeking as an objective the best medical care for every one and we are now discussing the means of accomplishing it, and it seems that it is hardly fair to include the entire group of individuals the entire population in a plan that will in the end bring about a lowering of standard and deterioration of service in order to take care of a smaller group to whom we feel that whatever assistance is given them should be given in a manner not recognizable

SENATOR PEPPER You do not mean that the people who need the most and are least able to pay it are the smallest group? There are more of those people than there are the well-to-do people DR. SENSENICH It depends on what you mean by well-to-do

SENATOR PEPPER What do you consider it? How much income do you think a family head should have a year in order to purchase the kind of medical and hospital care that would be available to the beneficiaries under this Wagner-Murray-Dingell bill? DR SENSENICH Senator may I answer that this way I recall when that statement came out purely on a matter of income. Let us be realistic and see the other side

SENATOR PEPPER I think that you would not mind giving me an answer to that What income for the head of a family would be necessary in order to purchase for that family the medical care that would be available under the Wagner-Murray-Dingell bill to the persons covered? DR. SENSENICH May I answer that in this way that income buys varying quantities of service in various communities, and that after all I must insist that you have to look at the reality and not the idea

Now then we must say on the other hand that no nation in the world—and may I answer this way Senator Murray

SENATOR PEPPER Senator Murray is going to get mad at me if you keep calling me by his name

SENATOR MURRAY That will all go in the record in my name and I will get credit for it and he is getting jealous of it.

DR SENSENICH We have to be realistic and recognize that, after all the major portion by far of the American population and I mean the population of the United States have had sufficient funds to get good medical care and they have enjoyed a better standard of health than any other country in the world

SENATOR PEPPER Now, you do not mean to say Doctor that the majority of the American people have been able to buy in the past the medical and hospital care that they ought to have, do you? DR. SENSENICH They have had enough to be well.

SENATOR PEPPER Do you think the American people have all been well? DR. SENSENICH Yes I know that they have

SENATOR PEPPER Very well Now how about my figure I wanted to ask you how much income you think the head of a family should have to have in order to buy in the private channels that are existing today the kind of hospital and medical care which is extended to the people covered by the Wagner-Murray-Dingell bill? DR SENSENICH There is no figure available

SENATOR PEPPER What is your opinion of the figure? DR SENSENICH The one that is quoted and I could not off-hand say It would be foolish for me to make an estimate. That should be studied.

SENATOR PEPPER Could they buy it on $500 a year? DR SENSENICH Of course not

SENATOR PEPPER $1,000 a year? DR SENSENICH In some areas, they not only can, but do and have, but I personally think that that is not enough

SENATOR PEPPER You think if the head of a family has an income of $1,000 a year that he can buy in any community in America the kind of hospital and medical care that this bill would provide to the covered people? DR SENSENICH When those figures came out, Senator Pepper, as a matter of fact they included a number of people who live on small farms and derive almost all of their living off the farms

SENATOR PEPPER They do not derive their hospital and medical care off the farm, they do not grow that, do they? DR. SENSENICH No but they are not always in need of that much medical care They may have their money available for that service to a much greater degree than the other individual that is on a salary

SENATOR PEPPER If they need hospital care and medical care of a sick child or sick mother or sick man in the country as distinguished from the town or the city is there a difference in that? DR SENSENICH There is a difference in charges but that is not the point if the individual has $1 000 to spend on those things his money on the side, obviously he can buy service that the individual in the city cannot buy if that is his total income, and he has to pay rent and other things There is no figure on that available which determines exactly what is necessary and could be determined only over a study of years and the average incidence of illness confining it to those individuals

SENATOR TUNNELL I would like to ask a question here. As I understand your position, Doctor you admit that there is an obligation somewhere and you place it on the local community? DR SENSENICH That is possible, yes sir

SENATOR TUNNELL I was protesting that it was not the duty of the doctor, I do not think the physician has the obligation to look after the health necessities of a community free. DR. SENSENICH That is right

SENATOR TUNNELL That is too much of a burden. DR SENSENICH That is right.

SENATOR TUNNELL It is just a case of where that obligation is DR. SENSENICH That is right Finally the House of Delegates in December of 1945, acting on several resolutions adopted a resolution setting up the machinery of coordinating and developing to a greater degree the voluntary insurance plans in the various states, and that is incorporated in this report.

SENATOR MURRAY Your judgment is Doctor that all of the proper medical care and service can be obtained by the American people through these voluntary systems that you have mentioned? DR SENSENICH What is that, all that need it? SENATOR MURRAY Yes sir DR. SENSENICH There are some who will never be incorporated in those plans

SENATOR MURRAY How many will be incorporated in those plans? DR. SENSENICH That I cannot say they have not had a sufficient time to develop

SENATOR MURRAY The American Medical Association always opposed those plans in the past? DR SENSENICH No they have favored them for some years past, on an experimental basis but there has been no actuarial experience and it would be folly to have promoted or encouraged the establishment of a great many plans that would ultimately fail because there was not sufficient actuarial experience.

SENATOR MURRAY Would it not be impossible at any time to develop these voluntary systems to such a degree that they would be capable of furnishing proper and complete medical care and hospitalization to the people of this country I mean to say outside of those who are in the indigent classes who are unable to contribute anything? DR. SENSENICH Well in fact, not every one would subscribe to any kind of insurance, and not every one whom you included in the compulsory plan would utilize the service that was obtainable under that plan Just as long as you have individuals and a free government of course they will do as they like However a sufficient amount of education would stimulate interest

Now we are the most insured nation in the world I think that we have some 80 million people covered by some kind of insurance There is nothing like it anywhere, and with a little encouragement and more facilities available there is no question that that would grow and continue to grow However there would be some who would not be included, but after all we cannot control every individual

SENATOR MURRAY But these plans do not give adequate coverage in the way of medical care and hospitalization For instance would you describe some of the medical plans that you know of which you believe would be complete as an answer to this question? DR. SENSENICH Some of the plans cover catastrophic illnesses only and surgery

SENATOR MURRAY Give me the name of some of them DR SENSENICH I cannot give that off-hand, I would be glad to furnish that for the record

SENATOR MURRAY Well, you are familiar with the Michigan Medical Service? DR SENSENICH Yes sir, you have a report on that

SENATOR MURRAY How does that compare with the coverage of the Murray-Wagner-Dingell bill? DR. SENSENICH It does not include as much as the Murray-Wagner-Dingell bill

SENATOR MURRAY It only provides surgical care and a partial maternity care. DR SENSENICH And also partial medical care, as I understand it. However, there are areas in which the plans cover everything

SENATOR MURRAY I do not understand that it gives anything except the surgical care and the partial medical care DR SENSENICH There are some of the plans Senator Murray that cover hospitalized illnesses and some others in which they are extending the service out to calls in the home. And there are some of those that are not included in these voluntary plans, but there are commercial plans that pay for service in the homes

SENATOR MURRAY But none of them cover complete service such as the bill before us? DR. SENSENICH Not at this time, sir

SENATOR MURRAY. And all of them have qualifications which make it available only to selected groups people of selected groups? DR. SENSENICH They were dependent in their early experience, while they were attaining some actuarial knowledge on some kind of selection and therefore they had to limit it to people who were employed Assuming the fact that they were employed meant some reasonable measure of health and so on Those things have all obtained, but they are expanding now as their information increases

SENATOR MURRAY But none of them are getting away from those restrictions which were mentioned here? DR. SENSENICH Yes they are.

SENATOR MURRAY My understanding is that most or all of these voluntary plans have restrictions Some will not enroll persons above or below a specified age or persons not enrolled in groups, or persons above a specified income, and some are limited to particular occupational or other groups and then the services are all limited, so that a person might be insured in one of those organizations for years and yet when he suffers a severe illness he would not get any benefit, because the coverage is so narrow in scope that he would not be able to take advantage of his position as a member of one of those groups DR. SENSENICH That is all in process of develop

ment, Senator Murray If you turn back to page 10 of my report, if you wish, there are certain standards of acceptance for medical care plans, and they will be encouraged

SENATOR MURRAY What page is that? DR SENSENICH Page 10 Senator Murray It goes into the matter of provision to the subscriber in the contracts and they are all operating under state law They must be financially dependable and as time goes on and experience and funds permit, the benefits are increased to cover additional risks and additional time of hospitalization and so on

SENATOR PEPPER Is it not a fact following Senator Murray's inquiry, that only about 3 per cent of the people of the country are given under the voluntary plans, anything like the comprehensive coverage that the Wagner-Murray-Dingell bill would extend? DR. SENSENICH I cannot give you at the moment the exact percentage, I can give you that later I will be glad to give that to the committee

*(Senator Pepper questioned Dr Sensenich as to the minimum income necessitating medical charity)*

SENATOR PEPPER I have some statistics which show that in the family income group from nothing to $449, 6 9 per cent get any kind of charity in respect to health care, whereas 13 9 per cent of rural non-farm people get some charity and medical care in that group and 17 3 per cent in the cities Practically only one third as many people in the country in that income group get any kind of charity in the medical field as get it in the urban areas In all of the categories under $3 000 a year in a group that was examined 6 4 per cent got any kind of charity medical care dental or otherwise and 12 5 per cent in the other areas got some kind of charity So that that shows that it is very probable that relatively few of the people who needed medical care and were unable to pay for it got it by charity DR SENSENICH But, Senator Pepper you are assuming the probability that they needed the care. As a matter of fact we explored, some years ago, a number of those areas and found much to our surprise, that even though they had no charity and they had very small incomes, they enjoyed very good health and their incidence of impairment was no greater than it was in urban communities with plenty of facilities available.

SENATOR PEPPER Your position is that the people of the United States need relatively more hospital and medical care than they are now getting? DR. SENSENICH In many areas it is true, and in many areas they need a great deal

SENATOR PEPPER What about the areas where it is not true?

SENATOR DONNELL Would you pardon me just a moment, may I make a point of order Mr Chairman, with respect fully to the Senator and to the Chairman, I think the Doctor should be permitted to answer the question fully without interruption, and I know the Senator from Florida admits that, too

SENATOR PEPPER Had you finished that yet? I wanted to ask you about the many areas in which it is not true.

DR. SENSENICH Then provision should be made, first of all, with facilities, and secondly, it should be determined what they need, and if they need medical men, and then the means to be provided. The thing that I do not like—I mean the profession generally that is, not myself, I feel that way myself and the rest of the profession—that the entire population should not be regimented into a plan simply to care for a relatively much smaller group Now, I realize that you will say there are more than I say there are, and the best information available is the factual data which we had back here in 1940 which was a much more extensive survey than anyone else had made.

SENATOR MURRAY What did that show generally without going into detail? DR SENSENICH I really cannot answer the question without going into some detail

SENATOR MURRAY It showed there were good health conditions? DR SENSENICH Yes

SENATOR MURRAY How does that correspond with the reports of the Selective Service Commission which found that as a result of ill health and defective conditions, that 40 per cent of the boys examined had to be rejected? DR. SENSENICH Senator Murray, we have a witness following me, Dr Goin, who will go into detail on the draft situation

SENATOR MURRAY I merely wanted to point that out now, because that is in conflict with the statement that you just made. DR SENSENICH The assumption of 40 per cent is subject to considerable variation and also some correction, and if you will permit, we will have Dr Goin tell you about that later

SENATOR PEPPER If you will permit me to call attention to some of the disclosures of our subcommittee's report

In fact, more than 23,000 000 people in the country have some chronic disease or physical impairment On any one day, at least 7 000 000 people in the United States are incapacitated by sickness or other disability half of them for 6 months or more Illness and accidents cause the average industrial worker to lose about 12 days from production a year a loss of about 400 000 000 man-days annually Sickness and accidents cost the Nation at least $8 000 000,000 a year—half of this amount in wage loss and half in medical costs

Preventive services are inadequate—40 per cent of our counties do not have even a full time local public health officer Sanitation needs are great—846,000 rural homes do not have so much as even an outdoor privy Hospitals are needed—40 per cent of our counties with an aggregate population of 15 000,000 do not have a single recognized general hospital Doctor shortages are severe—in 1944 553 counties had less than 1 active physician per 3 000 population the danger line and 81 had no active doctor at all Even in 1940, before many doctors were drawn off to war 309 counties had less than 1 active physician for every 3,000 people and 37 had no active doctor at all Maternal and child health services are inadequate—it is estimated that half the maternal and a third of the infant deaths could be prevented if known measures were fully applied Seventy five per cent of our rural counties have no prenatal or well baby clinics at all under the supervision of State health departments State agencies had 15 000 children on their lists awaiting crippled children s care in early 1944 They do not even pretend to care for the half-million children with rheumatic fever (the most killing of all diseases for children between ages 5 and 15) or for the tens of thousands of cerebral palsy (spastic paralysis') victims

It was our opinion that the people of the United States are not getting the medical care that they should be getting

DR SENSENICH That involves a good many things which will be covered by witnesses later, with reference to the distribution of hospitals and charity

SENATOR MURRAY You are not prepared to discuss with us the medical service plans that we have mentioned here? You have not made an exhaustive study of the different plans for prepaid medical care, that are being advocated?

DR SENSENICH We have a statement here from the director of our prepayment plan insurance group, and if I may have permission to have it included in the record, and that copy will be available to you

SENATOR MURRAY Will he appear here for cross examination? DR SENSENICH He is not able to

SENATOR MURRAY We would like to, if we could discuss with someone representing your profession the voluntary plans that are proposed and which you say are being developed. We think that it will be impossible to ever develop them to the degree that we will have a system that will furnish the American people with adequate modern medical care and hospitalization

SENATOR DONNELL I take it that the chairman does not mean to be expressing the opinion of all of the members of our committee in that statement. I say that with all due respect I realize the chairman is of that opinion but the committee itself has not yet passed on that question.

SENATOR MURRAY I am modifying it to that extent, but I am satisfied that when they hear the evidence they will recognize it

SENATOR DONNELL I mean no discourtesy to the chairman in the slightest, but the committee has not acted on that question

SENATOR MURRAY But I am satisfied when the committee hears all of the evidence, that they will agree with me, that it is impossible under any voluntary system in the United States to furnish the American people with a system of prepaid medical care and hospitalization. I am so convinced of that that I was led into the mistake of including all of the members of the committee, in support of the statement, and I will withdraw it now, and merely say that that is my judgment, and that is the judgment I think of every one who has made a study of these plans, and I am sure the testimony will convince you.

DR. SENSENICH It was not possible to present a witness on all of these phases, in the time allotted to us

SENATOR MURRAY It seems to me that this is the most important phase. It seems to me someone from the American Medical Association should come here prepared to convince the committee that we can take care of this problem in the United States by a voluntary system. I do not know of anything more important than that, that somebody should come here to show us that the system which we propose is wrong

DR. SENSENICH If the chairman will permit we have three other witnesses One will deal especially with the matter of statistics as to need. We think first of all need is the most important thing to discuss The second will deal with the hos-

pitals and medical facilities, and the third will deal with operations of plans of this type, and we have added the record from the head of our department of prepayment insurance, for a part of your record also, and may I say at this time that we will be happy to assist the committee in any way that we can in the consideration of the legislation

SENATOR DONNELL May I ask the doctor just a few questions, please? Doctor, I take it that all parties, physicians and laymen as well, generally realize the importance of improving health conditions to as practicable an extent as possible That is correct, is it not? DR. SENSENICH Yes sir

SENATOR DONNELL And the American Medical Association has been keenly alive to that problem, has it not? DR SENSENICH That is right

SENATOR DONNELL And as pointed out in your statement at page 6 at a meeting of the House of Delegates of the American Medical Association held in Chicago December 3 to 5 of last year the House of Delegates made a report a paragraph of which is quoted in your report as follows

"All of these plans"—that is, referring to voluntary prepayment medical care plans—

> All of these plans show a uniformity of desire for the immediate setting up of a national plan on a voluntary basis In all of them the urgency of this being done is stressed Accordingly your reference committee *recommends* that the House of Delegates of the American Medical Association instruct the Board of Trustees and the Council on Medical Service and Public Relations to proceed as promptly as possible with the development of a specific national health program with emphasis on the nationwide organization of locally administered pre-payment medical plans sponsored by medical societies

That was passed? DR. SENSENICH Yes, sir

SENATOR DONNELL And there was a conference held in Chicago in February of this year at which time there was organized a corporation to be known as the Associated Medical Care Plans, a national nonprofit organization Is that correct? DR. SENSENICH Yes, sir

SENATOR DONNELL And the details of the objects of the new corporation are set forth in your statement which is being filed with the committee? DR SENSENICH That is right

SENATOR DONNELL The point I desire to make, Doctor is this That the American Medical Association is approaching this problem with what it deems to be the utmost of speed consistent with efficiency in the solution of it. Is that right? DR SENSENICH Yes, sir

SENATOR DONNELL I want to take this opportunity of concurring with our distinguished chairman in the importance of the American Medical Association presenting to this committee its views and its reasons for thinking that voluntary methods can be adopted and I join thoroughly with him in the hope that the Medical Association will give to us the benefit of all such evidence as it can Doctor, I would like to ask you one question at this moment, arising out of a comment I think it was made by Mr Green of the American Federation of Labor yesterday in his very interesting testimony He suggested, in substance, that the source of the funds of various organizations which are opposing the plan embodied in S 1606 be made the subject of inquiry, and in response to a question asked him he at that time indicated that he thought the American Medical Association was one of those organizations the funds to support which should be inquired into May I ask you if you would be kind enough to state to the committee the source from which the funds which financed the American Medical Association are derived? *DR SENSENICH I will be very happy to* sir There is no secret about it We have dues from the Fellows of the American Medical Association, and we receive no dues from the members of component societies We publish certain medical publications from which there is some advertising income, and that is the source of our income

SENATOR DONNELL Do you have income from advertisements in THE JOURNAL which is published? DR. SENSENICH Yes, sir

SENATOR DONNELL Do you know about the proportion of the annual income which is derived from advertising? DR. SENSENICH I could not say that offhand I would be glad to *give you that information* The point is that THE JOURNAL is furnished to each Fellow for $8, and THE JOURNAL costs more than that to publish. Now, there is some coverage from the advertising income, but it would not be possible to publish THE JOURNAL at that income per year if there was not some advertising from it. We have no other sources of income

SENATOR DONNELL I was doing the very thing that Senator Pepper was doing, breaking in on your answer, but would you be kind enough to furnish for our record a brief compilation of the sources of income of the American Medical Association during the year 1945? DR SENSENICH I will be very happy to It is published each year in THE JOURNAL, and I will be very glad to

SENATOR DONNELL Another matter that I would like to ask you about is this You spoke of the comparative health in the United States and other countries Has there been a compilation of statistics on that question prepared and does it appear in your testimony? DR. SENSENICH There has been one prepared. As little information is now available in war torn countries the information that we have that we can depend on is of a little earlier date. I am under the impression that we had it in this report.

SENATOR MURRAY While you are looking for that, I would like to call attention to the fact that Dr Fishbein declares in his editorials in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION that health conditions and the standard of medical service are higher in the United States than anywhere else in the world, but at the same time it is found from an investigation in the country that the United States is not the healthiest country in the world You take, for example, the infant and maternal mortality rate In 1942, 40 babies died at birth for *every thousand born In one state the rate was 98, and 80 in* another, and we find similar conditions in many parts of the country My understanding is that a study of comparative health conditions in this country with some other countries of the world will show that the United States is not the healthiest country in the world

DR SENSENICH Senator Murray I will be glad to give you that information, and I think that that is included in the presentation of Dr Howard When you go comparing health statistics, you must know all the facts When it comes to children, for instance, I picked up the report of the health department in my own city the day before leaving, and I regret I did not bring it along The lowest rate quoted as I understand is Sweden which is 29 per thousand, and South Bend was 26 and a half The rate is very much better in Sweden than it is in a good many other places but you must remember when you are dealing with infant mortality that there are ways in which the information is gained I have it on good authority that the English do not record their infant mortality on the *same basis that we do I am letting others go into that in* more detail but the figures themselves are somewhat misleading We have and we do maintain that we do have the best health, and I think that we can judge that For instance, in New Zealand the figures given refer only to the European population, the white population We include everybody in our statistics

SENATOR MURRAY Of course, when we discuss this problem which is the healthiest nation of the world, we overlook the fact that even in the healthiest nations in the world and in our country here, notwithstanding the fact that it is comparatively better than other countries still here in this country there are thousands of people every day going without medical care because they are unable to pay for it There is no dispute on that. If a person wants to investigate it, it is a fact that throughout the country people in fairly moderate conditions fail to avail themselves of medical care because of the cost of it They are afraid to A man at the head of a family, with children going to school, and he is earning a fair income of say, $2,000 or $3,000 a year, and he is afraid to incur the expense of medical examinations and medical treatment on account of the cost of the thing There is no question about that, and it seems to me that some way must be found to make it possible for every one in this country to have access to the best possible modern medical care and hospitalization We do not have it, and the country suffers severely as a result of ill health in this country We lose millions of dollars every year, and nothing could be better for the welfare of our country than to have some system where every family can get this care without hesitation

DR. SENSENICH Senator Murray, I would not deny that there are people who should have medical care who are not getting it *From my own experience as a practicing physician for a good many years, and I do my turn on staff duty in the* hospitals as well, I can say definitely that the number of people who come to me or appear as charity patients in the wards, or with whom I come in contact who are ill who have not had medical care because they have neglected the case because they feared the expense, is negligible as compared to the individuals who did not have medical care because they neglected it. That is our principal difficulty I admit that there

are areas and there are individuals where education public health education and many things are lacking and the whole problem is a little more complex than simply the provision of an insured medical service

SENATOR PEPPER Doctor, further referring to the report of the subcommittee made on page 3 we have compiled the data between the ages of 15 to 64, and this is from the National Health Survey The data on the group between the ages of 15 to 64 show that in the category of less than $1 000 annual income they had 11 6 days of illness a year In that group they received 2 2 doctors' calls There is 11 6 days of illness and only 2.2 doctor's calls in the year in the group receiving $1,000 or less In the group receiving $1,000 and less than $2,000, the same age group they had an average of 7 9 days of illness a year, and they also got substantially the same number of doctors' calls In the group below $4 000 they had 6 7 days of illness a year, and they received 3 doctor s calls a year But when you get up in the highest group, above $10 000 a year annual income, you had less than 7 days' illness a year and yet they had 5 5 doctor's calls So as you go from the bottom up in the economic scale, down at the bottom you find more days of illness and less doctors' calls As you go up the ladder to the income group of $10 000 or more you find fewer days of illness and more doctors' calls That obviously had a relationship to the ability to purchase the medical care DR SENSENICH I am glad to discuss that with you If that information was taken from the Public Health Service a few years ago you must recall that the individual who had one leg off was ill so far as the record was concerned He was counted, although obviously he needed no medical attention The individual who had permanent impairment of any kind was counted as ill

SENATOR PEPPER Leaving out for all the differences in the basis of the calculations, would you not say that it is a basically correct principle as you said a while ago that the need is greatest in the income groups least able to pay? DR. SENSENICH Senator Pepper we have a witness following me who I think will be able to show that in every insurance system in the world the period of illness increases and the increase is very, very great.

SENATOR PEPPER I was getting at the basic thing you wanted to tell us Of course we have not given you very much chance to tell us, but the basic thing you started off to say was that you admitted that the lowest income groups of the nation have the greatest need for medical and hospital care? DR. SENSENICH That is right

SENATOR PEPPER Yet you felt it unsatisfactory to blanket into the same insurance system the people in those categories with the people in the higher income groups where the need for medical care was not so great, as I understood you

DR. SENSENICH Because you are going to increase the rate to the rest of the people If this person is medically indigent we will say, then he should be frankly so treated. I do not like to mislead the rest of the group who do not have such large incomes to carry the burden of this group here I think that if they need assistance they should have assistance We have said that again and again but we object to the manner of assistance because we feel it will cause the deterioration of the quality of medical care and service to the rest of the people

SENATOR PEPPER I believe you also said a while ago in response to a question of mine that you did believe that the people unable to pay for the kind of medical and hospital care they needed should have it? DR SENSENICH That is right

SENATOR PEPPER If they are unable to pay for it and they should get it by hypothesis then the funds with which they shall get that care will have to come from some public source or out of the charity of the medical profession? DR SENSENICH That is right

SENATOR PEPPER If the funds come from a public source will that not be raised from taxation? Will not the people that pay the most of the tax be the people in the highest income group? DR SENSENICH But in this insurance plan you are not doing that

SENATOR PEPPER I am asking you will that not be so? DR SENSENICH But the kind of tax at so much per head to the individual is not an even distribution

SENATOR PEPPER What I am asking is this If we do not have an insurance system you provide out of the public treasury federal, state or local, or all the medical care needed by the people who cannot buy it in the regular way That money will have to be raised by taxation? DR SENSENICH That is right.

SENATOR PEPPER And will not the people that pay the tax principally be the people in the higher income group? DR. SENSENICH But they will not under this plan

SENATOR PEPPER I am not talking about the plan DR SENSENICH If you are going to confine it to that, to the insured group, then the insured group is going to pay the tax, not the group above. After all if you are going to support it from taxation the whole group ought to pay it

SENATOR PEPPER Then, if the whole group is going to pay it, do you want to put a sales tax or some other tax and make the full payment into the federal treasury of the funds that will be donated out later to make up this medical service? If they do it is the same as the insurance principle DR SENSENICH I think not I believe the taxes are set up to include everybody and individual people according to ability to pay

SENATOR PEPPER You tax also according to ability It is contemplated to be a percentage of payroll up to $3,000 a year SENATOR MURRAY $3,600

SENATOR PEPPER The figure I have heard is that the worker pays 1 5 per cent and the employer pays 1 5 per cent and the self-employed pay 3 per cent up to $3 000 a year The fellow who made $600 a year would pay on the basis of what he made. The fellow who made $3 000 a year would pay on the basis of what he made That affords the central part of the funds out of which these services would be provided

DR SENSENICH May I say this Senator Pepper that after all the man who is insured and employed will pay once but if he has 2 other earners then they pay 3 You are going to put the burden on one group this insured group in proportion to the number of earners in the family to accumulate a fund to carry the indigent and those in between indigency whose burden should fall on the whole group

SENATOR PEPPER If you provided funds out of the federal treasury by ordinary taxes would not the earning members of a family pay the larger part of the taxes? DR SENSENICH But not to the same degree

SENATOR PEPPER They would pay it in to the federal treasury DR SENSENICH They would not pay that amount of tax

SENATOR DONNELL It seems to me Mr Chairman that there is a very fundamental point that perhaps we have not emphasized in the questioning as much as we should have of the doctor As I understand the doctor's views he inclines certainly toward the correctness of the statement referred to at page 3 of his testimony in which he quotes from the reference committee as follows

> Positive proof exists from experience in other countries that inferior medical service results from compulsory health insurance

Senator Tunnell directed a question along that line this morning I would like to ask a few questions along this line. I proceed with the hypothesis that everybody, all of us here in this committee and the doctors and the laymen alike are interested in improving health conditions in our country I am right in that, I believe DR SENSENICH Definitely so sir

SENATOR DONNELL I appreciate in your testimony page 16 you point out statistics as published in the Encyclopaedia Britannica Book of the Year 1943 of the comparative death rates of the large nations, that the rate in the United States was 10 5 in England 12.9 England has a compulsory system has it not? DR SENSENICH Yes

SENATOR DONNELL Germany 12 3 Bulgaria 12 5 Sweden 11.2, Chile 19 8 Japan 17 6 and New Zealand-European 9 8 DR. SENSENICH That is right

SENATOR DONNELL So that the comparative death rates indicated there it would seem to me Doctor tend to substantiate you that the health conditions in this country are on the whole certainly favorably compared with those of other nations DR SENSENICH That is right

SENATOR DONNELL That does not limit the fundamental importance of attempting to improve the conditions? DR SENSENICH If we bring it down to 5 5 the American Medical Association would be very delighted

SENATOR DONNELL Yes sir May I supplement your testimony by pointing out that in addition to action of the House of Delegates in addition to the formation of the corporation to which I refer one of the purposes of which is by authority granted by the state of Illinois, to quote your testimony

> To promote establishment and operation of such non profit voluntary medical care plans throughout the United States and Canada as will ade

quately meet the health needs of the public and preserve and advance scientific medicine and the high quality of medical care rendered by the medical profession of the two countries.

I say, in addition to that I observe, as set forth in your statement, that a meeting of the commission to carry out these general ideas has been called for the 26th and 27th of this month DR SENSENICH That is right.

SENATOR DONNELL In Chicago And you anticipate these plans will be presented for approval to the first meeting of the members of the corporation, now tentatively set to be held in San Francisco in July? DR SENSENICH That is right

SENATOR DONNELL Regardless of the fact that statistics seem to indicate our health conditions are perhaps better than we may realize, nevertheless the American Medical Association realizes the importance of the problem and is moving as rapidly as it can and as diligently as it deems practicable? DR SENSENICH That is correct.

SENATOR DONNELL Doctor, your idea is that the experience of other nations shows that, however desirable of embracing within the beneficent jurisdiction of any health insurance plan as many people as possible a plan may be, compulsory insurance has proved too defective in that it produces inferior quality of medical service? DR SENSENICH And prolongs illness

SENATOR DONNELL And prolongs illness

SENATOR MURRAY Right there, could you have the doctor explain how he arrived at the theory that it results in the deterioration of medical care? DR SENSENICH May I look to the other witness who will follow me for that.

SENATOR MURRAY That is very confusing to the committee to have a witness make statements of that character and then not be able to substantiate them before the committee. DR. SENSENICH They will be substantiated

SENATOR MURRAY These hearings are very complicated and I wish we could settle some of these questions as we go along I think it is unfair to make a bald statement of that kind and have to wait for some other witness to prove it. DR SENSENICH The witness is waiting right here, sir However, I can go into this much of it Immediately when you remove responsibility and relationship between the patient and the physician and inject the government in between the quality of service deteriorates

DR SENSENICH When you go to the Surgeon General of the United States Public Health Service and give him the right to say who shall practice, who can come in who cannot what he shall be paid, the conditions under which he shall practice, there is no one in between the patient and the doctor?

SENATOR MURRAY He operates with an advisory committee DR SENSENICH He is not held by anything I am sorry sir, I did not mean to interrupt you.

SENATOR MURRAY That is all right He operates under an advisory committee, and that advisory committee works with him in determining the qualifications of these doctors and to determine who are specialists This same practice is followed today by the medical profession is it not, in the country, to determine who the men are who are qualified to act as specialists, in the big hospitals of the country? DR. SENSENICH Yes sir

SENATOR MURRAY Well, what is wrong, then about the Surgeon General, working with the American medical profession and having their advice, specifying who the men are that are to be qualified as specialists? It is not true that under the bill the entire medical profession of the United States are placed under the direction of one man, the Surgeon General of the United States Public Health Service Section 203 of the bill, which relates to administration, is concerned not with the administration of medical practice but with the administration of the system of paying for medical care I do not see how the service would deteriorate. As a matter of fact, the greatest discoveries and advances in medicine have been made by men not actually practicing medicine They are found in laboratories Most of the great advances that have occurred in this country and other countries throughout the world have been the result of men working on salaries in laboratories and patiently studying and developing methods of cure for diseases Is that not true? DR. SENSENICH Yes But those men are specialized in particular fields That has nothing to do with the subject under discussion.

SENATOR MURRAY Why should a doctor physician or surgeon, permit his service to deteriorate merely because he is being paid out of a fund for the services he is rendering and being guaranteed that his services are going to be paid for when he performs them? DR SENSENICH Did the Veterans Bureau develop anything in twenty-five years of sufficient patients of sufficient funds and sufficient establishment of that good service?

SENATOR MURRAY I do not think that is any comparison DR. SENSENICH But that is government medicine

SENATOR MURRAY And you think this is government medicine? DR. SENSENICH Yes

SENATOR PEPPER What about Walter Reed and the Naval Hospital? Do you claim Walter Reed and the Naval Hospital are inferior? DR SENSENICH I am not familiar with the work of Walter Reed and the Naval Hospital at the moment Like every other institution, some have good work

SENATOR PEPPER That is true of private hospitals? DR SENSENICH Yes On the other hand, let us not forget that the work of the war was done by private physicians in the Army They have good men in the service, but there is something about the government service that deteriorates, and it has done so all over Europe

SENATOR MURRAY Has the service in the Kaiser hospitals deteriorated because the physicians are being paid? DR SENSENICH They have not operated long enough to know and there are no available statistics

SENATOR MURRAY You are not saying they are not rendering efficient service? DR SENSENICH We accepted them for intern training, and after a little time we will be able to tell you whether the work is good or not.

SENATOR MURRAY You do not have that here? DR SENSENICH It would be impossible to judge a few years under wartime.

SENATOR MURRAY Our understanding is that the Kaiser hospitals and the system he has provided out there does furnish the most modern, adequate medical care to his men, and it has worked so satisfactorily that it has been extended to the families of the workers in his plants DR. SENSENICH Senator Murray, those things take a long time to find out what they amount to I do not mean a "long time," but operation over some time.

SENATOR MURRAY I am more interested in the middle class of this country, the people that earn all the way from $3 000 or $4,000 up to $7,000, $8,000 or $10,000 a year I find around the country, talking to those people, that they have great difficulty meeting medical costs and hospitalization expenses They tell me that when they go to a hospital they have their financial situation inquired into, and they are charged a very high fee sometimes The doctors will investigate their financial situation and make them pay out of proportion to others Does that system prevail in the country? DR SENSENICH It does not, sir

SENATOR MURRAY Have you not heard of cases where they charged $2,500 for an operation? DR. SENSENICH I have heard of that in some instances I think that is a rarity

SENATOR MURRAY You think so? DR SENSENICH I have had no personal contact with those big fees

SENATOR MURRAY Is that so? Well, I have had some contact with them, and I have a very vivid recollection of it And I talked to another Senator about it DR. SENSENICH Perhaps, if I may interrupt, I did not investigate as well as you did

SENATOR MURRAY Well, I will tell you that any person that goes to a modern hospital today will find that he will have his financial situation investigated and he will be charged according to what they think he is able to stand That is the system. I do not think the system is satisfactory to the American people and I think that the great masses of the people want to find some way that they can get modern medical care without being overcharged and also get it without having to take a pauper's oath I think there is nothing un American about that, any more than the workmen's compensation laws or our present school system supported by the government.

SENATOR TUNNELL Could I ask just one question, Doctor? In your comparison of health conditions in the United States and other countries do you think that is influenced by other things, such as hygienic conditions including the kind of home the standard of living, as the result of different wage scales so that it is hardly just a comparison of medical treatment? DR SENSENICH Very greatly, sir In these areas of such low economic income many factors enter into the health Senator, may I say to the chairman with reference to overcharging do not mistake that. The American Medical Association does not approve of overcharging You used that word. SENATOR MURRAY Yes DR SENSENICH We must not forget that the great bulk of the population in the United States lives in towns under 12,000, and if you could get a big fee if you

wanted to, out of any patient in a town of 12,000 the whole town would know it and exclude you from that time on I have never known of that experience.

SENATOR TUNNELL There are frequently differences as to what is overcharging? DR SENSENICH That is true

SENATOR MURRAY Doctor, you were discussing a short time ago the American medical profession and the fact that it collects a very large sum, is very strongly financially supported and has accomplished a great deal of good for the medical profession? DR SENSENICH And for the public as well, sir

SENATOR MURRAY And for the public as well, through their medical journals? DR. SENSENICH Yes, sir

SENATOR MURRAY Very well Are you acquainted with the National Physicians' Committee? DR SENSENICH Yes sir

SENATOR MURRAY Can you tell me something about the National Physicians' Committee? DR SENSENICH I have no connection with them The American Medical Association has no connection with them They are a body of their own and for their own and have been interested in various things with reference to the medical situation There is no tie-up between the two organizations. The House of Delegates has approved their objectives, but we have nothing to do with their management.

SENATOR MURRAY But they are supported largely by members of the medical profession? DR. SENSENICH They would have to give you that information themselves I do not know

SENATOR MURRAY I see. Well, they circulate literature to the medical profession, do they not? DR SENSENICH I do not know, sir

SENATOR MURRAY Have you not seen that? DR SENSENICH I have some but I do not know that that is general to the entire medical profession

SENATOR MURRAY I assume it is general because in every part of the country I have visited I find that the medical profession there are well stocked with propaganda from the National Physicians' Committee. In fact, on one occasion I attended a meeting of the medical profession where the speaker of the evening delivered an address which was a complete copy of the pamphlet got out by the National Physicians' Committee in which this legislation is charged with being socialized or political medicine and makes misrepresentations from start to finish of the purposes and objects of the bill and the provisions Have you seen that pamphlet? DR SENSENICH No

SENATOR MURRAY You have never seen it? DR SENSENICH I do not know the one that you speak of I do not know the statement which you characterize as "propaganda" what the statement was

SENATOR MURRAY It was a pamphlet which they issued And I will be glad to get a copy of that pamphlet and have it inserted in the record It was a pamphlet which undertook to portray this legislation as socialistic, dangerous and misrepresented practically every provision of the bill You have never seen that? DR SENSENICH I am not sure that I have sir

SENATOR MURRAY Well, it was distributed very widely across the country, and many hundreds of thousands of dollars was spent by that committee in circulating it and deceiving the profession to a very large degree Medical men read that and believed it I can see that from the fact that I received letters from them in which they quoted sections of the pamphlet to me which were entirely false. That committee, however is a committee which is engaged in propaganda for the purpose of discrediting this legislation. You know that, do you not? DR SENSENICH No, I do not know that, sir

SENATOR MURRAY All right. I am surprised, because pretty nearly every person in the United States who has been following this legislation knows as a matter of fact that there is such an organization and just exactly what it is doing DR. SENSENICH Senator Murray, after all, those who disagree with us are always doing propaganda. That is the choice of the word I could not quite understand, sir

SENATOR MURRAY Well I have a copy of the pamphlet here, and I will ask to have it inserted in the record at this point.

SENATOR DONNELL Doctor, I thought it might be helpful if you could just give us one two, three, four the statement of the reasons why you are opposed to S. 1606 I have your point that you think it would bring about a deterioration in service. And you quoted as I take it with implied approval at any rate, the report of this committee that positive proof exists from experience in other countries that inferior medical service results from compulsory medical insurance That is point number one. DR SENSENICH That is right

SENATOR DONNELL Would you be kind enough to tell us the next point on which you oppose this bill? DR SENSENICH I would say first of all Senator Donnell, that the important thing is that there is nothing about this plan which has anything to do with preventive medicine That is the first thing, nothing in it which establishes any standards of preventive medicine or accomplishes what we would like to see done Secondly it does bring about a deterioration of medical service because of the fact that it brings the government in in a manner in which the profession is regimented and the public is regimented and that is not good.

SENATOR DONNELL I want a concise statement of your general points I think it might be helpful if we could center on some matters important but perhaps not quite as much along the line as giving us concretely your views as to this particular bill

DR SENSENICH Senator the second one, the statement you first quoted and in which I approved, is of course very broad It not only tends to deteriorate the quality of service but those who give the service not that they deliberately choose not to give the service but the interest is different. It is a rather intangible thing The third subdivision of that same point is the fact that it removes the free choice of physicians

SENATOR DONNELL Have you observed from your study of conditions in other countries any effect arising from compulsory health insurance where physicians have a certain number of persons beyond which they cannot go in treating them have you observed any effect on the initiative of physicians? DR SENSENICH Yes indeed, sir And that is incorporated still further in the report you will hear from another witness

SENATOR DONNELL Which witness is that? DR SENSENICH Dr Kennedy

SENATOR DONNELL Dr Kennedy of New Castle, Ind.? DR. SENSENICH Dr Kennedy of New Castle, Ind., who has studied and had close connection in foreign countries

SENATOR DONNELL Yes, sir DR. SENSENICH So that the deterioration of services depends on those things not so tangible and things more tangible in the fact that it does destroy the choice of physician. Obviously the choice is limited only to those willing to accept the plan and in every European country there are many who do not accept the plan And for those who do there is a tendency to be crowded. The income is low, and they treat many more patients than the average physician would treat in a given period of time. Whenever you standardize the control by regulation you standardize at a low level It is not the superior it is the low level, because it must include everybody and as a consequence there is that constant tendency to decline. And any time you remove the direct responsibility between the physician and the patient you incur an accumulated volume, we will say, of just omissions of one kind or another They are not intentional When I am called to see you, Senator, it is a responsible position and only God and your doctor know whether you are getting good medical care or not You cannot judge and no one can follow up every doctor to determine how he does his work Therefore it is important that the greatest responsibility exist between you and me I must have that consciousness of the necessity and of the rightfulness of doing everything that must be done

SENATOR DONNELL Do you think the provisions of this bill S 1606, would tend to reduce the care and effort on the part of the physician or the initiative of the physicians or do you not? DR. SENSENICH It diminishes the initiative, and over a period of time it tends to remove just the thing we are talking about that responsibility That is not so tangible, but on the other hand, you will learn more from a discussion of where these plans have operated and what actually happened. That is the reality end of it You cannot say what does it.

SENATOR MURRAY I notice that the Senators here avail themselves of the opportunity of going to a hospital here for medical care without having any contact with the physician previously that treats them They go to an administrative officer of the Navy here in Washington and he assigns them to the hospital DR. SENSENICH Yes

SENATOR MURRAY They go to the hospital without knowing who the physicians are or anything about them, and they are very satisfied with the treatment and the care they get. I hear the comment frequently that this idea of relationship between the physician and the patient in modern medical practice is

more or less a myth I know of cases where people have traveled all across the continent to go to a particular doctor and when they get there they find the doctor is too old or sick, and they have to take somebody else whom they never heard of, and the operation is entirely satisfactory in every way All members of the Senate and House go to physicians they do not know I am sure if you left it to a Congressman to select his own physician in the community he would not know how to do it

DR. SENSENICH Senator Murray—

SENATOR MURRAY Yet they talk about preserving the right to select your own physician In modern times the average citizen of the country is not capable of selecting his own physician. That is to say, nine times out of ten he might make a very serious mistake. I think that the system here that we have where the medical men are classified whether they are to be experts and the kind of service they render is good and a person can go to them qualified by education and experience and the practicing doctor can do just as good a job as if they were selected by the patient from private practice

DR. SENSENICH Senator Murray, you are talking about an institution to a specialist. Let us bring that back down to the average practice that is not in the hospital itself You go to some supervisor who authorizes you to go to the hospital Suppose you are ill at 2 o'clock in the morning Is the supervisor available? Does he approve of your admission? If you go to the hospital and you do not like the particular physician to whom you go, you are at liberty to change. But under this system you can change only provided the other man is included in your plan There are many things that make a vast difference between your relationship with your physician under existing conditions where you are entirely a free agent and can do as you like. Or, on the other hand, there is the individual who is limited in his selection to those who have approved of the plan, which in some countries has not included the better men

SENATOR TUNNELL Let me suggest something which I think the doctor means but has not spoken clearly on Would the poor doctor get just about as much practice as the best one under the theory you speak of? DR SENSENICH That is the way it works, because your standards must be low enough to include the whole number They are never satisfied The individual who is able to pay or has any means of getting outside the plan is very apt to go to some physician not included in the plan.

SENATOR DONNELL I think Senator Tunnell touched on an important point. I would like to ask one question on it Suppose there are 10,000 people in a community and 10 physicians Under this plan we will say that the physicians in that community elect to adopt the per capita pay basis Then the 10 physicians would announce themselves to be prepared to go in under the plan We will presume that all 10 of them accept the plan DR. SENSENICH Yes

SENATOR DONNELL Whereupon there is assigned by the Surgeon General to those physicians a quota beyond which those physicians cannot go DR. SENSENICH Yes

SENATOR DONNELL There would be a very strong tendency on the part of the Surgeon General in a given community to set aside 1,000 for each physician, or some variation but at any rate the poor physician would as Senator Tunnell so well indicated, be apt to have about the same number of persons assigned to him as the better physician That is probable is it not? DR. SENSENICH That is right

SENATOR DONNELL It is a matter of tact and courtesy and judgment on the part of the Surgeon General that is correct is it not? DR. SENSENICH Yes

SENATOR DONNELL May I ask you also, in that connection would there not be a strong tendency on the part of the population if they know one doctor was much better than another to register very quickly under that doctor, so that the fellow who was late would find himself remitted back to the inefficient doctor? DR. SENSENICH That is right.

SENATOR MURRAY Before you leave that, you admit then, that there are a lot of inefficient doctors in the country? DR. SENSENICH Some doctors are better than other doctors let us state it that way sir They have to meet certain requirements as to registration

SENATOR MURRAY They have the same fundamental education? DR. SENSENICH Nearly so

SENATOR MURRAY Some doctors have what they call better "bedside manners' and make themselves more attractive to the patients? DR SENSENICH I do not think that amounts to much sir

SENATOR MURRAY It is sometimes claimed that some doctors have personalities which attract the attention of the patients and which probably is an advantage. I am not criticizing it DR. SENSENICH May I answer that point? I do not think the matter of 'bedside manners" is anything Of course, a gentleman either sells himself or he does not. But as a matter of fact the one thing greatly overlooked in the discussion of legislation is the fact that you cannot divorce a man's illness from his personality And there is one complaint that comes again and again and again, and that is that too often at the clinics they never get people well It is a matter of attending physical illness and a continuing kind of symptom whereas the individual needs a sympathetic understanding Many times he is more disappointed than ill, more worried than sick Many things enter into that, and the physician who can deal with that man's personality and restore him to his normal state in society as a responsible individual and some one who is at least fairly satisfactory to himself emotionally and mentally is the physician who has the patients Let us omit the 'bedside manners" and admit that there is that difference between physicians, and that is the kind of physician we want to preserve in the picture, because he is the man who serves best.

SENATOR MURRAY Of course, men with those qualifications are favored in the community and get the best end of the practice at the present time under the present system? DR. SENSENICH That is right, sir

SENATOR MURRAY And they cannot take care of all the people in the community? DR SENSENICH That is right.

SENATOR MURRAY The result is that people in poorer circumstances are not able to get the services of those physicians who have such qualifications as you have described DR SENSENICH They are not necessarily excluded, sir Their selection is not on an economic basis

SENATOR MURRAY They are excluded if they cannot pay the fees If they cannot come up to his requirements in the way of compensation they are DR. SENSENICH No, I think not, sir I would not agree to that.

SENATOR MURRAY Then the system is very precarious, it seems to me. The public is not able, nine times out of ten, to determine just who this physician is that has all these qualifications that you mention, and he just has to pick at random under the present system. It seems to me we ought to have a more definite system than that, where men are qualified in the modern medical care and methods of taking care of modern diseases It should be scientific and not so much a matter of psychology More or less science DR. SENSENICH Yes

SENATOR MURRAY And if a doctor is properly qualified to practice medicine and has gone through the proper training, has been an intern and has had experience, it seems to me that he can give adequate care without necessarily having some of these other qualifications as regards personality

DR SENSENICH After all, you will admit the desirability of a certain amount of incentive, possibility of advancement, and of progressing You must admit that even though you do have a very high percentage of physicians that are comparable in the high quality of their work and in attendance on things I discussed with reference to personality and so on and so on, yet if you take all the competition out of it, all the incentive and all the means of progressing and tie him down to a dead level with the rest of them, how long do you think he will continue to be the good kind of man we are talking about, as long as the Surgeon General assigns a certain number of individuals at a certain price?

SENATOR MURRAY I do not see why he should deteriorate any more than the scientists deteriorate merely because of that. They sit away in a secluded spot and work out the problems, such as the scientists who developed the atomic bomb It seems to me that the mere fact that they had no contact with anybody by sitting in there in a laboratory diligently and patiently working this out, they were just as competent as if they had been in a different situation where they had come in contact with the people waiting to have these bombs supplied. DR. SENSENICH Senator Murray, you are familiar with the general exodus of scientists from government employment to the places where they were happier than they were in government employ?

SENATOR MURRAY I am not. I do not know that the scientists who worked out the atomic bomb were unhappy DR SENSENICH I do not know how many were on the atomic

bomb I know the scientists in the research work have gone back to where they were happier

SENATOR MURRAY That would be prefectly natural DR SENSENICH That would be perfectly natural, and you must recognize that the physician is an individualist and if he is not satisfied in government employment he is not going to remain Not all physicians will elect to take it

SENATOR PEPPER Well, a physician does not have to come under this plan Any doctor in my home town a choice doctor who has a big private practice, does this law make him come in? DR SENSENICH No, but I think that the head of Social Security the other day admitted that if the citizen wanted his services he had to pay twice He paid the compulsory insurance and also paid his separately

SENATOR PEPPER That is correct, but the doctor himself, from the viewpoint of the doctor, does not have to come under this plan unless he agrees? DR SENSENICH But you would like to have him in the plan I did not mean to interrupt.

SENATOR PEPPER I think it would be desirable to have him in the plan DR SENSENICH If you do not have them you would lead to the deterioration of service

SENATOR MURRAY The bill permits him to perform partial service under the plan and also remain in private practice DR. SENSENICH That has not worked out too happily, sir

SENATOR PEPPER Doctor, is not what you are saying based on ignoring the fact that everybody recognizes that this is not offered as a panacea for all ills and to make everybody happy and immediately well and keep them well? It is a question of comparison of this proposal and its effect, the good and the bad of it, with the good and the bad of the present system or the good and the bad of a system that is based on voluntary membership under various plans Now, I am sure that nobody has attempted to give you the inference that this was a perfect plan, that it met everything that everybody would like to have met but the essential problem is is it in the overall better for the people of the country than the present plan or than a system of voluntary plans all over the country? Our opinions may differ about that But should not one weigh against this case the masses of the people that do not have any doctor and can never get this high priced specialist that charges these big fees and deserves them for his skill? In life do you not find you have a balance of interests? DR SENSENICH Senator Pepper, that is exactly what we are trying to do, and I have with me today these witnesses who will present the very factual points

SENATOR PEPPER Very well DR. SENSENICH In an effort to establish first of all whether there is the need we think there is and what the effect would be on this or whether it would not be better to give a little time to some voluntary system

SENATOR DONNELL Doctor returning to the question of freedom of choice, we will take this situation I mentioned where the per capita system of payment is agreed on by a majority of doctors, and at a given place we will say there are 10 doctors and 10,000 people, and we will say 1,000 are assigned to each one of those doctors There is a difference in the ability of those doctors just like lawyers dentists shoemakers and anybody else? DR. SENSENICH That is right sir

SENATOR DONNELL And some doctors are able to make greater success than others even though all of them have passed the examinations prescribed by the state laws and the examinations in the medical schools? DR SENSENICH That is right.

SENATOR DONNELL Under this plan as I understand it in a case such as I have cited if the people in a community recognize Dr A as of outstanding ability it would appear to me that his quota would be promptly filled? DR. SENSENICH That is right sir

SENATOR DONNELL And the other people who did not get on his quota would be remitted back to the other gentlemen? DR. SENSENICH That is right.

SENATOR DONNELL Some of whom may or may not be as qualified as Dr A? DR. SENSENICH That is right

SENATOR DONNELL The very fact that Dr A has acquired confidence in the community is some evidence that he is better qualified than some other practitioner? DR SENSENICH That is right

SENATOR DONNELL Under the present situation, as we now have it we have the privilege of going to a doctor and he has the privilege of determining whether he can or cannot take us Is that right? DR SENSENICH That is right

SENATOR DONNELL There is no governmental compulsion? DR SENSENICH That is right

SENATOR DONNELL Whereas under the system I described there is governmental compulsion from which there can be no variation? That is correct, is it not? DR. SENSENICH Yes

SENATOR DONNELL With respect to the situation here relative to Congress that the chairman referred to I appreciate the fine services which Dr Calver has rendered, and in the *Saturday Evening Post* there is a very interesting article on that It is true that if a number of members of Congress go to Dr Calver, all Dr Calver has any legal authority to do is to make recommendations which members of Congress may or may not follow? DR. SENSENICH That is right.

SENATOR DONNELL But if the law goes into effect, and Dr Calver has 1,000 people, and 1,001 comes up he cannot administer to the treatment of number 1,001, that is correct, is it not? DR SENSENICH That is right.

SENATOR DONNELL Now, I want to ask you also under this bill what your opinion or judgment is as to the degree of power placed in the Surgeon General by the authority to designate the practitioners who shall be qualified as specialists or consultants? Do you regard that as a power that is fraught with some dangers, perhaps, to put it in one man's power to make that determination? DR SENSENICH There is no method provided by which he is judged It is a bureaucracy in its administration

SENATOR DONNELL I observe that there is some statement that he shall determine for each specialist in accordance with general standards previously prescribed by him after consultation with the advisory council but the authority to set forth the standards is vested in the Surgeon General one man? DR. SENSENICH That is right.

SENATOR DONNELL And the very term 'advisory council' speaks for itself that the council is advisory and has no ultimate power? DR SENSENICH That is right

SENATOR DONNELL Even if it did have the power, it would vest in a group of men and women the power to determine whether or not out in my own home or Senator Smith's home, or in Oregon or Washington, whether the particular person is or is not qualified to be a specialist? DR. SENSENICH That is correct.

SENATOR DONNELL Do you regard that as a desirable feature of this bill? DR SENSENICH I do not

SENATOR DONNELL You do not I am not going to prolong this I do want to ask you one more question though in conclusion of the questions I would like to ask along this line We had one witness here yesterday, who I am confident was actuated by the best motives and yet he made a statement in substance that the opposition to this bill is not honest That was the statement. This witness testified of respect for any honest opposition but made the statement that the opposition to S 1606 is not honest. I want to ask you this question Doctor In your opinion as a practicing physician and as a member of the American Medical Association do you think that the position taken by the American Medical Association is actuated primarily by selfish interests or by interests which have to do with the general welfare of the people of the United States of America, and I am going to ask you concretely in answering that question whether in your opinion the action of the American Medical Association was honest or dishonest in opposition to this bill? DR. SENSENICH It is an honest opposition It is definitely an honest opposition and that is further evident in the program of health objectives and nearly one hundred years of performance Remember that the government and the lay people have in no instance created the laws by which health is controlled Our laws have come about at the recommendation of and by the stimulation of the medical profession

SENATOR DONNELL I said that was the concluding question Your answer brings forth this thought The American Medical Association contains about 125 000 persons and represents a very large percentage of the entire practicing members of the profession? DR SENSENICH Yes sir

SENATOR DONNELL I realize asking you the question as to whether or not the action of the Association is honest or dishonest also means I was asking about your own honesty or dishonesty That is embarrassing, and perhaps you are a prejudiced witness but to my mind I think it is proper to ask an eminent member of the profession just as you would a member of the Bar or a member of the Bench with respect to

the legal profession and I want to ask you again this question, and I do close with this

In your judgment as a practitioner, a man whose reputation is at stake, a man who occupies a position such as you do with the American medical profession do you think that the position taken by the Association is taken as a result of some selfish interest of the profession, or is it a position taken as a result of earnest effort to try to bring forth a plan which in the honest opinion of the Association would best serve the health and public welfare? DR. SENSENICH There is no question of the honesty back of it, and for the proper care of health measures There is no question about the honesty in opposition of legislation which we feel will be harmful and we will present such evidence as is available to prove that it is harmful

SENATOR MURRAY Doctor, we have equally important witnesses men of high standing in the country who feel that the American Medical Association is somewhat behind the times in regard to legislation of this kind which is necessary for the protection of the health of the American people We had a witness on the stand the other day who was a very prominent man, of the Harvard Medical School Dr Butler Do you know Dr Butler? DR SENSENICH Yes, I know Dr Butler

SENATOR MURRAY (Reading)

It is inevitable that that association be so in terms of the manner in which its delegates are elected the manner in which everything is referred to a special committee that committee has members who were elected three four and five years ago it is inevitable that such an association is behind the times They have to be reactionary

He also said

I think the major part of the opposition—let me put it this way the major part of the publicity that is given the medical profession and the lay public reflects a selfish interest in maintaining the interests of doctors who are practicing medicine as they practice it today

Again he said in response to Senator Donnell's question

In other words as I take it, your view is and if I am wrong please correct me your view is that legislation such as S 1606 will prove advantageous to the medical profession second that in the absence of such legislation of this type financial embarrassment by the medical profession will generally ensue? Is that correct? DR BUTLER That is correct

And the witness here the other day, William Green, testified that in his judgment this legislation is absolutely necessary for the country and that if it is not passed the American medical profession will be placing themselves in a very serious position, because the people of this country are going to insist on having proper medical care modern medical care for every citizen in the country, within their means They have got to have it.

And it seems to me that the medical profession will be making a mistake if they do not sit down and study this legislation and propose what amendments they think would perfect it, because it is the only way in which you can bring modern medical care to the American people DR SENSENICH Senator Murray may I say that the competence of a witness and the usefulness of a witness depend largely on information and competence and honesty The statement on the part of the doctor from Harvard University was not factual As to Mr Green whom I have had occasion to meet a long time ago I do not know that he is informed.

SENATOR MURRAY He is informed on the condition of the health of his people. DR SENSENICH But he is not in a position to pass on the medical side of it as to the determination of medical care and how to obtain it and the effect on medical care of this system

SENATOR MURRAY They have a division or subdivision set up on their organization which is a very well organized body, and staffed by experts, economists, who have made a very careful study of this problem for the benefit of the American Federation of Labor, and its members and they have come to the conclusion that legislation of this kind is absolutely imperative for the welfare of the country and for the welfare of the great working masses of people DR. SENSENICH Senator Murray, I am not reflecting in any way on Mr Green whom you know and whom I respect However, this kind of problem cannot be answered by economists alone, that is the point I am trying to make

SENATOR MURRAY Surely DR. SENSENICH That also with reference to Mr Green

SENATOR MURRAY And we are not seeking to present a piece of legislation here which is the result of the work of economists We have had very distinguished doctors from all over the country who have cooperated with us and advised us with reference to this legislation. I have had letters from my own state of Montana in which doctors have given me their views on the bill, and many of them feel that this legislation is all right and that it should be passed. Members of the medical profession take that stand I am sure you know that. DR. SENSENICH There are some, a very, very small number

SENATOR MURRAY Well, I have attended meetings where they seem to appear in great numbers DR SENSENICH The trouble is in those meetings there is a certain automatic selection Those that are for go and those against do not That is our experience, at least. May I say, Senator Murray, after all we want every one to have the best medical care, and we will cooperate with any one and anybody in the matter of procuring that care, if it is possible to get it. And we have met with your committee Senator Pepper remembers it and you remember too we met with your committee several times. We were in not so long ago with reference to the Hill-Burton bill We are here not for the purpose of criticizing the people who developed this legislation or promoted it but rather to point out from a factual basis what its effect will be on medical care

SENATOR PEPPER Is it not fair to say that the representatives of the people, such as the Congress, have a perfect right to determine what in their opinion is in the public interest in helping the people preserve their health? DR. SENSENICH That is right

SENATOR PEPPER And this is not a matter that the people have elected the doctors to decide for them. We have got a perfect right to draw up any data that we think are relevant to the subject and to legislate in this field as in other fields? That is correct, is it not? DR SENSENICH Correct, if I may answer one thing I think they would expect that you would get the best advice you could get in the preparation of that legislation I do not think any legislator with nonmedical experience is competent to judge That is with all due respect.

SENATOR PEPPER But you will have to admit in the trial of a case at law a witness who has got a personal interest in the matter, the jury is entitled to know that the witness has a personal interest in the advice he is giving? DR. SENSENICH That is right, sir But we must also know that the public has an interest.

SENATOR PEPPER The difference of it is that we Senators do not make any more money if we pass a good health bill but a doctor may make more if we do not. DR. SENSENICH That is not the fact

SENATOR DONNELL Well, Mr Chairman, I think it is only proper to state at this time that the testimony adduced up to this point by the proponents of the bill has been to the effect that the installation of S 1606 and the plan thereunder will actually prove more beneficial to the doctors, as Dr Butler indicated in his testimony

SENATOR MURRAY To the great majority of the medical profession SENATOR DONNELL Yes, sir

SENATOR MURRAY But not to those at the top of the medical profession

SENATOR DONNELL Well, I think, Mr Chairman, the fact is that the American Medical Association is constituted of over 125,000 practitioners who are physicians all over the United States DR. SENSENICH That is right

SENATOR DONNELL They are representative, do you not consider, of the views of the medical profession taken by and large over the country? DR SENSENICH That is right sir

SENATOR DONNELL And the House of Delegates has expressed its opposition to compulsory health insurance? DR. SENSENICH That is right sir

SENATOR MURRAY And the House of Delegates according to some critics of the American Medical Association is far behind the times in this field? DR SENSENICH I should not say that that was factual They are elected for a two year term and I have never known any democratic institution in which its government body or policy making body did not reflect the attitude and belief of its membership when they are elected every two years

SENATOR DONNELL Is it your judgment that the House of Delegates does reflect the present up to date opinion of the medical profession? DR SENSENICH There is no question about it.

SENATOR DONNELL You mean to say you think it does? DR SENSENICH Beyond question

*(To be continued)*

# National Health Program

## PLATFORM ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

*One of the ten points in this platform will be published each week*

5 The provision of health and diagnostic centers and hospitals necessary to community needs is an essential of good medical care Such facilities are preferably supplied by local agencies, including the community, church and trade agencies which have been responsible for the fine development of facilities for medical care in most American communities up to this time Where such facilities are unavailable and cannot be supplied through local or state agencies, the federal government may aid, preferably under a plan which requires that the need be shown and that the community prove its ability to maintain such institutions once they are established (Hill-Burton bill)

# Washington Letter

*(From a Special Correspondent)*

May 6 1946

### Invitation to Attend Inter-American Medical Congress at Rio

During a nationwide tour of the United States started this week from Washington three Brazilian physicians will invite American medical men to attend the first Inter-American Medical Congress, to be held in Rio de Janeiro September 7 to 15 under the auspices of the Brazilian National Academy of Medicine The Office of Inter-American Affairs reported that Dr Estellita Lins, first vice president of the congress, Dr Alvaro Cumplido de Sant-Anna general secretary, and Dr Antonio de Moraes Austregesilo Filho, son of the neurologist, will visit New York, Boston, Detroit, Chicago Rochester Minn San Francisco, Los Angeles and Montreal Ten United States authorities in special medical fields will be selected as honor guests of the Brazilian government at the conference The trio reported that Sir Alexander Fleming discoverer of pemcillin, has accepted an invitation to be an honor guest from Great Britain

### Possible Cancer Benefits Expected from Use of the Betatron

Prof Donald W Kerst of the University of Illinois informed the George Washington University chapter of Sigma Xi scientific society, of the possible uses of the betatron machine that creates cosmic ray effects in the laboratory Possibilities that he mentioned were better study of the atom permitting laboratory study of instruments that formerly had to be sent into the stratosphere and cancer treatment. Professor Kerst was reported in 1940 to have produced 2 300 000 volts with the machine, later developing one of 20 000 000 volts He is now building a betatron to produce more than 250,000,000 volts

### Washington Dope Traffic Called "Worst in Nation"

The Senate has approved expenditure by the Narcotics Bureau of an additional $50,800 to hire more agents following a report by Senator Styles H Bridges Republican of New Hampshire, that the Washington drug traffic was a 'national disgrace' and 'the worst in the nation." The sum was included in the $63 000 000 second deficiency appropriation bill, which was sent to conference with the House. Senator Bridges said that the District of Columbia requires as many agents as New England or any five Western states

### Larger Hospital Reservations Advocated for the Tuberculous

Dr Samuel Ingraham, U S Public Health Service tuberculosis consultant has advocated that half of the hospital beds available in Washington be reserved for patients in the early stages of tuberculosis However, spokesmen for the health department declared that it would be impossible to put the plan into effect now because of the shortage of nurses Dr Ingraham estimated that Washington has 11,000 to 15,000 tuberculosis victims, of which he estimated 4,000 need hospitalization

### Nurses Ask That Health Program Include Nursing Care

Miss Katharine J Densford president of the American Nurses Association told the Senate Labor Committee holding hearings on the administration health bill that any national health program should include provision for "necessary nursing care' She declared that no national health program would be 'considered complete" unless it provides for nursing care, not only in hospitals but in homes

### Health Center Bill May Go to House Before Preelection Recess

The bill for financing a 1,500 bed modern hospital center in Washington, to cost $20,000,000, may be sent to the House for action before the preelection recess now slated to begin July 1 One version of the bill was passed several months ago by the Senate. A report of the Metropolitan Health Council is expected to set in motion a new drive for legislation for the new hospital center

### Shrine to Build More Hospitals, Offer Scholarships

William H Woodfield Jr of San Francisco, imperial potentate of the Shrine of North America, reports that the organization plans to expand its free service to crippled children without regard to race, creed or color, to build more hospitals, to start construction of convalescent homes and to offer scholarships to orthopedic surgeons and nurses He made the report during an official visit to Almas Temple of Washington

### Development of Curvature of the Spine in Victims of Infantile Paralysis

Dr E C Harper, director of crippled children's services for the Virginia State Health Department, has reported that approximately 100 youthful victims of the 1944 infantile paralysis epidemic in Virginia already had gradually developed curvature of the spine, although they were believed to have been cured

### Civilian Aid Urged for Handicapped Persons

Dr Howard A Rusk, originator of the Army Air Forces convalescent training program has urged civilian hospitals and communities as a whole to set up rehabilitation centers to aid the one out of every six persons in America who needs 'some sort of rehabilitation help" He is a member of Bernard Baruch s permanent committee on rehabilitation and a consultant to the New York *Times*

### Veterans Administrations Watching Health of Employees

Veterans Administration supervisors throughout the country have been instructed to watch the health of agency employees A directive suggests training in health practices analysis of causes of absence for sickness, health improvement training and other corrective measures

### Encephalitis Among Forces Occupying Okinawa

American occupation forces on Okinawa are menaced by a form of encephalitis, but the navy is reported to have under study a vaccine to combat the ailment. Commodore T M Rivers of the Navy Medical Corps made this revelation to the National Academy of Sciences. Navy doctors got first hand information during an epidemic among natives last summer

### Clinic Service for Epileptic Patients

Announcing the opening of a clinic service for the epileptic here beginning May 6, Dr Leopold E Wexberg, District of Columbia mental hygiene bureau chief, estimated that there are 400 epileptic children among those of school age. He said that epilepsy is curable in children through modern methods and that attacks on adults could be reduced

# Council on Medical Service and Public Relations

## NEW ENGLAND REGIONAL CONFERENCE

The Council of the State Medical Societies of New England cooperated with the Council on Medical Service and Public Relations in sponsoring a regional conference in Boston, Sunday, February 3. The conference was attended by representatives from New Hampshire, Connecticut, Massachusetts, Rhode Island, Maine and Vermont. Dr. James R. Miller, president of the Council of State Medical Societies of New England and member of the Board of Trustees, presided. Council members present were Dr. Roger I. Lee, President of the American Medical Association, and Dr. Louis H. Bauer, member of the Board of Trustees and the Council. The speakers were Mr. Jay Ketchum, executive vice president of Michigan Medical Service and chairman of the Advisory Committee on Prepayment Medical Care Plans of the Council, Dr. Louis H. Bauer, Major Gen. George F. Lull, General Manager of the American Medical Association, Dr. Joseph S. Lawrence, director of the Washington Office of the Council, Dr. Fritz Arestad, assistant secretary of the Council on Medical Education and Hospitals, Dr. W. W. Bauer, director of the Bureau on Health Education, and Dr. C. Charles Burlingame, chairman of the Committee on Public Education, American Psychiatric Association, and chairman of the Committee on Public Relations of the Connecticut State Medical Society.

As President of the American Medical Association, Dr. Lee opened the meeting with a few short but pertinent remarks on the phases through which public movements seem to go—the emotional phase, the political phase and the reasoning phase. 'It seems to me," commented Dr. Lee, ' that we have been through two of these phases, the emotional phase and I believe and trust we are emerging from the political phase, and we now come to the last phase, which is the intelligent rational phase in which hard thinking is very much in order. And that, I take it, is what the Council on Medical Service and Public Relations is going to do."

*Progress of Voluntary Medical Care Plans.*—Mr. Jay Ketchum called attention to the rapid growth in both enrolment and the number of plans during the twelve months that ended in June 1945. Within this period the number of plans jumped from thirty-five to fifty-three and the enrolment from around 975,000 to over 2,500,000. The voluntary plan," said Mr. Ketchum, 'has come out of the experimental stage. We know it will work. During the past five years a whole generation and more of discussion, of planning and of hope have borne fruit.'

*Fourteen Point Constructive Program.*—Dr. Louis Bauer gave a short review of the A. M. A. Fourteen Point Constructive Program. 'A great weakness" he said, 'lies in our county societies. They have waned in influence and are poorly attended. Men do not come out and learn these things. One of the prime essentials in any program we have, he went on, 'is that we must revive county societies and get men to take an interest in what pertains to the profession as a whole.' Dr. Bauer pointed out the relative importance of correct food, adequate housing and decent clothing in a general health program. He brought out the absurdity in trying to legislate a nation into health and urged education of the public and the doctors. "We must," he said, 'impress every doctor in the United States with the necessity of getting out and putting his shoulder to the wheel on any program to make it a working realization.'

Following Dr. Bauer's talk, representatives of various states were called on to report on problems or programs in their states.

*The Returning Veteran and the A. M. A.*—Dr. Lull presented the problems of the doctors returning from military service and the efforts of the American Medical Association in assisting them in their return to practice. "As you know," said Dr. Lull, "The American Medical Association saw fit to establish a Bureau of Information. This bureau was to furnish the returning medical service man with places where he could go to practice and information about residencies and internships, and where there were chances of postgraduate education. In Chicago for a time we interviewed ten to thirty veterans a day. This isn't the proper level to furnish these men this information. It is all right for general overall information, but the county and the state level should give this information."

He went on to say " the returning service man is faced with many problems. Problems differ in various parts of the country. We have circularized various states and we find that problems are different and that each state will do different things."

Dr. Lull also spoke of the personal problems of returnees, of a place to live, of office space, of clothing. On these problems the veteran will need the help of local medical men. "For their problems," he said, "there are two places they hold blamable. One thing, however, that is of great importance to returning service man is that he wants to talk over his future with some one he can trust and some one who can give advice. Many state secretaries have done a fine job in this. The personal approach to these men makes them feel they are part of the profession."

*The Washington Front.*—Dr. Joseph S. Lawrence introduced his subject with the question most often asked of him, "What is happening in Washington." He then gave a report of the service the Washington office has rendered to Congressmen.

Brief analyses were made of a number of bills, with comments as to various groups supporting or opposing them. "We recognize," he said, "that in certain areas of the United States medical services may not be readily available, and we are endorsing the most logical method of overcoming that defect that has presented itself, namely the enactment of the Hill-Burton hospital construction bill and by the way this bill has passed the Senate and is now before the House Committee on Interstate Commerce. Hospitals are naturally the center of medical activities, and it is hoped that the establishment of hospitals in areas where physicians are too few will attract more physicians and other medical personnel. For the success of this program there must be disengaged physicians willing to locate in the vicinity of the hospital, and the people of the community must give it their full support. "

'One wonders," he continued, "why the bill does not apply itself more directly to the economics of the problem rather than to the professional phase. Under the New Zealand plan the government does not propose to provide medical care but rather to aid the citizen pay his bill. By agreement with the physicians, a national fee schedule was adopted including every type of service. The government agrees to refund to the patient the amount of every medical charge as computed on the national fee schedule. The patient makes his private contract with the physician of his own selection and pays him more than the schedule from his own resources if he cares to do so."

*The Hill-Burton Bill and the Hospital System.*—Dr. Fritz Arestad gave a detailed analysis of this bill, which is supported by the hospital associations, Protestant and Catholic, and the American Medical Association. He divided the bill into four principal parts (*a*) purposes, (*b*) surveys and planning, (*c*) construction of hospitals and related facilities and (*d*) a section of miscellaneous items. He explained the provisions of each part and interpreted their significance in terms of need.

*Cooperative Community Relationships.*—Dr. W. W. Bauer spoke on this subject and stressed the importance of carrying the point of view of the medical profession to governmental agencies and the many lay organizations not only in the field of health but also those we do not ordinarily think of as health agencies, such as the American Camping Organization, Parents and Teachers Associations and Federated Women's Groups.

"One of the things constantly brought to my attention," said Dr. Bauer, "is that the American people are tremendously fond of doctors as individuals but not of medicine in organized aspects. People who have great confidence in their own physicians are rather antagonistic to county societies. We have not as a profession taken even time in the past to counteract the influence of our enemies by developing in the community those natural positions which should be ours."

Dr. Bauer emphasized the importance of leadership by the local medical society in community health matters and went on to say "All over the country there are being organized community health councils from informal groups of people getting

together without much organization to health councils we find in greater cities where they have a considerable headquarters staff These councils usually have some representation from the county medical society It seems to me of great importance that where such councils do not exist they should be formed on the suggestion of the county medical society"

Dr Bauer commented on the inadequacy of the present school health programs and pointed out that this should be one of the principal objectives of attack in the immediate future

Dr Oliver T Stringfield of Stamford, Conn, one of the regional chairmen of the American Academy of Pediatrics, read a resolution of the American Academy of Pediatrics adopted at its annual session in Detroit, Jan 15 to 18, 1946 Dr Reginald Fitz, president of the Massachusetts Medical Society, discussed various aspects of the Hill Burton bill Dr Walter Phippen of Salem, Mass, gave an account of the activities along this line in Massachusetts

*The Job of the State and County Societies in Medical Public Relations*—Dr C Charles Burlingame gave an extremely interesting discussion on the subject of Medical Public Relations

Public relations," he said, "is a field with which doctors are relatively unfamiliar, but the time has come now that we must unite in a solid front, standing up for our own principles to maintain our dignity and ethical standards and to preserve the individual independence which we value so highly

" Unless the doctors themselves are acutely aware of the principles and beliefs of organized medicine we are bound to lose ground to selfish groups"

He described the subject of public relations under the headings "(*a*) individual personal contact, (*b*) contact with cohesive groups, i e from the speakers' platform and participation in civic affairs, (*c*) the printed word, i e newspapers, magazines, pamphlets and books, and (*d*) the radio" Summing up his talk, Dr Burlingame spoke of the efforts in Connecticut calling on some of his personal experiences for descriptive material

# Medical Legislation

## STATE LEGISLATION

### Massachusetts

*Bills Introduced*—H 1822 proposes that any applicant for a license to practice a profession who has served in the armed forces of the United States during World War II shall be subject only to educational and experience qualifications required prior to Sept. 16, 1940

*Bills Passed*—H 1749 passed the senate April 25 It proposes that the College of Physicians and Surgeons, a Massachusetts corporation duly organized and established in 1880, be dissolved and that it register no new students after the date this proposal may be enacted. H 1811 passed the house April 25 and the senate May 1 It proposes that any official report of a medical examiner made and filed as required by law shall be open to the inspection of the next of kin of the deceased, his attorney or agent, and copies thereof may be made by such person.

### New York

*Bill Enacted*—A 2274 has become chapter 999 of the Laws of 1946 It amends the public health law by creating provisions governing the furnishing of care and treatment to persons suffering from tuberculosis as well as diagnoses tests studies and analyses for the discovery of tuberculosis without cost or charge to any resident of the state who is suffering from tuberculosis or is suspected of having tuberculosis

### Rhode Island

*Bill Enacted*—H 1015 was approved April 12 It is a joint resolution resolving, among other things that the senators and representatives from Rhode Island in the Congress of the United States be requested to use every effort at their command to work for federal participation in medical care payments paid directly by the state agency to hospitals physicians or other practitioners until such time as a medical insurance program has been provided

# Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St Chicago 10 Secretary

American Academy of Tuberculosis Physicians San Francisco June 30 Dr Oscar S Levin, P O Box 7011 Denver 6 Colo Secretary
American Association for the Study of Goiter Chicago June 20-23 Dr Thomas C Davison 478 Peachtree St N E Atlanta 3 Ga, Secretary
American Association for the Surgery of Trauma San Antonio, Texas June 26-28 Dr Gordon M Morrison, 520 Commonwealth Ave, Boston Secretary
American Association for Thoracic Surgery Detroit May 29 31 Dr Richard H Meade Jr Kennedy General Hospital Memphis 15 Tenn Secretary
American Association of Genito Urinary Surgeons Stockbridge Mass June 20-22 Dr Charles C Higgins 2020 E 93d St. Cleveland 6 Secretary
American Association of Plastic Surgeons Toronto Canada June 3-4 Dr Frederick A. Figi, 102 Second Ave. S W Rochester, Minn Secretary
American Association of the History of Medicine, Atlantic City May 26 27 Mr W B McDaniel II 19 S 22d St Philadelphia 3 Secretary
American Broncho-Esophagological Association, Chicago May 31 Dr Paul H Holinger 700 N Michigan Ave. Chicago 11 Secretary
American College of Allergists San Francisco June 28 30 Dr Fred W Wittich 401 LaSalle Medical Bldg Minneapolis 2 Secretary
American College of Chest Physicians San Francisco June 27 30 Mr Murray Kornfeld 500 N Dearborn St. Chicago 10 Executive Secretary
American College of Physicians Philadelphia May 13 17 Mr E. R. Loveland, 4200 Pine St Philadelphia 4 Executive Secretary
American College of Radiology, San Francisco June 29 Mr Mac F Cahal 20 N Wacker Drive Chicago 6 Secretary
American Dermatological Association Hot Springs Va, June 10-14 Dr Harry R Foerster 208 E Wisconsin Ave. Milwaukee, Secretary
American Federation for Clinical Research Atlantic City May 28 Dr Richard H Lyons University Hospital Ann Arbor Mich Secretary
American Gastro-Enterological Association Atlantic City May 24 25 Dr J Arnold Bargen 102 Second Ave S W Rochester Minn Secretary
American Laryngological Association Chicago, May 29 30 Dr Arthur W Proetz, 3720 Washington Blvd St Louis 8 Secretary
American Laryngological Rhinological and Otological Society Chicago May 27 28 Dr C Stewart Nash 277 Alexander St Rochester 7 New York Secretary
American Medical Women s Association San Francisco June 29 30 Dr Beulah Cushman 25 E Washington St. Chicago Secretary
American Neurological Association, San Francisco June 26-28 Dr Henry Alsop Riley 117 E 72d St New York 21 Secretary
American Ophthalmological Society San Francisco, June 26-28 Dr Walter S Atkinson 129 Clinton St Watertown N Y, Secretary
American Orthopedic Association Hot Springs Va. June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2 Secretary
American Otological Society Chicago May 31 June 1 Dr Gordon D Hoople, 713 E. Genesee St Syracuse N Y Secretary
American Proctologic Society San Francisco June 30 Dr Harry E Bacon 2031 Locust St Philadelphia 3 Secretary
American Psychiatric Association Chicago May 27 30 Dr Winfred Overholser St. Elizabeth s Hospital Washington 20 D C. Secretary
American Radium Society San Francisco June 28 29 Dr Edward H Skinner 1103 Grand Ave Kansas City 6 Mo Secretary
American Rheumatism Association New York May 24 25 Dr Richard H Freyberg 321 E 42d St New York 17 Acting Secretary
American Society for Clinical Investigation Atlantic City May 27 Dr Eugene A Stead Jr Grady Hospital Atlanta 3 Ga Secretary
American Society of Clinical Pathologists San Francisco June 27 30 Dr A S Giordano 531 N Main St. South Bend Ind Secretary
Association for the Study of Internal Secretions San Francisco June 28 29 Dr Henry H Turner 1200 N Walter St Oklahoma City Secretary
Association of American Physicians Atlantic City, May 28-29 Dr Joseph T Wearn 2065 Adelbert Road Cleveland 6 Secretary
Idaho State Medical Association Boise June 17 20 Dr F B Jeppesen 105 N 8th St Boise Secretary
Illinois State Medical Society Chicago May 14-16 Dr Harold M Camp 224 S Main St, Monmouth Secretary
Maine Medical Association, Poland Spring June 23 25 Dr Frederick R Carter 142 High Street, Portland 3 Secretary
Massachusetts Medical Society Boston May 21 23 Dr Michael A. Tighe 8 Fenway Boston Secretary
Minnesota State Medical Association St Paul May 20-22 Dr B B Souster, Lowry Medical Arts Bldg St Paul 2 Secretary
Mississippi State Medical Association Jackson May 14 15 Dr T M Dye Box 295 Clarksdale Secretary
National Tuberculosis Association Buffalo N Y June 11 13 Dr Charles J Hatfield, 1790 Broadway New York 19 Secretary
New Hampshire Medical Society Manchester May 14 Dr C. R. Metcalf 5 S State St Concord Secretary
New Jersey Medical Society of Atlantic City May 21 23 Dr Alfred Stahl 55 Lincoln Park Newark Secretary
New Mexico Medical Society Santa Fe June 6-8 Dr L B Cohenour 221 W Central Ave Albuquerque Secretary
North Dakota State Medical Association Bismarck May 26-28 Dr L W Larson 221 Fifth St. Bismarck, Secretary
Rhode Island Medical Society Providence May 15-16. Dr William P Buffum 122 Waterman St. Providence 6 Secretary
Society of American Bacteriologists Detroit, May 21 24 Dr Leland W Parr 1335 H St N W Washington 5 D C Secretary
South Dakota State Medical Association Aberdeen June 1-4 Dr Roland G Mayer 22½ S Main St Aberdeen, Secretary
West Virginia Medical Association Huntington May 13 15 Mr Charles Lively P O Box 1031 Charleston 24 Executive Secretary

# Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities, new hospitals education and public health)

## CONNECTICUT

**George Darling Named Director of Medical Affairs**—George B Darling, Dr P H, vice chairman division of medical science, National Research Council Washington, D C., has been appointed director of medical affairs a newly created position at Yale University Dr Darling who will assume his new post by July 1, will correlate the university interests represented in the schools of nursing and medicine, the department of public health and the Grace-New Haven Community Hospital Dr Darling graduated at the Massachusetts Institute of Technology in 1927 and received his degree of doctor of public health in 1931 at the University of Michigan In 1932 he joined the staff of the W K. Kellogg Foundation subsequently holding various positions until he became president in 1940 He was vice chairman of the division of medical sciences of the National Research Council from 1942 to 1945, when he was named to the newly created post of executive secretary in the council

## ILLINOIS

**Public Health Association**—The sixth conference of the Illinois Public Health Association will be held at the Hotel LaSalle Chicago May 16 17 Howard J Shaughnessy Ph D Chicago president-elect of the society who became acting president on the death of Dr Sumner Miller Peoria, will preside Among the speakers will be

Dr Gaylord W Anderson Minneapolis Military Preventive Medicine Experience Applicable to Civilian Public Health
Dr Roy R Grinker Chicago Postwar Psychiatric Problems of Veterans and Civilians
Dr Dale C Cameron Washington D C Psychiatric Plans of the U S Public Health Service
Paul Fox Chicago Relation of Community Facilities Report to Planning
Lieut. Col Robert H Flinn Chicago and Col Ralph E Tarbett Washington D C Recent Observations in Japan
Dr Richard F Boyd Springfield Functions and Responsibilities of Local Health Agencies
Dr Raymond B Allen Chicago The Challenge of Unmet Health Needs to Medical Education
Dr M Herbert Barker Chicago Infectious Hepatitis

The Associated Illinois Milk Sanitarians will meet May 17

**State Medical Meeting**—The 106th meeting of the Illinois State Medical Society will be held at the Palmer House Chicago May 14-16 under the presidency of Dr Everett P Coleman, Canton Among the speakers will be

Dr Arthur S Webb Glen Ellyn Minimal Pulmonary Infiltration Significance and Management
Dr Paul H Holinger Chicago Bronchoscopy as an Aid in the Diagnosis of Pulmonary Disease
Dr Henry C Sweany Chicago New Laboratory Methods in Diagnosis of Tuberculosis
Dr Emmet F Pearson Springfield Observations on Malnutrition in Santo Tomas Internment Camp
Dr H Russell Meyers Iowa City Management of Acute Craniocerebral Trauma
Dr Israel Davidsohn Chicago, Rh Factor
Dr Eleanor M Humphreys Chicago Pathology of Rheumatic Fever
Dr Harry A. Warren Peoria Treatment of Acute Rheumatic Fever in Young Adults
Dr Parker Dooley, Chicago Diarrhea in Infancy
Dr George E Wakerlin Chicago Physiology of Infectious Diseases of the Liver
Dr George F O Brien Chicago Newer Aspects in the Treatment of Liver Diseases
Dr Russell D Herrold Chicago Indications for Antibiotics (Penicillin and Streptomycin) in Urinary Tract Infections
Dr Francis J Gerty Chicago Practical Points in Shock Therapy
Dr Frank G Norbury Jacksonville Hazards in the Use of Sedatives Bromide Intoxication
Dr Walter W Carroll Chicago Venous Surgery
Dr Augusta Webster Chicago Periodic Examination in Apparently Well Women
Dr James E Fitzgerald Chicago Anesthesia in Obstetrics.
Dr Alexander Brunschwig, Chicago Cancer of the Pancreas
Dr Danely P Slaughter Chicago Diagnosis of Accessible Cancer
Dr Warren H Cole Chicago Diagnosis and Treatment of Cancer of the Colon
Dr William E. Anspach Chicago Staphylococcic Pneumonia in Children
Drs Hilman S Schmidt and Theodore Warchowski Chicago Fluoroscopic Study of the Nasal Accessory Sinuses Compared with X Ray Film Examination
Dr Irvin F Hummon Jr Chicago The Expression of Dosage in X Ray and Radium Therapy
Dr Henry Quastler Urbana Expected Uses of the Betatron in Cancer Therapy
Dr Paul Carelli Chicago Relation of Near Point Convergence to Squint Surgery
Drs Watson Gailey and George E Morgan Bloomington, The Surgical Management of Squints
Dr Hyman S Sugar, Detroit and Harvey J Forestner, D D S Chicago Methacrylic Resin Implant for Sunken Upper Lid Following Enucleation
Dr Helen Holt, Chicago, Ocular Observations in Deficient Diets.
Dr Samuel J Myer Chicago Diagnosis and Treatment of Blepharoptosis
Dr Edmund B Spaeth Philadelphia The Marcus Gunn Jaw Phenomena
Dr Thomas D Allen Chicago Pan American Ophthalmological Congress in Montevideo
Charles F Hottes Ph D Champaign Open Boat Trip Down the San Juan and Colorado Rivers
Dr Oscar B Nugent Chicago, Cataract Extraction by the Vacuum Method
Dr Kenneth L Roper, Chicago Lancaster s Technic of Cataract Extraction
Dr George E. Shambaugh Jr Chicago Preliminary Results with a New Fenestration Technic
Dr Francis L Lederer, Chicago The Otologist s Role in Rehabilitation of the Hard of Hearing Adult
Dr Maurice H Cottle Chicago Rhinoplasty
Dr Bertha A Klien Chicago The Eyegrounds in the Differential Diagnosis of Arterial Hypertension

The oration in medicine will be given Tuesday evening by Dr Ralph H Major, Kansas City, Mo, on "War and Disease and the oration in surgery Wednesday morning by Dr Robert L Sanders Memphis, Tenn, on "Gallbladder and Common Duct Problems" At the dinner Wednesday evening the principal speaker will be William M McGovern, Ph D, Chicago, on "Behind the Scenes in Foreign Affairs"

### Chicago

**Society News**—Major Gen George F Lull, Secretary and General Manager, American Medical Association, will address the Chicago Society of Internal Medicine, May 20, on "Utilization of Specialists in the Army"

**Olin West Made Honorary Member**—Dr Olin West, recently retired Secretary and General Manager of the American Medical Association, was elected an honorary member of the Connecticut State Medical Society during its annual meeting May 1

**Fund for Research in Pediatrics**—The woman s board of Presbyterian Hospital has contributed $6,000 to establish a fund for research in pediatrics in memory of James Lovett Parmelee, first lieutenant in the Marine Air Corps, who was lost in action over Rabaul, New Britain, on April 30, 1944 Lieutenant Parmelee was the son of Dr and Mrs Arthur H Parmelee, Oak Park Ill

**New Mercy Hospital**—Mercy Hospital-Loyola University Clinics has purchased all but 100 feet of the block bounded by Erie, Huron and St Clair streets and Fairbanks Court to construct a 500 bed hospital to cost at least $5,000 000, it is reported The present Mercy Hospital, 26th Street and Prairie Avenue will still be maintained by the Sisters of Mercy after completion of the new near north side hospital in 1950 Construction of the new building will be started in 1948 The new structure will be the third hospital located in an area of less than two blocks and will adjoin the proposed new medical center of Northwestern University (The Journal, April 20, p 1181) Mercy Hospital is the oldest hospital in the Chicago area From 1850 to 1859 it was a part of Rush Medical College and later it became affiliated with Northwestern University with the affiliation continuing until 1920, when Mercy became associated with Loyola University

**Irwin Winter Appointed Director of Clinical Research** Dr Irwin C Winter a major in the Army Medical Corps until his separation from the service in March, has been appointed director of clinical research for G D Searle and Company, Chicago manufacturers of pharmaceuticals Dr Winter will work directly with Albert L Raymond, Ph D, vice president in charge of research in the clinical development of the products of Searle research Dr Winter entered military service in 1942 as first lieutenant in the medical corps after serving for a number of years as medical consultant for the Council on Pharmacy and Chemistry of the American Medical Association Previous to his connection with the American Medical Association he was associate professor of pharmacology at the University of Oklahoma School of Medicine and instructor in physiology and pharmacology at the Baylor University School of Medicine. He received his M D degree from the University of Tennessee College of Medicine, Memphis and his M S and Ph D degrees in physiologic chemistry from Northwestern University In the medical corps Dr Winter graduated from the School of Aviation Medicine at Randolph Field Texas in 1944 and went overseas as flight surgeon for the European division of the Air Transport Command, seeing action in England, France Germany and Czechoslovakia Most of Dr Winter s research has been in the fields of fatty acid metabolism the pharmacology of autonomic drugs and the physiology of the urinary tract.

## KANSAS

**Dr Hiebert Leaves Board of Health**—Dr Homer L Hiebert, Topeka, director of the division of tuberculosis control, Kansas State Board of Health since March 1942, resigned in March to take graduate work in radiology at Harper Hospital, Detroit.

## KENTUCKY

**Personal**—Dr Charles E Youmans Frankfort, has been appointed superintendent of Darnall General Hospital, Danville, recently reacquired for state control Dr Youmans is said to have been associated with the state department of welfare for some twenty two years and is currently superintendent of the State Institution for the Feebleminded, Frankfort.——Dr and Mrs D Randolph Skaggs Royalton on March 3 observed their fiftieth wedding anniversary——Dr Edward C Humphrey, Harrodsburg, was recently named physician of the University of Kentucky health service to succeed Dr Robert J Griffin Lexington, who resigned to enter private practice——Dr Clement V Hiestand Campbellsville, recently completed fifty years in the practice of medicine, twenty-five of which were spent as health officer of Taylor County Dr Hiestand once served as mayor of Campbellsville and secretary of the Taylor County Medical Society

## LOUISIANA

**Personal**—Dr Murphy P Martin St Martinville, was recently appointed health unit doctor for Iberia Parish and also to act as health officer for St Martin Parish Dr Martin will reside in St. Martinville until he can secure a home in New Iberia

**Dr Magruder Resigns After Thirty-One Years' Service**—Dr Marcus J Magruder New Orleans, has resigned from the board of administrators of the Tulane Educational Fund after serving as an administrator for thirty-one years He was appointed to the medical advisory committee of the board in 1914, becoming chairman in 1924, a position he held at the time of his resignation

**Doctor's Day**—March 30 was observed as Doctor's Day in New Orleans According to the *Bulletin* of the Orleans Parish Medical Society this date was designated in March 1938 for the observance because of the fact that on March 30 1888 Dr Rudolph Matas performed his first operation in vascular surgery Dr. Matas is emeritus professor of surgery at Tulane University of Louisiana School of Medicine, New Orleans

## MASSACHUSETTS

**Personal**—Dr Joseph W Ferrebee has been appointed assistant professor of medicine at Harvard Medical School, Boston, and Peter Bent Brigham Hospital, where in addition to his clinical teaching, he will head a program of research in fundamental aspects of the mechanism of hypersensitivity

**The George Holmes Lecture**—The George W Holmes annual lecture will be delivered by Dr Arthur C Christie Washington, D C, May 17 before the annual meeting of the New England Roentgen Ray Society at the Harvard Club Boston Dr Christie's subject will be The First Fifty Years of Radiology The Elements Which Have Contributed to Its Growth as a Great Medical Specialty

**Personnel Changes in State Health Department**—Dr John J Pontas, Boston has resumed his position as director of the division of local health administration in the Massachusetts Department of Public Health, having returned from overseas duty in the European theater His work will include supervision of the eight district offices of the department and the nursing nutrition social service and sanitation bureaus Dr Roy F Feemster Boston recently acting director of the division of local health administration Massachusetts Department of Public Health has returned to his former position as director of the division of communicable disease Dwight J Mulford Ph D, has been appointed laboratory chief of the blood processing laboratory in the division of biologic laboratories Massachusetts Department of Public Health This laboratory is especially designed for the fractionation of blood plasma into albumin immune serum globulin fibrin foam fibrin film and other fractions of value in medicine surgery and public health Dr Otto C Yens Cambridge, has been appointed supervisor in charge of crippled children services in the Massachusetts Department of Public Health Prior to his appointment Dr Yens held the rank of lieutenant colonel in the medical service of the 117th Evacuation Hospital U S Army Ruth Alida Thomas C P H has joined the staff of the bureau of health information Massachusetts Department of Public Health Miss Thomas was formerly assistant professor in the department of hygiene and bacteriology Smith College Alexander A Robertson formerly chief sanitary officer with the Newton Health Department is now serving with the Massachusetts Department of Public Health as supervising health district sanitary officer Mr John B Skinner has been appointed director of the division of occupational hygiene of the Massachusetts Department of Labor and Industries Mr Skinner has been an engineer with the department since 1941 He succeeds Mr Manfred Bowditch, who retired from state service to assume the position of field director of the Saranac Laboratory, Saranac Lake, N Y

## NEW HAMPSHIRE

**State Medical Meeting**—The one hundred and fifty-fifth meeting of the New Hampshire Medical Society will be held at the Hotel Carpenter Manchester May 14 under the presidency of Dr Richard W Robinson Laconia Among the speakers will be

Dr Ralph E Miller Hanover Autopsy Service Mary Hitchcock Hospital
Dr Edwin B Astwood Boston Present Status of the Medical Treatment of Thyrotoxicosis
Dr Louis H Bauer, Hempstead N Y The Medical Care Problem in the United States
Dr John C Leonard Boston Hypertension
Dr Clay R Murray New York Handling of Common Injuries to the Knee Joint
Dr John T King Baltimore Acute Chest Episodes Caused by Pulmonary Embolism Differential Diagnosis and Treatment
Dr Edward D Churchill Boston Resuscitation of the Wounded

Fifty year certificates will be presented to Drs H Sheridan Baketel Greenland, and Oscar C Young, Charlestown Dr Morris Fishbein Chicago, Editor of THE JOURNAL, will address the banquet Tuesday evening on "Medicine in the Postwar World"

## NEW JERSEY

**One Hundred Years of Medicine**—The Camden County Medical Society will celebrate its one hundredth anniversary on August 14 On this date in 1846 it was formed at Haddonfield under the name of the District Medical Society for the County of Camden in the State of New Jersey with Drs James S Risley as president, O H Taylor vice president R M Cooper secretary and Jacob P Thornton treasurer The organization of the society had been approved at a meeting of the Medical Society of New Jersey on May 12, 1846 The state society was founded in 1766 Organizers of the county medical society include Dr Risley, Dr Thornton and Dr C D Henry

## NEW YORK

**The Borden Undergraduate Award**—Dr William A Clay Washington D C, was recently presented with the Borden Undergraduate Research Award at the University of Rochester School of Medicine and Dentistry for his work with Dr Sidney C Madden *Rochester on protein metabolism and* protein reserves during acute sterile inflammation. The annual award of $500 for excellence of research has been established at twenty-two medical schools in the country in an effort to assist the schools in developing a greater interest among undergraduates in medical research (THE JOURNAL, Dec 18, 1945, p 1218)

**Stockton Kimball Named Dean of Buffalo**—Dr Stockton Kimball a member of the faculty of the University of Buffalo School of Medicine for a number of years has been appointed dean of the medical school to succeed Dr Edward W Koch who died February 9 after serving as dean for sixteen years Dr Kimball graduated at Buffalo in 1929 He was appointed instructor in medicine and pharmacology in 1932, subsequently was promoted to associate in those two fields and in July 1944 was elevated to assistant dean He also is an instructor in the school of social work Since Dr Koch's death he has been acting dean

**Committee for Education on Alcoholism**—The Rochester Committee for Education on Alcoholism was organized April 15 and is said to be the tenth such group to be set up in the United States Dr John L Norris, Rochester is chairman Mrs Marty Mann, executive director of the National Committee for Education on Alcoholism addressed the organization meeting Objectives of the group include

Education of the community to an understanding of the problem that alcoholism is a disease and the alcoholic addict is a sick person that the alcoholic addict can be helped and is worth helping and that alcoholism is a public health problem and therefore a public responsibility
Promotion of adequate hospital facilities for the treatment of acute alcoholism
Establishment of an information center working in cooperation with Alcoholics Anonymous
Establishment of a clinic for the study of alcoholism and for the diagnosis and treatment of alcoholic addicts

**State to Offer Cerebral Palsy Aid**—Under a recently enacted resolution a legislative committee has been formed to make a survey and study of the social, educational and physical problems of persons afflicted with cerebral palsy in the state of New York. The membership of the committee is to consist of the commissioner of health commissioner of social welfare, commissioner of mental hygiene, three members to be appointed by the temporary president of the senate and three members to be appointed by the speaker of the assembly These appointments had not been made up to April 15 and probably will not be made for another month The resolution, which was introduced by Mr Abraham Schulman, appropriates $20 000 for the study of cerebral palsy in the young It was passed by the senate and the assembly and became a law in the form of a resolution which did not require the governor's signature.

### New York City

**Harvey Society Lecture**—The eighth Harvey Society Lecture will be delivered at the New York Academy of Medicine, May 16, by Dr Carl F Cori, professor of pharmacology, Washington University School of Medicine, St Louis on "Enzymatic Reactions in Carbohydrate Metabolism"

**Training in Psychoanalytic Medicine**—The Psychoanalytic Clinic for Training and Research, department of psychiatry, Columbia University, offers to qualified physicians a three year course of graduate residency training in psychoanalytic medicine. This course is based on complete training in psychoanalysis includes psychosomatics and is combined with the graduate training in the other branches of psychiatry On fulfilment of the training requirements, students will be awarded a certificate of training in psychoanalytic medicine. Those students who in addition undertake satisfactory investigative work and pass a supplementary examination in the related basic sciences may also be awarded the advanced degree of doctor of medical science. The next first year class begins October 1

**Memorial Planned for Mills Sturtevant**—On April 16 thirty-five friends and associates of the late Dr Mills Sturtevant, who founded the gastroenterology clinic of New York University College of Medicine in 1926, decided to raise $100,000 to build equip and endow a new stomach clinic in his memory The new clinic will be part of the New York University-Bellevue Medical Center (THE JOURNAL, Dec 29, 1945, p 1277) Dr Arthur M Wright former chairman of the department of surgery at the New York University College of Medicine, is general chairman of the campaign, and Dr Max P Cowett, an associate of Dr Sturtevant at the time the clinic was established, vice chairman Dr Sturtevant was on the university medical staff from 1913 until his death in 1945 and chief of the gastroenterology clinic until 1938

## NORTH CAROLINA

**Students Receive Prizes**—The Borden Undergraduate Research Award in medicine for 1946 was recently presented to Dr Thomas H Lewis for his study in comparative anatomy entitled 'The Morphology of the Pectoral Girdle and Anterior Limb in Aplodontia." Honorable mention was given to Dr Alexander W Boone Jr for his contribution in experimental surgery entitled "A Study of the Effect of Pericardial Adhesions and Coronary Ligation in the Rat" The annual award of $500 for excellence of research has been established at twenty-two medical schools in the country in an effort to assist the schools in developing a greater interest among undergraduates in medical research The Mead Johnson prize in pediatrics was given to Dr Bailey D Webb for her contribution entitled 'A Study of Purpura and Gangrene Following Scarlet Fever"

**Gifts to Bowman Gray**—The Bowman Gray School of Medicine Winston-Salem, has received gifts of $125,000 each from Gordon and Bowman Gray, sons of the late Bowman Gray, whose contribution in 1939 made possible the expansion of the Wake Forest School of Medical Sciences into a four year school The gift came from the estate of the late Mr Gray a tobacco magnate of Winston Salem (THE JOURNAL, Nov 8, 1941, p 1635) The recent contributions are to be used for expansion of the medical school, enlargement of the ophthalmology department in connection with the clinic for eye diseases now sponsored by the Lions Club, addition of a new staff member to or training a present staff member for the department of physical medicine, enlargement of the orthopedic department and addition to the staff in neurology As a result of the $250,000 received from the Gray brothers, a department of preventive medicine has been organized, and Dr Thomas T Mackie, New York, has been elected professor of preventive medicine and chairman of the division of medicine.

## OHIO

**Revised Regulations Govern Tuberculosis Hospitals**—A revised code of regulations governing tuberculosis hospitals, adopted by the Ohio Public Health Council on January 13, became effective February 15 The revised code defines a tuberculosis hospital, outlines the experience required for a medical superintendent and governs the care of patients, laboratory procedures, nursing service and the health supervision of nurses and other employees

**Research in Mental Hygiene**—The Ohio State Board of Control has made available to the state division of mental hygiene $25,000 for research in the field of mental diseases The money will be divided among several research projects designed to investigate mental health problems from the biologic, medical and sociological points of view Dr Edward J Humphreys, chief, bureau of prevention and education, division of mental hygiene, will direct and coordinate the research work.

**Personal**—Staff members of St Elizabeth Hospital recently honored Dr Frederick J Driscoll, Dayton, with a dinner and presented him with a wrist watch in recognition of his twenty five years' service on the staff Dr Driscoll is moving to Fort Lauderdale, Fla——Dr William Muhlberg, medical director of the Union Central Life Insurance Company, Cincinnati, since 1916 and vice president since 1929, retired recently He will be succeeded by Dr Charles Maertz, assistant medical director Dr Muhlberg is president of the Cincinnati Board of Health and a past president of the Public Health Federation and of the Life Insurance Medical Directors of America——Dr James T Villani, Akron, has been appointed superintendent of the Edwin Shaw Sanatorium (Summit County Tuberculosis Hospital)——Dr Theodore A Cross, Medina, has been appointed coroner of Medina County to succeed Dr Robert T Rowe Akron, resigned

## PENNSYLVANIA

**Personal**—Dr Andrew J Griest, Steelton, was recently made president-elect of the Harrisburg Academy of Medicine. Dr William K. McBride, Harrisburg, was installed as president. Dr Edward A Nicodemus, Harrisburg, is secretary treasurer——Dr Dale C Stahle, Harrisburg, recently released from the armed services, has been named acting director of the bureau of tuberculosis control, state department of health Dr Stahle was formerly in charge of the department division of pneumonia control

**Jefferson Acquires Sanatorium.**—Jefferson Medical College of Philadelphia in connection with expansion plans is acquiring the White Haven Sanatorium in Luzerne County, according to the *Bulletin* of the Pennsylvania Tuberculosis Society Harold T Prentzel, business manager of the Friends Hospital, Philadelphia, will continue as administrator of White Haven, a position he took over in March 1942 White Haven was started in 1895 as the Free Hospital for Poor Consumptives by the late Dr Lawrence F Flick, who was instrumental in founding the Henry Phipps Institute of the University of Pennsylvania, Rush Hospital for Consumption and Allied Diseases, Philadelphia, and the Pennsylvania Society for the Prevention of Tuberculosis The institution comprises forty-five buildings with assets valued at $1,097,919, including $179,255 90 in restricted endowment funds The Jefferson plans for expanding its facilities for the treatment and care of tuberculosis patients includes research The college also desires to use the Broad Street Hospital, Philadelphia, as a chest clinic, but the proposal is held up by litigation, it was stated Patients of the proposed clinic at the Broad Street Hospital would be cared for at White Haven Sanatorium White Haven has 240 beds and Broad Street has 120 Dr Frank A Craig Philadelphia director of the clinic of the Phipps Institute and president of the White Haven Sanatorium, is reported to have said that the object of the board in affiliating with Jefferson Medical College was to provide a more valuable service to its patients It will benefit the community as a whole by continuance of research in tuberculosis, begun many years ago at White Haven by providing Jefferson with research material and by providing the sanatorium with the teaching facilities of a medical school for both physicians and nurses The board of directors of the White Haven Sanatorium will remain intact

### Philadelphia

**Appointments at Temple**—Dr George C. Henny has been appointed professor of medical physics and head of the department of physics at Temple University School of Medicine and Hospital, and Dr Margaret T C Collins, Philadelphia, has been named director of the laboratories and lecturer in endocrinology Dr Henny graduated at the University of Oregon Medical School Portland, in 1930 and Dr Collins at the University of Illinois College of Medicine in 1944

## TEXAS

**Texas Medical Center**—On February 28 a dinner in Houston marked the dedication of the 161 acre site of the Texas Medical Center, the first units of which are now under construction Ultimately the project will cost $100,000 000 Development of the Texas Medical Center was made possible by the M D Anderson Foundation the trustees of which decided to use the $20,000 000 fortune left by the late Mr Anderson of Anderson, Clayton and Company for this purpose To administer and promote the project the Texas Medical Center was incorporated Nov 1 1945 under the laws of the state of Texas 'exclusively for benevolent, charitable and educational purposes" The specific purposes will be

To promote and provide for or assist in the establishment support and maintenance of facilities for medical dental and nursing education and other phases of health and medical education for hospitalization and treatment of the sick and afflicted and for research in the field of health and science of medicine and dentistry

To promote and provide for or assist in the establishment support and maintenance of medical schools dental schools schools of public health and nursing hospitals and clinics and to provide facilities and financing for housing of students faculty members and employees of all and any of such institutions

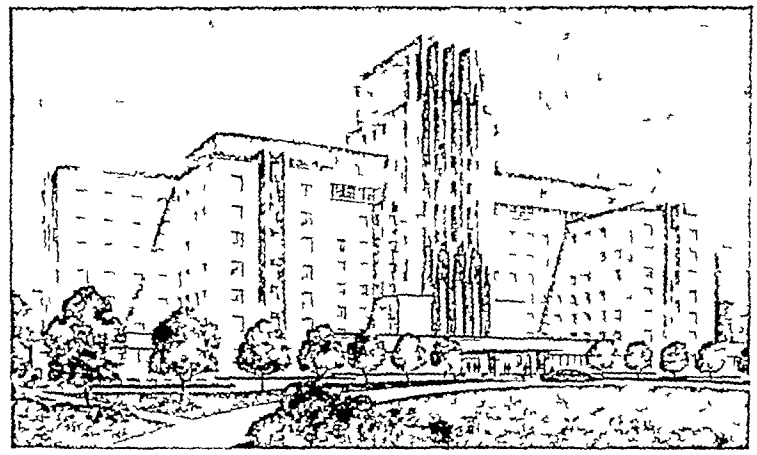
To promote provide for or assist in the establishment support and maintenance of a general health program for the state of Texas as well as special health programs for the state of Texas

To join and assist other institutions organized and operated exclusively for any one or more of the purposes herein stated

To make awards give prizes grant scholarships publish reports and engage in research

To accept and administer gifts donations and bequests whether of money personal property or real estate and otherwise to accumulate administer and disburse funds to advance or achieve any of the afore stated purposes

The four colleges participating in the program of the Texas Medical Center will be Baylor University which at this time is constructing a $2 000 000 school of medicine to be completed in December the University of Texas, which has announced a $6 250,000 building program for the center the University of Houston which will administer the Central School of Nursing, and the Rice Institute, which will cooperate with the units of the center in research A number of hospitals will be located immediately within the confines of the center Hermann Hospital which has received bids on a large addition to its present building in the center and on a professional building for doctors and dentists practicing in the center with additional plans for an affiliated urologic hospital a children s hospital in association with the Shrine Arabia Temple a psychosomatic pavilion and a maternity pavilion the M D Anderson Hospital for Cancer Research, jointly supported by the Anderson Foundation and the University of Texas in cooperation with the American Cancer Society the Cancer hospital was made a state institution by the forty-seventh legislature and in this institution unlimited clinical and fundamental research and treatment will be carried out in cooperation with the University Medical Branch, the main university the dental school and other units of the center, the Methodist Hospital for which plans for a new building to cost $3 500 000 are nearing completion St. Luke's Episcopal Hospital which will be constructed in the center at a cost estimated at $2 500 000 a tuberculosis hospital to be constructed in the center as a large, modern institution to replace the present institution operated by the city of Houston and the county of Harris The important addition of a marine hospital is expected to be announced for the center by the United States government in a few weeks The United States Naval Hospital now under construction at a cost of $12 000 000 is only two blocks from the center and will cooperate in its program Another government hospital to be located within walking distance of the center is the $8 000 000 Veterans Hospital The Convalescent Hospital and the Hospital for Chronic Diseases and the Aged for which plans are under discussion and the Medical Center Central Clinic, which will be an important and integral part of the entire program will bring the total number of beds to well over 2 500 Hospitals located elsewhere in the city of Houston but which have made offers of close cooperation to the center board of trustees, will add an additional 1 700 beds to the grand total Under the center s plan of operation each of these hospitals will participate fully in education and research Each institution will maintain its separate identity and management but in joining in the center program each commits itself to a unified teaching and research program The units of the University of Texas will be the M. D Anderson Hospital for Cancer Research and the School of Dentistry Preceptorial training for undergraduate medical students with all hospital facilities in the center available for students, with special assignments to a receiving center and outpatient department a postgraduate and graduate school of medicine a school of public health and training courses for all public health workers and an institute of geographic medicine Additional plans for the Texas Medical Center call for the establishment of an Institute of Biological and Pathological Research and the operation of a Central Medical and Diagnostic Clinic covering the admission examination diagnosis and distribution of all indigent patients who are admitted to the center This clinic will house a central service and medical record bureau which will handle all phases of this program making available to all medical students a wealth of material being wasted under present unorganized conditions The Houston Academy of Medicine has made plans for a medical library in the center and in connection therewith will operate a training school for graduate librarians for certificate in individual medical library practice In addition to a broad library program, the academy of medicine building will provide lecture and meeting rooms Through cooperation of the Baruch Foundation for Physical Medicine facilities may be provided in the Texas Medical Center for rehabilitation of postwar and industrial injuries Dr Ernest W Bertner, Houston is president of the self-perpetuating board of trustees of the Texas Medical Center John H Freeman attorney and member of the Anderson Foundation is vice president Col James Anderson is treasurer and Frederick C Elliott, dean of the University of Texas Dental Branch, is secretary Other members are Jesse H Jones, Mrs Oveta Culp Hobby Col W B Bates also a member of the Anderson Foundation Bishop Clinton S Quin Hines H Baker Ray L Dudley Leland Anderson Horace M Wilkins, also a member of the Anderson Foundation and H R Cullen philanthropist whose gifts were largely responsible for the new buildings, which will house every hospital in the center



Hermann Hospital—one unit in new medical center

## VIRGINIA

**Personal**—Dr Henry M Snead Petersburg has been appointed coroner of Petersburg succeeding Dr Walter L L Barnes resigned

**Changes in State Health Department.**—Dr Benjamin R Allen formerly of Suffolk recently released from the army, was appointed director of the bureau of communicable diseases Virginia Department of Health, Richmond effective April 1 Dr Edgar C Harper Richmond director of tuberculosis outpatient service and the crippled children s bureau resigned effective May 1 to become assistant chief tuberculosis control program fourth district Veterans Administration Dr Clifford E Waller Leesburg health officer of Loudoun County, resigned effective April 1

**Changes in Health Personnel**—Dr Nelson Podolnick Fairfax resigned April 1 as health officer of Prince William Fairfax and Stafford counties to enter private practice in Falls Church——Dr Edward M Holmes Jr Richmond on terminal leave from service in the army has returned to his former position as director of the division of venereal diseases Virginia Department of Health Dr Holmes had held the position from September 1939 to June 1942, when he entered service.

## WISCONSIN

**Executive Assistant Named for State Society**—On March 18 Mr Ralph F Weber, Milwaukee, business manager of the Milwaukee County chapter, American Red Cross, joined the staff of the State Medical Society of Wisconsin as an executive assistant to aid in developing the society's health insurance programs, including "The Wisconsin Plan," the farm security program in Price and Taylor counties and other related projects For ten years prior to his joining the Red Cross Mr Weber had been assistant executive secretary of the Medical Society of Milwaukee County

**The Jackson Clinic Postgraduate Meeting**—The Jackson Clinic postgraduate meeting will be held in Madison May 16-17 with Dr Karl A Meyer, Chicago, as the guest speaker The clinical interpretations of the basal metabolic rate and of laboratory tests will be discussed The program will also include round table discussions Among the speakers on the program will be

Drs Claude F Schroeder Princeton and John A Hurlbut Madison, Demonstration of Allergy Tests Significance of the Tests
Dr Addie M Schwittay Madison The Rh Factor
Dr Donald L Dickerson Madison Diagnosis and Treatment of Sterility
Dr Russell Jackson Jr Madison Diagnosis of Cancer of the Breast.
Dr George H Ewell Madison Lesions of the Genitourinary Tract
Dr Luther E Holmgren Madison Treatment of Varicose Veins
Dr Arthur C Stirling Madison Recent Developments in Orthopedics.
Dr *Arnold S Jackson Madison Recent Developments in Surgery*
Dr James A Jackson Madison Cancer of the Colon
Dr Margaret J Prouty Madison Recent Developments in Pediatrics
Dr Johanna Christine Thelen Madison, Problems in Gynecology
Rachael Weirich, Problems in Dietetics
Drs. Reginald H Jackson Jr Michael F DeSalvo John H Dix and Elmer J Hawkins all of Madison Case Presentations

## GENERAL

**Neurologic Board Candidates Return to Prewar Status**—At a meeting in Nashville, April 1, the American Board of Neurological Surgery voted that in the future no candidate will be examined until he has complied with all requirements of the board both as to training and practice but invites prospective candidates to submit their qualifications to the board when their period of training is completed and before they have begun their period of practice. During the war, in order to cooperate with the surgeons general of the army and navy in the classification of specialists, the American Board of Neurological Surgery permitted applicants whose training was satisfactory to take their examination before complying with the requirement of two years' independent practice of neurologic surgery In no instance, however, was the board's certificate issued until all requirements had been fulfilled

**Cancer Society Reorganized.**—The American Cancer Society, which was reorganized early in 1945 (THE JOURNAL, April 28, 1945 p 1141), has announced another reorganization to permit its operation by its constituents, thus allowing for a closer relationship by the parent body and the state groups The organization adopted a new set of by-laws and will be henceforth "truly national in scope," it was reported Corporation papers have been filed under the laws of New York, and the changes in the by-laws transform the board of directors from a group of random choice electees to a board of fifty-six members, half of whom are selected at large and the other half from the seven geographic regions comprising the society Dr Frank E Adair, New York, was reelected president of the society and Theodore R Gamble, chairman of the board of the American Theatre Association, Portland, Ore, chairman of the reorganized board of directors He succeeds Eric A Johnston, who was unable to accept reelection

**Ear, Nose, Throat Meeting**—The fiftieth meeting of the American Laryngological Rhinological and Otological Society, Inc, will be held at the Drake Hotel, Chicago, May 27-28, under the presidency of Dr Albert C Furstenberg, Ann Arbor Among the speakers will be

Dr Dean M Lierle, Iowa City The Use of Oral Penicillin in Otolaryngology
Dr Terence Cawthorne London England Ménière's Disease
Dr James H Maxwell Ann Arbor Chronic Proliferative Osteomyelitis of the Frontal Bone
Joseph A Sullivan Toronto Ontario Canada, A Statistical Analysis of an Audiometric Survey in the Royal Canadian Air Forces
Dr Oliver E Van Alyea Chicago Maxillary Sinus Drainage
Dr Murdock S Equen Atlanta Magnetic Removal of Foreign Bodies from the Food and Air Passages
Drs. Fred Z Havens and John R McDonald both of Rochester Minn, Pathologic Study of the Malignant Tumors of Glandular Origin of the Nose Throat and Mouth.
Dr Kenneth M Day Pittsburgh Appraisal of the Fenestration Operation Experiences with 100 Cases
Dr Chevalier L. Jackson Philadelphia Laryngocele
Dr Edmund P Fowler Jr New York Pure Tone Group Audiometry
Dr Arthur W Proetz, St Louis, Nasal Physiology in Relation to the Common Cold.
Dr Daniel S Cunning New York Tonsillectomy and Poliomyelitis.

**American Therapeutic Society**—The forty-seventh meeting of the American Therapeutic Society will be held at the Hotel Traymore, Atlantic City, May 11-12, under the presidency of Dr Joseph F Borg, St Paul Among the speakers will be

Dr Richard Kovacs New York The Present Status of American Spas
Dr Noah P Norman New York, Soils, Food and Health
Dr Oscar B Hunter Jr Washington D C Correlation of Laboratory Findings with Therapy in Epidemic Hepatitis
Drs David I Macht and Marcus Ostro Baltimore, An Experimental Approach to the Therapy of Pemphigus.
Dr Harvey B Haag Helen J Ramsey Ph D and N W Pinschmidt all of Richmond, Va, Alcohol Barbiturate Synergism
Dr Daniel L. Sexton St Louis Thiouracil—Clinical Evaluation Following Two and One Half Years Experience
Dr Frank W Konzelmann, Atlantic City Clinical Significance of the Rh Factor as of Today
Drs Ernest A Spiegel Mona Spiegel Adolf and Henry T Wycis Philadelphia Recent Studies in Cerebral Trauma
Drs. Harry E Bacon, Philadelphia and Samuel A. Linde Washington D C. The Surgical Treatment of Diverticulitis
Dr Kenneth M Lewis New York, The Use of Penicillin in Surgical Infection
Dr Robert E Fricke, Rochester Minn Uses of Radon Ointment
Dr Francis M Pottenger Monrovia, Calif, Difficulties in Physical Examination of the Chest
Dr David Salkin, Hopemont, W Va Postmortem Pneumothorax
Raymond A Kelser D V M, Philadelphia Brucellosis in Man and Animals
Dr Nathan S Davis III Chicago The Treatment of Hypertensive Cardiovascular Renal Disease with Ascorbic Acid Riboflavin and Vitamin B Complex

## LATIN AMERICA

**Health Activities in Latin America**—*Inter-American Congress on Radiology*—The second Inter-American Congress of Radiology, originally scheduled to be held in January and later postponed on account of transportation difficulties, will be held in Havana, November 17-22 Headquarters are at the Hotel Nacional Radiologists of the United States and Canada desiring to present papers at the congress should communicate promptly with Dr James T Case, chairman, in care of the American College of Radiology, 20 North Wacker Drive, Chicago 6 Dr Jose F Merlo Gómez, Argentina, is president of the congress and Dr Pedro L Fariñas, Havana, president-elect.

*Special Society Election*—At a recent meeting of the Minas Gerais Society of Leprology Dr Orestes Diniz was elected president, Prof Olinto Orsini de Castro vice president, Dr Antonio Carlos Horta secretary and Dr Josefino Alexo treasurer

## FOREIGN

**Second Reading Approved for Health Bill**—The House of Commons approved the second reading of the national health service bill today by 359 votes to 172 after three days of debate, according to the Chicago *Sun* By this vote the House decided that Britain is to have a system of socialized medicine beginning at the end of next year, with all medical services of every description provided free of charge to the public, hospitals administered and financed by the government and doctors paid salaries and fees from the government The bill now goes to the committee where minor modifications may be accepted but no major change or rejection of the bill now is possible Under the bill the practice of medicine for private fees will still be permitted for those who are willing to pay fees for extra service, but it is doubtful whether this will take place on more than a very small scale The organized medical profession demonstrated its dislike of the bill at a noisy meeting of the British Medical Association, which ended its second day after passing numerous resolutions condemning the bill in general Only five of the three hundred doctors who supported the motion approved the "general framework" of the bill The bill enjoyed the support of the Socialist Medical Association, however, and the delegates to the British Medical Association convention recognized the inevitability of their position to the extent of passing several resolutions offering constructive amendments One such amendment suggested that the system be financed out of compulsory health insurance based on ability to pay, as well as out of taxes Another proposed that expectant mothers be allowed to choose their own doctors and a third asked for government regulation of the sale and advertisement of "patent medicines"

---

## CORRECTION

**Incorrect Name**—A news item in THE JOURNAL, March 30, page 885, announced that Dr Milton B Plotz, Brooklyn, was executive secretary of the International and Spanish Speaking Association of Physicians, Dentists and Pharmacists. Dr Plotz writes that this is an error and that he does not hold office in this or any other medical organization

# Deaths

**Simon Flexner** ⊕ renowned pathologist and former director of the Rockefeller Institute for Medical Research, died May 2 in the Presbyterian Hospital, New York, aged 83

Dr Flexner was born in Louisville, Ky, March 25 1863 He was educated in the local public schools and graduated at the University of Louisville Medical Department in 1889 He did postgraduate work at Johns Hopkins University School of Medicine Baltimore and in Strasbourg, Berlin and Prague and at the Pasteur Institute From 1895 to 1898 he was associate professor of pathology at Johns Hopkins and professor of pathologic anatomy from 1898 to 1899, when he went to the University of Pennsylvania School of Medicine Philadelphia, to serve until 1903 as professor of pathology director of the Ayer Clinical Laboratory, 1901 to 1903 and pathologist at the University Hospital and the Philadelphia Hospital 1900 1903 He joined the Rockefeller Institute for Medical Research as director of laboratories in 1903 a position he held until 1935, when he became director emeritus having served as director since 1920 He was Eastman professor at the University of Oxford in 1937 and 1938 He had been a colonel in the Officers' Reserve Corps of the U S Army, serving as lieutenant colonel in the medical corps of the U S Army in 1917, becoming in 1919 a colonel and assistant surgeon general of the U S Public Health Service. He had been a trustee of Johns Hopkins University, 1937-1942, chairman of the Public Health Council of the New York State Department of Health 1936-1942 and member of the advisory committee of the American Red Cross He had been a member of the National Advisory Health Council created by Congress in 1930 and of the U S Science Advisory Board named by President Roosevelt in 1934 He had been president of the Society of Experimental Biology in 1906, of the Harvey Society in 1910 and of the American Association for the Advancement of Science in 1920 and held membership in many societies in the United States, Latin American countries and abroad



SIMON FLEXNER, M D 1863-1946

Numerous honorary memberships had been conferred on Dr Flexner Prizes awarded to him included the Cameron Prize from Edinburgh University in 1911 and the William Wood Gerhard Medal from the Pathological Society of Philadelphia in 1931 He had delivered such notable lectures as the Kober, Herter Gehrmann and Pasteur lectures

Dr Flexner had contributed more than three hundred and fifty original articles to the literature on pathology and bacteriology He discovered the dysentery bacillus which bears his name, was the first to record the phenomenon which later became known as anaphylaxis was the first to advocate intrathecal injection in the treatment of meningitis the first to transmit experimental poliomyelitis in series and to produce the efficient serum against meningococcic infection Dr Flexner introduced a new concept of the pathogenesis of poliomyelitis and the recognition of the olfactory lobes as the route for the virus from the nasal passages to the brain Other notable achievements include his studies of the biochemical constitution of snake venoms the pathology of toxalbumin intoxication epidemic cerebrospinal meningitis experimental epidemiology experimental pancreatitis and fat necrosis and the cause mode of transmission and serum treatment of poliomyelitis

**James Fulton Percy** ⊕ Los Angeles Bellevue Hospital Medical College, New York 1886 born in Bloomfield, N J in 1864 clinical professor of surgery at the College of Medical Evangelists member of the founders group of the American Board of Surgery delegate from Illinois to the American Medical Association in 1905 1906 1908 and 1909 and from California in 1931, member of the American Association of Obstetricians Gynecologists and Abdominal Surgeons past vice president of the Los Angeles Medical Society, past president of the Los Angeles Surgical Society, Los Angeles Cancer Society, Western Surgical Association and the Illinois State Medical Society, serving as secretary of its judicial council for seventeen years honorary member of the Southern California Medical Association and the Hollywood Academy of Medicine member of the Association of Military Surgeons of the United States one of the founders and a fellow of the American College of Surgeons, member of the first draft board of Knox County, Ill, in 1916 chief of medical staff, U S Army Base Hospital, Camp Kearny 1917-1919 lieutenant colonel, medical reserve corps U S Army, not on active duty, honor guest at Clinical Congress of Surgeons of North America at a meeting in London in 1914 chief surgeon cancer service at the Los Angeles County Hospital, attending surgeon at the French and White Memorial hospitals and the Presbyterian Hospital-Olmstead Memorial consulting surgeon Los Angeles Orthopedic Hospital School for Crippled Children developed surgical instrument known as Percy cautery in 1904 called the first meeting in Galesburg Ill out of which grew the Galesburg Cottage Hospital in 1888 in 1914 awarded the honorary degree of master of arts by Knox College Galesburg died April 26 aged 82

**Oliver Paul Humpstone** ⊕ Speculator N Y Columbia University College of Physicians and Surgeons, New York 1899 born in Philadelphia, Aug 11 1875 emeritus professor of clinical obstetrics and gynecology at the Long Island College of Medicine, Brooklyn, where he had been professor from 1931 to 1941, specialist certified by the American Board of Obstetrics and Gynecology, Inc. past president of the Medical Society of the County of Kings, of which he had been an honorary member, the New York Obstetrical Society and the Brooklyn Gynecological Society, fellow of the American College of Surgeons, member of the local draft board number 46 during World War I, served on the staffs of the Wyckoff Heights Kingston Avenue and St. John's hospitals in Brooklyn Rockaway Beach (N Y) Hospital North Country Community Hospital, Glen Cove, and St Luke's Hospital in Newburgh director emeritus of the division of obstetrics and gynecology at the Methodist Hospital in Brooklyn, where he served as chief of the department and where he had been associated since serving his internship, credited with the development of the maternity service at the hospital died January 23 aged 70, of carcinoma of the prostate

**Stirling Everette Russ,** San Antonio Texas Baylor University College of Medicine Dallas, 1932 born in San Antonio Nov 20 1906 member of the American Medical Association and the Texas Surgical Society fellow of the American College of Surgeons in 1936 secretary of the section on surgery of the State Medical Association of Texas served on the staffs of the Medical and Surgical, Robert B Green Santa Rosa and Nix hospitals began active duty in the medical corps Army of the United States on Nov 20 1940 first stationed at Camp Stewart Ga., being sent from there to Fort William Davis, Canal Zone, at which post he was stationed for nineteen months returned to this country as a patient with tropical malaria his next assignment was William Beaumont General Hospital El Paso, following which he served as assistant chief of the surgical service, Ashburn General Hospital McKinney, transferred to the Station Hospital Camp Hood and was separated from the service on Dec. 2 1945 died January 1, aged 39 of heart disease.

**Albert Perkins Tibbets** ⊕ Washington D C, George Washington University School of Medicine Washington D C, 1910 born in 1884 formerly assistant demonstrator of anatomy clinical instructor in ophthalmology and otolaryngology, clinical associate in laryngology and otology and clinical professor of otolaryngology at his alma mater, specialist certified by the American Board of Otolaryngology fellow of the American College of Surgeons, past president of the Washington Medical and Surgical Society, served during World War I, on the

staffs of the Episcopal Eye, Ear and Throat Hospital, Gallinger Municipal Hospital and the George Washington University Hospital, died in Chevy Chase, Md., January 31, aged 61, of cerebral hemorrhage.

**Samuel Bayard Woodward** ⊕ Worcester, Mass., Harvard Medical School Boston 1878, born in Worcester, Aug 24 1853 past president of the Worcester District Medical Society the Massachusetts Medical Society and the Harvard Medical Alumni Association, fellow of the American Association for the Advancement of Science for many years affiliated with the City, St Vincent, Worcester State and Memorial hospitals, chairman of the board of trustees of the Worcester County Institution for Savings, where he had been a corporator, trustee, vice president and president, at one time president of the chamber of commerce, died January *29*, aged *92*

**Harley James Hallett** ⊕ Colonel, U S Army, retired, Highland Park, Fla., Jefferson Medical College of Philadelphia, 1905, fellow of the American College of Physicians, entered the medical corps of the U S Army as a first lieutenant in 1911, promoted through the various ranks to that of colonel, served during World War I, retired Nov 30, 1940, during World War II took an active part in civilian defense work and with the Red Cross, which he served as physician to the local blood bank, died December 11, aged 65 of coronary occlusion

**George Washington Allen Jr** ⊕ San Antonio, Texas, University of Texas School of Medicine, Galveston 1900, fellow of the American College of Surgeons, died in the Nix Hospital December *23*, aged *69* of lobar pneumonia.

**Ulysses Grant Arnett,** Point Pleasant, W Va., Barnes Medical College, St. Louis, 1903, served during World War I and as county coroner, died December *22*, aged *77*

**Ida Badanes,** Los Angeles, Boston University School of Medicine, 1897, died in Santa Monica January *27*, aged *75*, of cerebral hemorrhage

**Harry Bailey** ⊕ Hartford, Conn University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1922, born in New Haven, Aug 10, 1898, specialist certified by the American Board of Dermatology and Syphilology, member of the American Academy of Dermatology and Syphilology and the New England Dermatological Society, consultant at the State Veterans Hospital Rocky Hill attending dermatologist at the Mount Sinai and Municipal hospitals, died January 12 aged 47, of acute peritonitis and septicemia

**John William Bailey,** Des Moines State University of Iowa College of Medicine, Iowa City 1905 member of the American Medical Association, served as coroner of Story and Polk counties, died January 16, aged 62, of coronary occlusion

**Clayton H Bayard,** Orono, Maine College of Physicians and Surgeons Baltimore, 1892, honorary member of the Maine Medical Association, member of the American Medical Association, died January 14, aged 79, of cerebral hemorrhage

**Charles Abbott Beach,** Elijah, Mo., National University of Arts and Sciences Medical Department St. Louis, 1917, died January *23*, aged *63*, of chronic nephritis

**Joseph Anthony Benedetto,** Chicago, Chicago College of Medicine and Surgery, 1913, on the staffs of the Mother Cabrini Memorial and Columbus hospitals, died January *25*, aged *54*, of carcinoma of the liver

**Martin L Bertolette,** Stony Creek Mills, Pa University of Pennsylvania Department of Medicine, Philadelphia 1878 on the staff of St Joseph Hospital Reading died January *26*, aged *89*, of cerebral hemorrhage.

**Samuel Byron Biller,** Brooklyn Boston University School of Medicine, 1935, interned at the Hahnemann Hospital in Scranton, Pa., served a residency in pathology at the Montefiore Hospital, New York, and a residency in surgery at the Jewish Hospital, began active duty as a captain in the medical corps, Army of the United States in June 1942, promoted to major service terminated during December 1945, died January 19 aged *36*, of heart disease.

**Louis A. Bize,** Tampa Fla., Baltimore Medical College, 1895, served as president and chairman of the board of directors of the Citizens Bank & Trust Company, past president of the chamber of commerce, executive general agent of the Atlantic Coast Line Railroad, died January 9, aged *74*, of congestive heart failure

**Walter Allen Blair** ⊕ Chester, Pa., Temple University School of Medicine, Philadelphia 1915, died December 19, aged 57, of coronary thrombosis and hypertension

**Means Blewett,** Citronelle, Ala., University of Tennessee Medical Department, Nashville, 1891, member of the American Medical Association, formerly mayor died January 17, aged *77*, of *cardiovascular disease and* angina pectoris

**Samuel Bolton,** Philadelphia University of Pennsylvania Department of Medicine, Philadelphia, 1888, on the examining staff of the John Hancock Mutual Life Insurance Company, for many years president of the Bucknell Alumni Association of Philadelphia one of the founders and for many years affiliated with the Frankford Hospital where he died January 11 aged 82, of arteriosclerotic heart disease and bronchiectasis

**Ianthis Roland Boothby** ⊕ Clinton N J., Boston University School of Medicine, 1905, served for many years as president of the board of education died January 20, aged 63 of coronary thrombosis and gastric ulcer

**James Grimes Bostwick** ⊕ Mishawaka, Ind., Rush Medical College, Chicago, 1902, served during World War I member of the staff of St Joseph Hospital, died January 7, aged *67*, of cerebral hemorrhage.

**Harry G Bristow** ⊕ St. Louis, St. Louis University School of Medicine St. Louis, 1925, chemist U S Bureau of Animal Industry, 1909-1910, instructor in organic chemistry Missouri State University, 1910-1911, formerly instructor, assistant professor, associate professor and professor of chemistry at his alma mater where he had been assistant and instructor in internal medicine, died in St Mary's Hospital February 6, aged 57, of coronary thrombosis

**George Hustead Brownfield** ⊕ Fairmont, W Va., College of Physicians and Surgeons, Baltimore, *1898, honorary* member of the Marion County Medical Society and the West Virginia State Medical Association, died March 21, aged *74*, of heart disease

**Ruth Mack Brunswick** ⊕ New York Tufts College Medical School Boston, 1922, member of the American Psychoanalytic Association and the New York Psychoanalytic Society, died January 24, aged 48, of pneumonia.

**Edwin Lee Burton** ⊕ McKinney Texas, Kentucky School of Medicine, Louisville, 1889 specialist certified by the American Board of Otolaryngology owner of the Burton's Eye, Ear Nose and Throat Hospital, affiliated with the McKinney City Hospital, died January 19 aged 80, of coronary occlusion

**Emilie J Chalfont Carriere,** Bostonia Calif., Homeopathic Medical College of Missouri, St. Louis, 1895, died January 13, aged *72*, of myocarditis

**Cap James Carter,** Magee, Miss University of Tennessee College of Medicine Memphis, 1914 died in Meridian (Miss) Hospital January *26*, aged *57*, of pneumonia.

**Lee Landruf Collins,** Port Barre, La., Memphis (Tenn.) Hospital Medical College, 1906, died February 18, aged *65*, of cardiac failure

**Walter Henry Conley,** Lake Worth Fla. Albany (N Y) Medical College, 1891, at one time medical superintendent of the Metropolitan Hospital Welfare Island, in 1930 retired from his position as general medical director of the City of New York Department of Hospitals died January 9, aged *76*, of cerebral hemorrhage.

**Charles Larkin Conroy** ⊕ Chicago, College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois 1907 fellow of the American College of Surgeons, on the staff of St. Francis Hospital in Evanston Ill., where he died January *26*, aged *67*, of coronary thrombosis and diabetes mellitus

**Paul Raymond Correll** ⊕ Easton Pa Medico-Chirurgical College of Philadelphia, 1908, chairman of the state board of medical education and licensure served during World War I, on the staff of the Easton Hospital fellow of the American College of Surgeons died March 1, aged 61, of cirrhosis of the liver

**Leonard H Crane,** Menasha Wis Milwaukee Medical College, 1903, died in the Community Hospital New London January 7 aged *65* of heart disease and cirrhosis of the liver

**Joseph Reed Crowder** ⊕ Sullivan, Ind. Rush Medical College Chicago, 1897 past president of the Sullivan County Medical Society formerly member of the school board at one time associated with the R H Crowder Memorial Hospital, died in New Smyrna, Fla., January *22*, aged *71*, of myocarditis

**Albert L Davenport** ⊕ Holdenville, Okla. (licensed in Oklahoma under the Act of 1908), served as county health officer died December 9

**Amplias Warrick Davis** ⊕ Madisonville Ky., Louisville Medical College, 1898, served as treasurer and vice president of the state medical association and as a member of the state board of health, a captain in the medical corps of the U S Army serving overseas during World War I lieutenant colonel medical reserve corps U S Army, not on active duty on the staff of the Hopkins County Hospital, died March *27*, aged *71*, of cardiovascular renal disease.

**Eugene Davis,** New Orleans University of Virginia Department of Medicine Charlottesville, 1899, member of the American Medical Association and the West Virginia State Medical Association, formerly health commissioner of Charleston W Va, served as a major in the medical corps of the U S Army during World War I, at various times officer in charge of Veterans Administration facilities, died in the U S Marine Hospital January 14, aged 75, of cardiorenal disease and arteriosclerosis

**Edgar Herbert Earl,** Jamaica N Y, Long Island College Hospital, Brooklyn 1908 died January 20, aged 82, of diabetes mellitus and cerebral arteriosclerosis

**John A Eason,** Leapwood Tenn, Memphis (Tenn) Hospital Medical College, 1903 died December 30, aged 80

**Oliver Van Auken Emery,** Washington, D C, Columbian University Medical Department Washington, 1902, also an attorney, for many years associated with the department of internal revenue, died in Port Jervis N Y, January 7, aged 76 of heart disease.

**Ella Thompson Fast,** Paulding Ohio, Cincinnati College of Medicine and Surgery, 1897, died December 31, aged 74

**Filip August Forsbeck,** Oconomowoc, Wis the Hahnemann Medical College and Hospital, Chicago 1895 fellow of the American College of Surgeons served during World War I formerly member and secretary of the state board of medical examiners, at one time a member and president of the staff of St. Mary's Hospital in Milwaukee, died January 18, aged 72, of carcinoma of the bladder

**Charles Hughes Fortner** ⊕ Coffeyville Kan, University Medical College of Kansas City Mo 1904 in 1941 named head examining physician for the Selective Service Board formerly associated with the Coffeyville General Hospital division surgeon for the Missouri Pacific Railroad, died January 11, aged 73, of hypertension

**Herman J Friedman** ⊕ Rock Island Ill Chicago College of Medicine and Surgery, 1912, died January 31, aged 71, of rheumatic heart disease

**Ward Anderson Fritz,** Wooster, Ohio, Western Reserve University School of Medicine, Cleveland, 1928, member of the American Medical Association, interned at the City Hospital in Cleveland, served a term on the school board a major in the medical corps Army of the United States, during World War II, began active duty on Oct. 19, 1940 and was relieved from active duty in 1945 died January 19, aged 46, of coronary thrombosis

**Leon J Gibson,** Vassar, Mich, University of Michigan Homeopathic Medical School, Ann Arbor, 1904, served overseas during World War I, died January 31, aged 70 of cerebral hemorrhage.

**Olin Farris Gober** ⊕ Temple Texas University of Texas School of Medicine, Galveston 1905 fellow of the American College of Physicians, physician in charge of the Gulf, Colorado and Santa Fe Hospital, died January 26 aged 67, of coronary sclerosis

**John Newton Goode,** Saranac Lake, N Y, New York Homeopathic Medical College, New York, 1903, died January 23, aged 72, of arteriosclerosis

**Florence Smith Goodhue,** Cardington Ohio Homeopathic Hospital College, Cleveland, 1884, died January 2, aged 84, of influenza and a fractured hip, received in a fall

**Hedley C W Graham,** Rochester, N Y, Queen's University Faculty of Medicine Kingston Ont, Canada 1889 died in the Rochester State Hospital January 12, aged 83, of chronic myocarditis

**Cecil Charles Grant** ⊕ Cedar Falls, Iowa, Chicago College of Medicine and Surgery 1914, specialist certified by the American Board of Otolaryngology on the staff of the Sartori Memorial Hospital where he died January 14, aged 58, of hemorrhagic purpura

**James Grieve,** Perth Amboy N J, Long Island College Hospital Brooklyn 1921, member of the American Medical Association on the staff of the Perth Amboy General Hospital, where he died January 27, aged 57, of coronary thrombosis

**John Thomas Hairston** ⊕ San Antonio Texas University of Texas School of Medicine, Galveston, 1928, fellow of the American College of Surgeons, died in the Physicians and Surgeons Hospital January 24, aged 42, of carcinoma of the rectum

**Edward Everett Hamer** ⊕ Carson City, Nev, Kentucky School of Medicine, Louisville, 1906 since 1927 state health officer for Nevada, past president of the Nevada State Medical Association past secretary of the Nevada State Board of Medical Examiners, delegate from Nevada to the American Medical Association at the 1935 special session past district surgeon for Southern Pacific Railroad, died April 13, aged 68, of cardiac failure.

**Walter Addison Hancock,** Fairfield Ill, Marion Sims College of Medicine, St Louis, 1895, member of the American Medical Association, died in the Deaconess Hospital Evansville, Ind, January 16, aged 74, of cerebral hemorrhage

**William Davis Harrell,** Norris City, Ill, Rush Medical College, Chicago, 1892 member of the American Medical Association, died in St Louis January 15, aged 87, of coronary thrombosis

**William Emmett Higbie,** Canton, Ohio, Medical College of Ohio Cincinnati, 1899, died January 29 aged 71, of heart disease

**William Henry Hinkel** ⊕ Tamaqua, Pa, Jefferson Medical College of Philadelphia, 1908, vice president and a director of Peoples Trust Company, died January 20, aged 60, of coronary thrombosis

**Jesse James Holes** ⊕ Mount Dora Fla, Detroit College of Medicine, 1904, member of the Michigan State Medical Society and the American Urological Association, served during the Spanish-American War and World War I, died in a hospital at Eustis, January 19, aged 73, of pneumonia

**Alexander Hood,** Birmingham, Ala. Vanderbilt University School of Medicine, Nashville, Tenn., 1900 died January 15, aged 68, of coronary occlusion

**Philip Horowitz,** Los Angeles, Columbia University College of Physicians and Surgeons, New York, 1904, served as treasurer of the International Spanish Speaking Association of Physicians, Dentists and Pharmacists, major, medical reserve corps, U S Army not on active duty, formerly on the staff of the Beth Israel Hospital in New York and an honorary fire department surgeon, died in the Cedars of Lebanon Hospital January 17, aged 64, of cerebral hemorrhage

**Herman Max Hurwitz** ⊕ Hartford Conn, Yale University School of Medicine, New Haven, 1912, member of the American Academy of Orthopedic Surgeons, consultant orthopedist at the Veterans Administration Facility, Newington, on the staffs of the Mount Sinai and Municipal hospitals, died January 16, aged 55, of coronary occlusion

**Walter Lee Jackson,** Ranger, Texas, Baylor University College of Medicine, Dallas 1917, member of the American Medical Association, served in France during World War I, on the staff of the Ranger General Hospital, for many years member of the board of trustees of the local school board serving as its president for two years, died March 13, aged 57 of coronary occlusion

**Gedney Jenks,** Hastings on-Hudson N Y New York Homeopathic Medical College and Hospital New York 1908 died January 13 aged 66, of carcinoma of the throat.

**Homer L Kindred,** Meadow Grove Neb Kansas City (Mo) Medical College, 1892, member of the American Medical Association, served as mayor member of the school board and coroner died January 22, aged 79, of injuries received when he was struck by an automobile

**Margaret W Rhode Koenig,** Waterloo Neb, John A Creighton Medical College Omaha, 1903 died January 10, aged 70, of cerebral hemorrhage.

**Louis J Krouse,** Cincinnati, Medical College of Ohio, Cincinnati, 1879 member of the American Proctologic Society, fellow of the American College of Surgeons on the staff of the Jewish Hospital, died January 20, aged 89 of heart disease.

**Roderick Gambrell Lander,** Goliad Texas Southwestern University Medical College, Dallas 1911 served during World War I for many years county health director with the Mississippi State Board of health did part time work with the Texas State Board of Health in 1941, died January 6, aged 58, of cerebral hemorrhage.

**Philip Cadwell Leavenworth,** Cleveland, Western Reserve University School of Medicine, Cleveland, 1944, served an internship and residency at the University Hospitals died February 25, aged 25 in an automobile accident.

**Abraham Aaron Levy** ⊕ New York, Cornell University Medical College New York, 1903 specialist certified by the American Board of Internal Medicine, for many years on the staff of St. Mark's Hospital, on the staff of the New York Post-Graduate Medical School and Hospital, where he died January 16, aged 69, of carcinoma of the transverse colon

**Frederick Clarence Lord** ⊕ Biddeford, Maine Medical School of Maine, Portland, 1903, on the staff of the Webber Hospital, died January 28, aged 69, of coronary thrombosis

**Benjamin Dane Luck Sr** ⊕ Pine Bluff, Ark., Jefferson Medical College of Philadelphia, 1903, chairman of the Jefferson County Board of Health interned at the St Vincent's Hospital in Birmingham Ala., fellow of the International College of Surgeons served as a member of the state board of nurse examiners, died in the Davis Hospital, January 23, aged 66, of coronary thrombosis

**William Solomon Lynch** ⊕ Lake City, S. C. Medical College of the State of South Carolina, Charleston, 1899, served during World War I, major, medical reserve corps, U. S. Army; not on active duty died December 21, aged 70

**Lyle Dee McMillan** ⊕ Mackinaw City Mich., University of Michigan Medical School Ann Arbor, 1916, at one time teacher of science in high schools in Petoskey and Hancock, Mich., spent several years in the Philippines in the U. S. civil service, served six months in France as a surgeon of the U. S. Marine Corps during World War I, died February 18, aged 56, of heart disease

**Stephen Codding Mason** ⊕ Menominee, Mich., Rush Medical College, Chicago, 1905, served as president and vice president of the Upper Peninsula Medical Society, member of the board of education, on the staff of St Joseph's Hospital, where he died January 10, aged 65, of coronary thrombosis

**William Harvey Mercer** ⊕ Taylorville, Ill., Marion Sims College of Medicine, St Louis, 1898 past president of the Christian County Medical Society, died in the Barnes Hospital, St Louis, January 23, aged 75, of carcinoma of the stomach

**Elbert Ervin Munger** ⊕ Spencer, Iowa, State University of Iowa College of Medicine, Iowa City, 1894 born in Lima, Ohio, June 23, 1867, for many years member of the Clay County Insanity Commission, author of a county hospital bill, which was enacted into law, past president of the Clay County Medical Society, member of the county draft board during World War I, on the staff of the Spencer Municipal Hospital, died March 14, aged 78, of virus pneumonia

**Henry Garrett Munson** ⊕ Philadelphia, Jefferson Medical College of Philadelphia 1892, since 1923 secretary of the Philadelphia County Medical Society, assistant secretary of the Medical Society of the State of Pennsylvania, served during World War I on the staff of the Jefferson Hospital and the Presbyterian Hospital, where he died April 9, aged 76

**William Carl Newell** ⊕ Ottumwa, Iowa, Marion-Sims College of Medicine, St Louis, 1899 Barnes Medical College, St Louis, 1900, fellow of the American College of Surgeons, on the staffs of the Ottumwa and St Joseph's hospitals, died January 18, aged 69, of carcinomatosis

**Walter Aaron Palmer** ⊕ Castle Rock, Colo., Rush Medical College, Chicago, 1892 associate member of the Colorado State Medical Society, medical examiner for the selective service board during World Wars I and II, participated in the work of the city council, served as city and county health officer and physician, an officer of the First National Bank of Douglas County, died March 31, aged 78, of carcinoma

**Charles Joseph Vincent Redding,** Owego, N. Y., Cornell University Medical College, New York, 1908, member of the American Medical Association, died in the Robert Packer Hospital, Sayre, Pa., January 31, aged 66, of pneumonia and acute leukemia.

**Daniel James Rudasill,** Kingwood, W. Va., Medical College of Virginia, Richmond, 1905, died March 29, aged 66, of coronary thrombosis

**Robert Thomas Rudd,** Fulton, Ky., Eclectic Medical Institute, Cincinnati, 1896, died in the Fuller Gilliam Hospital, Mayfield, January 28 aged 76, of lobar pneumonia

**Lida Burgess Russell,** Denver, Denver Homeopathic College, 1907, died in St Luke's Hospital January 12, aged 84, of carcinoma of the stomach

**James O St Dizier** ⊕ Walls, La., Medical Department of Tulane University of Louisiana New Orleans, 1900, parish coroner, died January 17, aged 65, when the automobile in which he was driving was struck by a train

**Louis Van Sams** ⊕ Denver, University Medical College of Kansas City, Mo., 1903 served during World War I, formerly medical director of the Remington Arms Plant, just a week before his death had been made medical director of the Denver General Hospital, where he died January 20, aged 65, of acute disseminated tuberculosis

**J Clarence Sharp,** New York, Bellevue Hospital Medical College, New York, 1886, member of the American Medical Association specialist certified by the American Board of Otolaryngology, honorary police surgeon on the staff of the Manhattan Eye Ear and Throat Hospital, where he died January 17, aged 85, of pneumonia

**Anna P Sharpless,** Bala Cynwyd Pa., Woman's Medical College of Pennsylvania Philadelphia, 1889, served on the staff of the Western Philadelphia Hospital for Women, died January 27, aged 82, of lymphatic leukemia

**Harry Laurence Stevens,** New Bedford Mass., Baltimore Medical College, 1891, member of the American Medical Association, formerly physician to the overseer of the poor and city physician, served as a member of the state board of registration in medicine, died January 29, aged 75, of hypertensive heart disease

**Samuel Stevens,** Mendon, Mich., College of Physicians and Surgeons of Chicago School of Medicine of the University of Illinois, 1894, died January 6, aged 77, of carcinoma of the right lung

**Chester T Stewart,** Buffalo, College of Physicians and Surgeons, Baltimore, 1882 died January 25, aged 84, of cerebral thrombosis

**Fred Elliston Strout,** Gardiner, Maine Medical School of Maine, Portland, 1890, past president of the chamber of commerce, died December 1, aged 78, of angina pectoris

**William Franklin Sult,** Gilman, Iowa, Iowa Eclectic Medical College, Des Moines, 1892, member of the American Medical Association, died January 14, aged 77, of heart disease.

**Eugene Talmage,** Los Angeles, Hahnemann Medical College and Hospital of Philadelphia, 1891 died December 12, aged 79, of adenocarcinoma of the prostate

**Jackson Taylor** ⊕ Coatesville, Pa., Jefferson Medical College of Philadelphia, 1904, fellow of the American College of Surgeons, chief surgeon, Coatesville Hospital, died January 20, aged 69, of coronary occlusion

**Leslie Allin Turner** ⊕ Brooklyn, Columbia University College of Physicians and Surgeons, New York, 1898, formerly associated with the department of health of New York City, died January 19, aged 70, of coronary occlusion

**Harry Fuller Waite,** Hollywood, Fla., University of the City of New York Medical Department New York, 1897, died in Miami, January 26, aged 73, of epithelioma of the right eye and face

**Charles Norton Warner** ⊕ Litchfield Conn., Jefferson Medical College of Philadelphia, 1896, president of the Litchfield Savings Society, past president of the Litchfield County Medical Association, on the staffs of the Charlotte Hungerford Hospital, Torrington, and the Waterbury Hospital, Waterbury, died January 27, aged 80, of arteriosclerotic heart disease.

**Job Harry Weeks,** Philadelphia, Jefferson Medical College of Philadelphia, 1886, died January 25, aged 82, of mitral stenosis and pulmonary tuberculosis

**John William West** ⊕ Narka, Kan., Lincoln Medical College of Cotner University, 1897, died in January, aged 72, of chronic myocarditis

**Martin Daniel Westley** ⊕ Cooperstown, N. D., Jefferson Medical College of Philadelphia, 1904, served as a captain in the medical corps of the U. S. Army during World War I, with the 26th division and participated in the Meuse, Argonne and Chateau Thierry campaigns, examining physician for Griggs County during World War II, member of the North Dakota State Committee on Maternal and Child Welfare, died in the Northwestern Hospital, Minneapolis, March 28, aged 72, of uremia following transurethral surgery

**Milton Cayce Wiggins,** Tucson, Ariz. University of Tennessee College of Medicine, Memphis, 1915, member of the American Medical Association, Tennessee State Medical Association and the Southeastern Surgical Congress, fellow of the American College of Surgeons, served during World War I, died January 12, aged 55, of coronary disease.

**Gustave Windesheim,** Kenosha, Wis., Northwestern University Medical School, Chicago, 1891, member of the American Medical Association, past president of the State Medical Society of Wisconsin, served as member and president of the state board of health and health commissioner of Kenosha, a founder and for many years trustee of the Wisconsin Anti-Tuberculosis Association, for many years visiting physician at the Willowbrook Sanitarium, died in a local hospital January 19, aged 91, as the result of a fall

**Firman M Wurtsbaugh,** Richwood, Ohio, Eclectic Medical Institute, Cincinnati, 1908 member of the American Medical Association, past president of the Union County Medical Society, past president of the Union County Board of Health served as county health officer, died in the Mount Carmel Hospital, Columbus, January 22, aged 72, of intestinal perforation and peritonitis

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

April 13, 1946

### The Proposed National Health Service

At largely attended meetings of the medical profession, organized by the British Medical Association throughout the country strong opposition is being manifested to the government bill for a national health service At the house of the British Medical Association in London the audience not only packed but overflowed the great hall Dr Charles Hill delivered an address in which he referred to the bill as containing both proposals which should be commended and proposals which should be condemned For example, the proposal to plan all hospitals, council and voluntary, over natural hospital regions was welcomed, provided the regional boards were properly constituted. Four main issues were raised by the general practitioner proposals to abolish good will in practices, to require practitioners entering the public service in future to secure the permission of a central committee, to remunerate general practitioners in part by salary and to organize general practice from health centers The profession, which through its voluntary machinery had assumed the responsibility for the recruitment of doctors to the forces during the war, was capable of solving any problem of distribution remaining after the introduction of a comprehensive medical service Inducement would suffice and direction was objectionable

Dr Hill advocated that general practitioners should be remunerated by capitation fee in proportion to the number of people who chose them The salaried system endangered the public's free choice. Health centers were a useful conception worthy of widespread experiment. What the doctors needed was centers which could provide diagnostic and other aids, not merely places where a large number of people could collect in municipal premises The bill could be amended so as to ensure the public s freedom and the cooperation of the medical profession They were waiting for an indication from the minister whether he was prepared frankly to discuss the proposals with the only people who could make them work—the doctors The medical profession did not want to be steamrollers into any form of service it felt to be contrary to the public interest

### Antituberculosis Legislation

The Government of Northern Ireland bill which makes better provision for the prevention and treatment of tuberculosis, marks an advance in existing plans A tuberculosis authority is to be set up for the whole country which will make provision for the accommodation and treatment of tuberculous persons, for the detection of cases and for preventing the disease by educational and other methods, including courses of instruction for medical students, doctors and nurses This authority will be able to purchase or lease land, acquire or construct buildings to be used as hospitals, sanatoriums, dispensaries clinics, health centers or occupational colonies It will maintain and educate tuberculous children or children who have recovered from tuberculosis or who have been in contact with infection in their homes It will train persons in methods of detecting, preventing and treating tuberculosis to that end testing apparatus and equipment, and maintaining laboratories for research The authority also may contribute to the support of any association for training nurses or to any benevolent association in line with its purpose The authority with such wide powers will have as a majority of its members nominees of the local authorities and in addition four other members nominated by the minister of health It will also be possible co-opt one or two further members The members are not to be paid any salary or fees but are to be reimbursed for expenses

Whenever a physician intimates to the authority that a person shows symptoms of a tuberculous condition, that person may be called on to be examined medically for the purpose of diagnosis The authority will also have power to require any person living in habitual contact with a person suffering from tuberculosis to be examined by a medical officer It can also apply to a court of summary jurisdiction for an order to detain any person suffering from tuberculosis of the respiratory tract if he is in an infectious state and his home circumstances are such that proper precautions are not or cannot be taken If the court is satisfied it may order the person to be kept in a hospital or institution for not more than three months, which may be renewed if the same conditions still obtain. If during the period of detention his condition improves so that there is no longer serious risk of infection, or if his home conditions become such as to permit the necessary precaution to be taken, he may be at once released from institutional control

## SWEDEN

*(From Our Regular Correspondent)*

STOCKHOLM, April 4, 1946

### Half a Million Kronor Granted to Ninety-Seven Scientists

The Swedish government Medical Research Board recently granted considerable sums of money to ninety-seven medical investigators, including professors and students, for studies of a wide variety of problems, ranging from the origin of hay fever to the conversion of proteins in the nerve cells Among the recipients were Dr C. Juhlin-Dannfelt, who for some time has been studying the pollen allergies in Sweden at the allergy clinic of Sabbatsberg Hospital in Stockholm. The clinic has been in existence for six years and has assembled a great deal of material on the grasses of this country and their relation to allergies Dr Åke Öhrström, another recipient, will use the money to continue his research into the brain metabolism involved in certain psychoses, particularly schizophrenia and manic depressive psychosis He is using radioactive phosphorus to determine the metabolism in the cells of the brain and has thus far been able to confirm that the epiphysis has a great deal of glandular activity The more practical side of his investigation is to establish whether mental diseases are due to a metabolic disturbance in the brain Dr Curt Åmark received a grant for the study of the causes of chronic alcoholism. He is working with about 700 carefully selected subjects in an attempt to determine the constitutional, social and other factors responsible for alcoholism Some of the other grants will be used for study in the United States

### Ten Year Hospital Plan for Stockholm

What to do about the shortage of hospital space in Stockholm has long been a subject of discussion among the authorities here. Dr Nils Hanson director of the city s hospitals, has now presented a plan for the building of four new hospitals with about 600 beds each which should take care of the needs of the next ten years If the plan is realized, the number of hospital beds in Stockholm will increase from the present 3,371 to 5,601, which should be sufficient for a population of 830,000 if the need for beds is calculated on the basis of 6 7 per thousand An additional 556 beds are planned for children

### "X-Ray Bus" to the Netherlands

As is probably known, Sweden is doing a great deal through its Red Cross to help alleviate suffering in Europe through gifts of food and medicine and even hospitals in the hardest hit countries. A great many undernourished children have also been brought to Sweden for care Recently the Red Cross contributed a fully equipped x-ray bus to the Netherlands X-ray examinations, chiefly of children, are to begin in Utrecht, and then the bus is to travel from city to city throughout the

Netherlands The proportion of tuberculosis among the Dutch children, which before the war was the lowest in Europe, has increased by at least 45 per cent Through the loan of this rather unique bus it is now hoped to detect and treat the disease in its early stages

### Serious Diphtheria Epidemic in Finland

The number of cases of diphtheria in Finland has been extremely high for the past few years Normally there are about 1,000 to 4,000 cases annually, but in 1945 there were 17,899 cases, of which 1,005 were fatal In Finland s armed forces between 1943 and 1945 more than 45,000 soldiers had the disease, and over 3,000 of the cases had a fatal outcome The epidemic is still severe and shows no signs of receding

### Icelandic Gifts of Cod Liver Oil to European Children

Through a Red Cross drive in Iceland, enough money was collected to purchase about 160 tons of cod liver oil to be sent to the children of Austria, Poland, Czechoslovakia and Germany A good portion of the oil has already been forwarded

## BRAZIL

*(From Our Regular Correspondent)*

RIO DE JANEIRO April 3, 1946

### Blood Chemistry of Normal Adults

Dr M Pereira de Mesquita, with the cooperation of other physicians of the blood bank service of the Instituto Nacional de Puericultura, is attempting to establish the normal values of the most important components of the blood in healthy white adults in Rio de Janeiro Three reports have been published on sugar, urea and creatinine For the estimation of blood sugar the Folin Wu method was used as modified by Andes and Northup for the photometer (Fisher s electrophotometer), 201 individuals were studied (144 males and 57 females) For the 144 males the results were minimum 73 mg maximum 119, mean value 95 1 and standard deviation 9 3 For the 57 females the results were minimum 75 mg, maximum 112 mean value 91 9 and standard deviation 10 0 Urea was determined by the Marshall Van Slyke method in 200 individuals (140 males and 60 females) For the 140 males the results were minimum 15 5 mg, maximum 45 5, mean value 30 3, standard deviation 7 2, for the 60 females the results were minimum 15 0 mg, maximum 40 2 mean value 26 2, standard deviation 6 9

### Meeting of Dietitians and Nutritionists

From April 3 to 8 the first Brazilian Congress of Dietitians and Nutritionists will be held in São Paulo under the sponsorship of the São Paulo Chemistry Association and the state Department of Health The organization committee includes Drs Nicolino Moreno, Haroldo J Reis and J Assis Ribeiro of São Paulo and Dr A Paula Rodrigues of Rio de Janeiro The subjects will be discussed in the following sections Nutrition and Dietetics, Food Hygiene and Food Control, Food Chemistry, Standardization of Food Analysis Methods and Teaching of Food Chemistry Included in the scientific contributions for presentation will be papers by Drs Francisco Albuquerque, Jose Tobias Neto, Antonio T Bragança, Pedro A Pereira Antenor P dos Santos and Paulo Andrade from the Federal District and the states of São Paulo, Bahia, Rio Grande, Sergipe, Parana and Minas Gerais

### Vital Statistics of Rio de Janeiro for 1945

Provisional data of vital statistics for Rio de Janeiro for the year 1945 show that the total number of deaths from all causes was 33,500, a crude annual death rate of 16 79 per thousand computed for a population of 1,995,000 This is slightly below the rates for the previous two years (18 50 for 1944 and 17 58 for 1943) The number of live births registered in 1945 was 42,930, corresponding to an annual birth rate of 21 52 per thousand, approximately the same as for the past two years (21 95 for 1944 and 21 63 for 1943) With 3,633 stillbirths the fetal mortality was 78 02, a rate almost identical with those of the last few years as a result of the high prevalence of syphilis in the population The number of deaths from causes related to pregnancy, childbirth and the puerperium was 277, a maternal death rate of 6 45 per thousand live births (6 65 in 1944 and 6 33 in 1943) Of these 277 deaths 78 were due to puerperal infection, or 28 16 per cent of the maternal deaths, as compared with 38 87 in 1944, 34 88 in 1943 and 46 65 in the five year period 1938-1942

The most important single cause of death was tuberculosis of all forms, with a total of 6,538 deaths (6,335 from tuberculosis of the respiratory system), or 19 52 per cent of the total of deaths from all causes, and a crude annual death rate of 328 per hundred thousand of population (326 in 1944, 325 in 1943 and 328 in the five year period 1938 1942) The mortality from tuberculosis remains practically stationary at a high level

### Brief Items

The administration of the state of São Paulo will promote the expansion and improvement of spas and climatic stations of its territory (at São Pedro, Lindoia, Serra Negra, Campos do Jordão, São José dos Campos and other places) The governor of the state has appointed a committee including Dr Clementino Fraga, professor at the University of Rio de Janeiro, Dr Aguiar Pupo, professor at the University of São Paulo, and Drs H Sampaio Correia and Nicolino Morena from the state Department of Health to study a plan of development

The American government transferred to the administration of the state of Amazonas the hospital at Manaos that the U S Rubber Development Corporation constructed and equipped for the assistance of rubber agricultural workers of that organization's plantations For some time yet, large quantities of natural rubber will be shipped to the United States, and the service of a good hospital is an important measure for the efficient production of the plantations

At the meeting of the American International Institute of Child Welfare recently held at Montevideo, Uruguay, Dr Mario Olinto, director of the National Institute of Child Health of Brazil and president of the meeting, presented several papers by Brazilian specialists and in an address reviewed child welfare work in Brazil

## Marriages

VERNON ROWLAND Cleveland Heights Ohio, to Miss Georganne Williamson of Charleston, W Va, in Cambridge, Mass, March 23

HARRY DUFF RIDDLE Gastonia, N C, to Miss Mary Margaret Phillips of Belton, S C, in New York March 9

HUGH ROBERT WATERS, Wisconsin Rapids, Wis, to Miss Patricia Ellen Keeble of St Louis in Chicago, February 15

CLARENCE L ANDERSON, Tampa Fla, to Miss Cicely Ann Laws of Brentwood, Md, in Durham N C, March 23

HAROLD LEON POOLE, Spartanburg, S C, to Miss Dora Nell Barkalow of Atlanta in Marietta, Ga, February 11

GEORGE GERBER YOUNG, Des Moines, to Miss Margaret Adelle Jewett of Pasadena, Calif recently

BERT WAYNE MARKS to Miss Jeannette Lucille Wolf, both of Miami Beach, Fla, March 24

JOHN WALLACE DAVIS, Philadelphia, to Miss Gail Gardner of Spokane, Wash, January 12

THOMAS F FRAWLEY to Miss Marigrace Cecelia Gould, both of Rochester, N Y, March 23

FRED M JAMESON to Miss Doreen Taylor, both of Linden, Mich, in Flint, March 3

PAUL J VIGNOS JR Canton, Ohio, to Miss Edith Ingalls of Cleveland, March 23

# Correspondence

## TIC AND SPASM

*To the Editor* —In Queries and Minor Notes (THE JOURNAL, March 16, p 754) an opinion is asked on treatment of facial tic. First, was this case one of tic or of facial spasm? A clear distinction must be made between these two conditions, as they differ fundamentally in their nature origin, symptomatology and therefore treatment The description of the symptoms given is somewhat misleading The terms "spasm" and "tic" are mentioned simultaneously

Convulsive movements of the face appear in three principal forms spasm, tic and epileptic twitchings The last mentioned are usually associated with generalized or with focal epilepsy Tic is characterized by a sudden and abrupt contraction of one or several muscles As these are invariably always the same, they are coordinate and always executed for a certain functional purpose. Originally the movements of the tic were made for a certain good reason and under the influence of the will For example, a foreign body accidentally gets under a person's eyelid. Irritation is produced He closes and opens his eyelids He endeavors to get rid of it Finally the body is removed Normally this is the end of the trouble. But certain persons continue the reproduction of the sensation of the foreign body They will repeat the act of closing and opening the eye Gradually they forget the original trouble. The act becomes a habit and the movement becomes automatic While at the beginning the movements were logical and reasonable, now they are superfluous It is evident that we deal here with an abnormal physical phenomenon and with a mentally unstable individual That a psychic element is predominant in tic can be seen also from the singular satisfaction the person experiences from indulging in tic movements. He may make an effort to inhibit the tic, but the effort of his will is meager and short in duration The last characteristic diagnostic element of tic is the fact that the muscular contractions do not correspond to a well defined anatomic distribution of a certain nerve supply

Facial spasm does not present a reproduction of a purposeful physiologic act. It consists in a motor reaction following an irritation of any part along the spinal reflex act. It is strictly confined to the area of distribution of the facial nerve. The muscular contractions in spasm are either slow and coarse or rapid and fascicular The muscles supplied by the upper facial nerve alone may be involved, and then we observe a contraction of the frontalis and orbicularis palpebrarum muscles or else the lower facial nerve is irritated and the muscle of the lower part of the face are contracted, also the muscles of the neck on the same side. While the twitching in tic is an exaggerated normal movement, made originally with a certain object in view, in spasm on the contrary the twitching is illogical and without any reasonable expression, it does not resemble the ordinary mimicry of the face. Here the will has no cerebral inhibitory power to arrest the attack, which is the opposite in tic Spasm may occur in sleep, while tic does not Tic is a mental phenomenon Irritation of any portion of the seventh nerve or of its nucleus or else of the sensory fibers of the fifth nerve will produce a spasm through the reflex arc Irritation of the palpebral mucosa will produce a spasm of the orbicularis

In view of the different pathogenesis of the two disorders the treatment must logically differ In tic the treatment must be directed chiefly toward the patient's psyche. Psychotherapy, with continuous training to immobilize the face and regularly practiced, will eventually bring results The management of facial spasm must be totally different Among all the methods used by competent men, injections of ethyl alcohol are the most satisfactory The method consists in injecting with an ordinary hypodermic syringe into the facial nerve in the stylomastoid foramen 5 minims (0.3 cc.) of 80 per cent solution of alcohol The injection can be done without a preliminary localized anesthetic.

Of course, anatomic knowledge of the exit of the nerve from the foramen is essential As a point of departure, the end of the mastoid process can be taken The foramen is situated in front and inward of the process A successful injection means an immediate facial palsy and immediate disappearance of the spasm The palsy is not permanent. Electrical treatment of the palsied muscles may be instituted three or four weeks after the alcohol treatment The palsy usually lasts about three or four months Recurrences of the spasm will in some cases occur Repeated injections into the same nerve may be undertaken In 1 of my cases there has been no recurrence after three years

ALFRED GORDON, M.D., Philadelphia

## RADIOACTIVE PHOSPHORUS IN POLYCYTHEMIA VERA

*To the Editor* —Several weeks ago in an editorial you stated that radioactive phosphorus was the "method of choice" in the treatment of polycythemia vera We feel that such a statement is not in keeping with the judgment of many clinical investigators who have had occasion to use radioactive isotopes in therapy

Radiation therapy is highly empirical in its application When radioactive isotopes are used, it should be kept in mind that a great deal of basic information is still lacking We will mention only one example. Reinhard, Moore, Bierbaum and Kamen (*J Lab & Clin Med* **31** 107 [Feb.] 1946) point out that there is a wide discrepancy at the present time in the unit of dosage which is regarded in different laboratories as a millicurie Two well known laboratories differ by a factor of 2.4 When one considers the fact that the ultimate effect of a dose of radio phosphorus may take many weeks to appear, this factor can easily represent the difference between a therapeutic dosage and one which may result in leukopenia and thrombocytopenia with fatal termination

Radio phosphorus is already widely available, and recent developments in the field of nuclear fission should make this isotope much more available in the future If its use in therapy is adopted too enthusiastically, more widespread use will undoubtedly result in many untimely deaths We do not feel that radiation should be employed in any benign diseases in which alternative methods of control are available This is especially true in the case of polycythemia, in which control by phlebotomy presents a simple and straightforward approach Failure of this method is frequently due to the lack of appreciation of the quantity of blood which must be removed Not only is it necessary to reduce the circulating hemoglobin to the desired level, but also the reserve iron stores must be depleted In cases of polycythemia it should be pointed out that the venous hematocrit does not give the proper index of the total volume of the circulating red cells Where proper facilities are available for determining red cell volumes by the radioactive iron or carbon monoxide rebreathing technics, it is suggested that these methods be used as a guide.

P. F. HAHN, PH.D.
C. W. SHEPPARD, PH.D.
Nashville, Tenn.
Associate Professor and Assistant Professor, Respectively, Department of Biochemistry, Vanderbilt University School of Medicine.

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Public Hospitals Exemption from State Real Estate Tax.**—The plaintiff Fairmont Community Hospital Association, Inc, filed a petition to exempt certain of its real estate from taxes levied against it by the state. From an order finding that the real estate was not exempt from taxation, the plaintiff appealed to the Supreme Court of Minnesota

Prior to Jan 1, 1941 the building now operated by the plaintiff was operated by the Fairmont Clinic and Hospital Corporation, a private institution organized by three physicians, each of whom owned stock therein These physicians maintained their offices in the hospital, and no other physicians in the area used its facilities On January 1 the plaintiff purchased the property and commenced operations under the name of the Fairmont Community Hospital Association No cash was involved in the transaction The plaintiff s note for the purchase price, when paid, will be insufficient to take care of the unsecured creditors and stockholders of the old corporation Under a collateral agreement the preferred stockholders could apply the par value of their stock on hospital services rendered for them by the plaintiff and the plaintiff would apply such stock on its indebtedness Since 1941 the plaintiff has done business on the premises as a public hospital in accordance with the objectives expressed in its articles, namely to operate a public hospital on a nonprofit basis to furnish hospitalization to the sick and injured, to provide nursing care, to maintain a training school for nurses and to do all other acts which may lawfully be done by corporations of its class under the laws of the state. Any doctor in good standing may use its facilities No one has ever been refused admittance to the hospital No member of the corporation has made a profit of any kind from the hospital and no person has received any private gain or advantage from the earnings thereof The patients employ the services of their own physicians and the latter look to the patients rather than to the hospital for compensation. When patients are unable to pay for hospitalization, the local relief office is asked to take care of the expenses involved, including medical and surgical fees The county pays such charges The hospital extends a lower rate to the county for poor patients In 1941 and 1942 the hospital operated at a loss In 1943 there was a profit which was used in making improvements and additions to the hospital, and on Jan 1, 1944 a tax assessment for alleged 1943 taxes was levied against the petitioner's real estate. Under the Minnesota constitution "public hospitals" are specifically exempt from taxation

The district court first denied exemption on the theory that the evidence indicated a private gain to some of plaintiff's organizers incompatible with the status of a public hospital This was predicated on the fact that three of the incorporators of the Fairmont Community Hospital Association were also stockholders of the old corporation We are of the opinion, said the Supreme Court, that the petitioner was organized as a public hospital and that during 1943 it was conducted as one. Therefore it was exempt from the tax involved Under prior decisions, the court continued, a public hospital need not operate at a loss or as a charitable institution to remain eligible for exemption from taxation under the constitutional and statutory provisions referred to 'Operated for the benefit of the public" means operated without an intent to make a private profit If the profit made does not go to plaintiff's incorporators or to any individual as private gain, plaintiff must be regarded as a public hospital The record discloses that no part of such profit finds its way, by any device into the private accounts of plaintiff s incorporators, officers or trustees, and, under its articles such profit cannot be so diverted Payment to the bondholders and preferred stockholders constitutes merely payment of the purchase price of the building and equipment. Surely it cannot be, concluded, said the Supreme Court, that a corporation organized to conduct a public hospital, and operated as such, loses its tax exempt status because it uses such profits as it may derive in payment of the purchase price of its property The reduction of the indebtedness of the old corporation is merely the payment of the purchase price of its property and has nothing to do with the status of the new corporation as a public or private institution

The district court also ruled that the activities of some of the common stockholders of the old corporation who were also incorporators and trustees of the plaintiff, in continuing to maintain offices in the hospital after the transfer and in leasing out equipment owned by them to doctors using the hospital facilities, established not only a private gain to them incompatible with plaintiff s status as a public hospital but also, in substance, the control of the new institution by the controlling officers of the old We do not agree with the trial court's conclusion, said the Supreme Court. The brief period of time during which certain doctors continued to maintain their offices in the hospital should not constitute a bar to plaintiff's subsequent claim for exemption from taxation

Finally, the trial court held that the possibility of a future amendment of plaintiff's articles of incorporation so as to change it from a public to a private hospital supported the conclusion that plaintiff had not established its right to exemption as a public hospital The Supreme Court said that it did not feel that the possibility that the plaintiff at some future date might amend its articles was a factor to be considered in these proceedings Plaintiff was organized as a public hospital under the social and charitable provisions of the laws of the state Should it attempt at some future time to change its character for the benefit of its incorporators as private individuals, it would seem that the state might properly intervene to uphold whatever right the public might have in the property of the corporation.

The order of the trial court denying plaintiff's tax exemption was accordingly reversed.—*Fairmont Community Hospital Association, Inc, v State, 21 N W (2d) 243 (Minn, 1945)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### BOARDS OF MEDICAL EXAMINERS
### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL, May 4 page 67

### EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY *Oral* New York Oct. 9-14 Sec Dr Paul M Wood 745 Fifth Ave. New York 22

AMERICAN BOARD OF INTERNAL MEDICINE *Written* Oct 21 Final date for filing application is July 1 Asst. Sec. Dr W A Werrell 1 W Main St Madison 3 Wis

AMERICAN BOARD OF OPHTHALMOLOGY *Oral All Groups Parts I and II* New York June 1947 Final date for filing application is Dec 1 Chicago October 1947 Final date for filing application is March 1 Sec Dr S J Beach 56 Ivie Rd, Cape Cottage Me

AMERICAN BOARD OF ORTHOPAEDIC SURGERY *Part II Oral* Chicago January Final date for filing application is Nov 1 Sec. Dr Guy A Caldwell 1136 W Sixth St. Los Angeles 14

AMERICAN BOARD OF OTOLARYNGOLOGY Chicago May 22 25 Sec. Dr Dean M Lierle University Hospital Iowa City Ia

AMERICAN BOARD OF PATHOLOGY San Francisco June 25 26 Applications should be submitted by May 15 Sec Dr F W Hartman Henry Ford Hospital Detroit 2

AMERICAN BOARD OF PEDIATRICS *Oral* San Francisco July 1 5 Sec Dr Lee F Hill 3309 Forest Ave Des Moines Ia.

AMERICAN BOARD OF PSYCHIATRY & NEUROLOGY New York December Final date for filing application is Sept 30 Sec Dr Walter Freeman 1028 Connecticut Ave N W Washington D C

AMERICAN BOARD OF RADIOLOGY Chicago Nov 27 to Dec. 1 Final date for filing application is Sept. 1 Sec Dr B R. Kirklin Mayo Clinic Rochester Minn.

AMERICAN BOARD OF SURGERY *Written Part I* Various centers October Final date for filing application is July 1 Sec Dr J S Rodman 225 S 15th St Philadelphia 2

AMERICAN BOARD OF UROLOGY *Oral* Chicago February 1947 Final date for filing application is Nov 15 Sec Dr Gilbert J Thomas 1409 Willow St. Minneapolis 4

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days Three journals may be borrowed at a time Periodicals are available from 1936 to date Requests for issues of earlier date cannot be filled Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested) Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order Reprints as a rule are the property of authors and can be obtained for permanent possession only from them

Titles marked with an asterisk (*) are abstracted below

### American Heart Journal, St Louis

**31** 1-114 (Jan) 1946

*Superior Vena Caval Syndrome Report of 35 Cases H H Hussey S Katz and W M Yater —p 1
*Study of Prothrombin Time in Normal Subjects and in Patients with Arteriosclerosis Preliminary Report L Meyers and C A Pomdexter —p 27
Normal Electrocardiograms in Cardiovascular Disease D Pazzanese and S Bertacchi —p 33
Certain Effects of Positive Pressure Respiration on Circulatory and Respiratory Systems D T Carr and H E Essex —p 53
Bigeminy Electrocardiographic Study of Bigeminal Rhythms A E Parsonnet R Miller A Bernstein and E Klosk —p 74
Staphylococcus Aureus Septicemia and Pericarditis Treated with Penicillin J J Zimmerman and Bernice Durgin —p 93
Electrocardiographic Changes Resulting from Phosphorus Poisoning Report of Case R A Dathe and D A Nathan —p 98
Congenital Defect of Aortic Vestibule Complicated by Bacterial Endocarditis with Perforation and Death from Cardiac Tamponade Report of Case L S Medalia and J F Drapiewski —p 103

**Superior Vena Caval Syndrome**—Hussey and his associates present 35 cases of the superior vena caval syndrome observed at the Gallinger Municipal Hospital and the Georgetown University Hospital Aneurysm of the ascending aorta bronchogenic carcinoma, malignant lymphoma and carcinoma with metastasis to the mediastinum are the main causes of the syndrome Simple thrombosis of the superior vena cava is very rare. The principal symptoms and signs of the syndrome are edema and cyanosis in the upper part of the body dyspnea and dilated veins indicative of the collateral circulation Comparison of measurements of the venous pressure in the upper and lower extremities is the best method for establishing the diagnosis of obstruction of the superior vena cava This may be the only practical method for recognizing that the vena cava is partially obstructed The venous pressure in the arms is significantly higher than the femoral venous pressure The arm-to tongue circulation time may be normal in spite of the fact that the venous pressure is quite high If prolonged it is usually less than might be anticipated from the height of the venous pressure Phlebography demonstrates that obstruction of the superior vena cava is present and at times localizes the point of obstruction. In 2 cases of aortic aneurysm the superior vena caval syndrome was produced by communication between the aneurysm and the superior vena cava This condition should be suspected when the syndrome develops explosively in a patient with aneurysm of the aorta The usual features of arteriovenous communication such as thrill, bruit and an increase in pulse pressure may not be present. X-ray therapy of radiosensitive mediastinal tumors may decrease obstruction of the superior vena cava. Surgical exploration of the mediastinum may be of value in cases in which lack of evidence of the cause of the obstruction holds promise of a remediable condition such as obstruction by adhesions

**Prothrombin Time in Patients with Arteriosclerosis**—Prothrombin estimations on arteriosclerotic persons were checked with the blood of a normal person as a control Diluted and undiluted plasma determinations were checked two or three times, and the control specimen was rechecked after each series The chief advantage of Shapiro's method is that it employs both diluted and undiluted plasma for the determination of the prothrombin time In the diluted determinations a 1 8 saline solution of plasma is used The diluted prothrombin time has revealed changes in patients with coronary arteriosclerosis that have not been demonstrated by the ordinary undiluted method. This may be due Shapiro states, to an anticoagulant factor in undiluted plasma which is inactivated by dilution In diurnal studies of the prothrombin time there is a tendency toward shortening in the diluted fraction in the late hours of the night and in the early morning in patients with coronary arteriosclerosis There is no significant change in normal males Exercise apparently had no effect on the prothrombin times of the small group of arteriosclerotic patients tested Patients with coronary sclerosis and anginal syndrome do not show any especial alterations of the prothrombin time After the acute phase of coronary occlusion there is noted a trend toward shortening of the dilute prothrombin time which continues for several weeks during the period of infarction

### American Journal of Clinical Pathology, Baltimore

**15** 555 628 (Dec) 1945

*Plumbism Punctate Basophilia in Bone Marrow E R Movitt —p 557
Quantitative Estimation of Prothrombin A J Quick —p 560
*Melioidosis C D Cox and J L Arbogast —p 567
Study of 377 Cases of Fatal Meningitis with Special Reference to Bacteriologic Diagnosis A J Hertzog —p 571
Method of Demonstrating Anti Rh Agglutinins in Cases of Erythroblastosis Fetalis B B Carter and J Loughrey —p 575
Hemolytic Disease of Newborn in Relation to Rh Factor M V de Torregrosa and A Ortiz.—p 577
Salmonella Problem Practical Laboratory Applications of Recent Advances O Felsenfeld —p 584
Aneurysm of Splenic Artery with Rupture Case Report S R Pinas —p 609
Comments by Members of Committee on Tests for Intoxication of National Safety Council on Blood Alcohol and Intoxication Its Value in Borderline Cases A O Gettler W Freireich and H Schwartz —p 613
Answers to Comments by Members of Committee on Tests for Intoxication A O Gettler —p 618

**Plumbism Punctate Basophilia in Bone Marrow**—Movitt points out that the demonstration of basophilic stippling is particularly important in the diagnosis of plumbism when proper facilities for lead determination in body fluids are not available Punctate basophilia frequently cannot be found in the peripheral blood to a significant extent but may be seen in abundance in the bone marrow

**Melioidosis**—Cox and Arbogast present what they consider to be the first case of melioidosis in the Army of the United States An American Indian soldier aged 27 was admitted to a hospital in Burma with a history of headache, fever, chills, nausea and vomiting for twenty four hours before admission The patient was acutely ill with a temperature of 102 4 F, pulse rate 86 and respiratory rate 18 The liver and spleen were palpable 2 fingerbreadths below the costal margin Repeated malarial smears failed to demonstrate parasites During the next few days scattered pustules appeared over the entire body involving especially the face chest abdomen, arms and legs except the palms and soles Some of the lesions became crusted The fever was septic in type A diagnosis of smallpox was considered The liver and spleen remained palpable, and moderate abdominal distention developed On the fifth day the patient became irrational and signs of pneumonic consolidation were present at the left base The clinical diagnosis at the time of death was generalized septicemia etiology undetermined Premortem cultures from skin pustules and blood and postmortem cultures from pulmonary abscesses blood liver and spleen were identified as Malleomyces pseudomallei The organism was a short gram negative bacillus showing bipolar staining even by means of Gram's stain The cells had the characteristic 'closed safety pin' appearance Motility was present and could be demonstrated by both the hanging drop and semisolid agar methods

### Archives of Physical Medicine, Chicago

**27** 1-56 (Jan) 1946

Psychosomatic Concepts in Physical Medicine. Barbara Goldberger and J Goldberger —p 5
Physical Therapy and Reconditioning Therapy at Fitzsimons General Hospital Denver O L Huddleston —p 11
Pulley Exercises to Increase Joint Movement G G Deaver and K J Peterson —p 17
Ultraviolet Blood Irradiation Therapy of Apparently Intractable Bronchial Asthma. G P Miley R E Seidel and J A Christensen —p 24
Preventive Measures in Plaster Cast Application A M Pruce —p 30
Muscle and Joint Examination Charts S T Snedecor —p 33

## Arizona Medicine, Phoenix

2 343-400 (Nov) 1945

Significance of Some of Fundamental Physical Findings in Examination of Heart J A Greene—p 363
Continuous Caudal Obstetric Analgesia R J Barfoot—p 366
Rh Hazards in General Practice W H Oatway Jr—p 370

## Bulletin New York Academy of Medicine, New York

22 1-54 (Jan) 1946

Contributions of War Effort to Medicine C P Rhoads—p 3
Modern Concepts of War Neuroses W C Menninger—p 7
What Can the Practitioner Do in Treating Neuroses? T A C Rennie.—p 23
Evaluation of Early Postoperative Activity J H Powers—p 38

22 55-112 (Feb) 1946

Physiopathology and Surgical Treatment of Congenital Cardiovascular Defects A Blalock—p 57
Treatment of Aneurysms and Arteriovenous Fistulas D C Elkin—p 81
Hormonal Treatment of Prostatic Malignancy C L Deming—p 88
New Absorbable Hemostatic Agents Virginia K Frantz—p 102

## Bull of the U S Army Med Dept., Washington, D C

5 123-244 (Feb) 1946

Treatment of Aneurysms and Arteriovenous Fistulas D C Elkin—p 157
Clinical Survey of 86 Cases of Scrub Typhus C M Agress and E R Evans—p 163
Rorschach Test in Differential Diagnosis of Cerebral Concussion and Psychoneurosis S A Koff—p 170
Transportation of Patients with Fracture of Femur N C Mead—p 174
Reconditioning Program in Station Hospital F Rathauser and H Ulfelder—p 178
Responsibilities of Medical Supply Officer A Pappas—p 185
Blood Groups in Air Forces Basic Trainees H F Kesinger—p 187
*Diagnosis of Acute Coccidioides Immitis Infections* C B Cherry and A G Bartlett—p 190
Treatment of Hysteria in Forward Echelon G L Wadsworth and O Rath—p 193
Trench Foot Prognosis and Disposition E C Toone and J P Williams—p 198
Closed Ward Psychiatric Reconditioning L Barbato—p 210

## Cancer Research, Baltimore

6 49 96 (Feb) 1946

Social Distribution of Cancer of Scrotum and Cancer of Penis E L Kennaway and N M Kennaway—p 49
Calcium and Potassium Content of Secretions from Noncancerous and Cancerous Stomachs Lucia J Dunham and A Brunschwig—p 54
Demonstration of Enzyme Inhibiting Factor in Serum of Cancer Patients Preliminary Study G Duboff and S Hirshfeld—p 57
Respective Roles of Longevity and Genetic Specificity in Occurrence of Spontaneous Tumors in Hybrids Between Two Inbred Lines of Rats W F Dunning and M R Curtis—p 61
*Growth of Mammalian Tumors in Fertile Eggs Is Filtrable Cancer Virus Produced? G H Twombly and Doris Meisel—p 82

**Growth of Mammalian Tumors in Fertile Eggs**—Twombly and Meisel incubated fertile white leghorn eggs for five days at 38.5 C and then inoculated the eggs with 0.5 cc of a sterile tumor emulsion. The inoculated eggs were then incubated again. Rat sarcoma R39, Bagg mouse carcinoma 755 and the RC mouse carcinoma of Taylor have been grown successfully in these eggs. The mortality of such eggs has been high, 73 per cent by the seventeenth day of inoculation, making this method a poor one for the routine growth of tumor tissue. The yolk from eggs bearing the rat sarcoma R39 did not produce sarcomas when injected into susceptible rats save in 1 instance in which the centrifuged sediment of the yolk was effective. Injection of the yolk did not confer immunity on young rats so treated. Yolk from eggs bearing either of the two mouse mammary carcinomas frequently reproduced the tumor when injected into susceptible mice. Repeated attempts to filter the tumor agent through Berkefeld N or V candles were unsuccessful.

## Hawaii Medical Journal, Honolulu

5 117-176 (Jan-Feb) 1946

Tracheotomy in Leprosy N R Sloan—p 125
Pellagra Report of 2 Cases H M Patterson—p 129
Cold Agglutinins in Virus Type Pneumonia E A. Fennel—p 132
Penicillin Therapy in Purulent Maxillary Sinusitis H E. Crawford—p 135

## Journal of Allergy, St. Louis

17 1-52 (Jan) 1946

Studies on Poison Ivy and Other Dermatitis Producing Plant Parts Wherein Active Resinous Principles are Suspended in Aqueous Solution Margaret B Strauss and W C Spain—p 1
*Study of Inheritance of Respiratory Allergies K. A Stiles and Elizabeth J Johnston—p 11
*Allergic Reaction Following Typhus Fever Vaccine and Yellow Fever Vaccine Due to Egg Yolk Sensitivity S S Rubin—p 21
Anaphylactic Shock from Skin Testing in 2 Cases 1 Fatal O Swineford Jr—p 24
Bronchial Asthma Critical Review L Tuft—p 27

**Inheritance of Respiratory Allergies**—Stiles and Johnston report familial atopy in a family of five generations. This family of 232 persons has been studied with regard to the inheritance of respiratory allergies, namely asthma, hay fever and bronchial disorders. The incidence of respiratory allergies was 22.4 per cent, in contrast to approximately 7 per cent in the general population. The authors think that, in studying the inheritance of atopy, perfect mendelian ratios are not likely to be obtained, owing to the complexity of both environmental and hereditary factors involved. The specific sensitivity does not appear to be inherited but rather the capacity or the predisposition to become hypersensitive. The manifestations of the symptoms are influenced by many factors and their interactions, including presence of the atopen, climate, degree of inheritance, age and sex. The reported data suggest that respiratory allergy may be interpreted as an irregular dominant character. The gene exhibits low penetrance with variable expressivity.

**Allergic Reaction Following Typhus and Yellow Fever Vaccination Due to Egg Yolk Sensitivity**—Rubin reports that allergic manifestations of angioneurotic edema, nasal blockage and tightness in the chest developed in a soldier aged 19 shortly after he received yellow fever vaccine prepared from infected chick embryos and typhus vaccine prepared from infected yolk sacs. The patient had a history of spring and fall hay fever for the past eight years and sensitivity to egg yolks since childhood. Tolerance for egg white and hypersensitivity to egg yolks was corroborated by cutaneous tests showing that egg yolk sensitivity may exist alone without concomitant egg white sensitivity. The author points out that persons sensitive to egg or chicken may develop allergic manifestations from virus or rickettsial vaccines which are grown on egg yolk sacs or chick embryos.

## Journal of Clin. Endocrinology, Springfield, Ill.

6 1-116 (Jan) 1946

*Thiouracil Treatment of Thyrotoxicosis I Results of Prolonged Treatment R H Williams—p 1
*Id II Toxic Reactions R. H Williams H M Clute T J Anglem and F R Kenney—p 23
Urinary 17 Ketosteroids in Metabolism II Partition of Gonadal and Adrenocortical Hormonal Derivatives of Normal Endocrine and Cancerous Patients W T Salter R L Cahen and T S Sappington with technical assistance of Gretchen Sappington.—p 52
Degenerative Changes in Cerebral Arteries Following Administration of Desoxycorticosterone Acetate F M Forster A. Cantarow P A Herbut K E Paschkis and A E Rakoff—p 77
*Methyl Testosterone and Surgical Castration in Treatment of Carcinoma of Breast W P Boger—p 88
Effect of Administration of Estrogens on Production of Cervical Mucus in Castrated Women W T Pommerenke and Ellen Mae Viergiver—p 99

**Prolonged Treatment with Thiouracil**—Williams says that during the last two and a half years thiouracil has been used at his clinic at Harvard Medical School in the treatment of 247 patients with thyrotoxicosis. All patients experienced a remission of the disease, which was maintained for as long as treatment was continued. Thyroidectomy was done on 121 patients, 3 having a two stage operation. Thyrotoxic reactions were less before, during and immediately after the operation than shown by comparable patients treated with iodide but there was greater vascularity and friability of the thiouracilized glands. The combined administration of iodide and thiouracil gave the best results. Ninety-five of these patients have been examined one or more times during intervals of from three to eighteen months, 85 exhibited no evidence of thyrotoxicosis and no complications from the thyroidectomy, 5 exhibited a persistence of thyrotoxicosis and 2 had a recurrence. Two

patients developed a paralysis of one vocal cord, 2 were found to have tetany and 1 became myxedematous The treatment of 100 patients, most of whom were given thiouracil for many months, was discontinued Forty nine of these patients have gone without treatment for intervals of from three to twenty-one months, and none have experienced a relapse Fifty one patients exhibited a relapse of the disease within two weeks to five months On cessation of therapy sustained remissions of the thyrotoxicosis were more apt to occur the longer the thiouracil had been given, when there was only slight enlargement of the thyroid gland in subjects with slight increase in the basal metabolic rate and when the patients were females About two thirds of 69 patients who were treated for eight months or longer exhibited a decrease in the size of the thyroid gland, a few glands increased in size

**Toxic Reactions of Thiouracil**—Williams and his associates report the toxic reactions encountered in 247 patients who were treated with thiouracil Thirty-six, or 14 5 per cent, had such reactions In 13 patients the leukocyte count decreased to 3 800 or below, and 3 others developed agranulocytosis There were febrile reactions in 7, maculopapular eruptions in 6, edema of the legs in 6, urticaria in 5, neuritis in 5, arthritis in 2 and enlargement of the submaxillary salivary glands in 1 There was a rare complaint of headache, nausea, vomiting and diarrhea. In 18 patients 7.2 per cent, it was necessary to discontinue thiouracil therapy because of reactions to this drug In 2 additional instances, each with urticaria cessation of treatment was regarded as advisable although perhaps not compulsory All the patients in this series recovered from the toxic reactions Each of the 3 patients with agranulocytosis not only recovered from this reaction but have gone for intervals of from eight to twenty months free from thyrotoxicosis in spite of no treatment The routine administration of special capsules of liver powder containing more folic acid than usual did not afford protection against the development of toxic reactions Unnecessarily large doses of thiouracil and long interrupted intervals of treatment tend to increase the frequency and severity of toxic reactions

**Methyl Testosterone and Surgical Castration in Carcinoma of Breast**—Boger employed surgical castration and concomitant administration of methyl testosterone in the treatment of a woman aged 27 with extensive carcinoma of the breast She was given 1,440 mg of methyl testosterone over a period of eight months after the surgical castration The patient was bedridden when the therapy was instituted, and within two weeks thereafter she was ambulatory and free from pain. Extensive osteolytic metastases in the spine and pelvis were partially recalcified within six weeks The patient died approximately one year after treatment was begun, but she was given eight months of useful living before her condition began to deteriorate

## Journal of the Mount Sinai Hospital, New York

**12** 959 1020 (Jan-Feb) 1946

Edward Gamaliel Janeway Lectures I Vitamin K Its Discovery Biochemistry and Application in Medicine H Dam—p 961
Visceral Manifestations of Kaposi's Sarcoma D Stats—p 971
*Effect of Weight Reduction on Course of Arterial Hypertension D Adlersberg H R. Coler and J Laval—p 984
Cancer of Lung in Presence of Pulmonary Tuberculosis Report of 2 Cases H Hennell—p 993
Anterior Mediastinal Neoplasm with Unusual X Ray Appearance C B Rabin—p 996
Cylindroma of Bronchus Pneumonectomy Peripheral Carcinoma of Lung Lobectomy and Chest Wall Resection H Neuhof—p 1000
Essays on Biology of Disease Chapter 11 Arteriosclerosis E Mosch cowitz—p 1003

**Weight Reduction and Arterial Hypertension.**—Adlersberg and his associates of the Nutrition Clinic of the Mount Sinai Hospital studied the effects of weight reduction on the course of arterial hypertension in a group of 54 patients The average course of dietary treatment was 8.2 months the average loss of weight during this period was 23½ pounds (10 6 Kg) The loss of weight was associated with a decreased blood pressure in 72 per cent and with no change of blood pressure in 28 per cent of the cases Fifteen patients of the original group were reexamined in 1944 The course of arterial hypertension was more favorable in those who maintained their weights at reduced levels than in those who increased in weight during the three year interval Loss of weight and the return of blood pressure to lower or normal levels had practically no effect on the vascular changes of the fundi.

## Journal of Nervous and Mental Disease, New York

**103** 1-106 (Jan) 1946

Hemiatrophy of Body in Adult Life N Reider and G S Player—p 1
Unusual Involvement of Nervous System in Generalized Lymphoblastoma H Kohut—p 9
Is the Epileptic a Safe Motor Vehicle Driver? With Some Remarks Relative to Clinical Application of the Electroencephalogram M A Glaser and M Irons—p 21
Study of Case of Pseudo Deaf Muteness ("Psychic Deafness") Erika Oppenheimer Fromm—p 37
*Relationship of Vegetative Nervous System to Angina Pectoris (Abdominalis) L. Hess—p 60
Classification of Anxiety Reactions (Anxiety States) J M Schneck—p 81

**The Vegetative Nervous System and Angina Pectoris (Abdominalis)**—Hess reviewed the anatomic findings outside the chest of patients who died following attacks of angina or coronary occlusions In the first group of patients, in whom the syndrome of angina abdominalis was recognized during clinical observation, necropsies revealed anatomic changes in the coronary arteries, secondary involvement of the myocardium (recent or old myomalacia) or myocardial aneurysm in some cases syphilitic aortitis in addition to the coronary disease and finally, ulcers in the esophagus, stomach or duodenum The author thinks that in a second group of patients, in whom coronary disease and gastrointestinal hemorrhages coincided, the syndrome under discussion was in its early stages In a third group coronary disease was found to be associated with old ulcers The author considers four possibilities in explanation of the anatomic findings 1 The coincidence of the cardiovascular signs and of ulcers is incidental 2 The ulcers are dependent on the condition of the coronary arteries 3 The ulcers are dependent on a generalized disease of arteries (sclerosis syphilis), as are changes of coronary arteries 4 The coronary disease (bouts of angina pectoris thrombosis of the coronary artery) and the ulcers are dependent on one common cause Involvement of the vagus plays a certain part, and the primary site of the anginal attack may be located in the center of the vegetative nerves

## J Neuropathology and Exper Neurology, Baltimore

**5** 1-84 (Jan) 1946

*Reinnervation of Paretic Muscles by Use of Their Residual Nerve Supply H E Billig A van Harreveld and C A G Wiersma—p 1
Effects of Local Applications of Acetylcholine to Acoustic Cortex F M Forster and R H McCarter—P 24
Cortical Cerebellar Atrophy Without Ataxia II Primary Circumscribed Variety B W Lichtenstein and S A Levinson.—p 29
Angiomatous Malformation of Sylvian Aqueduct with Remarks on Management of Aqueductal Obstructions. C. Graf—p 43
Terminal Degeneration Within Central Nervous System as Studied by New Silver Method P Glees—p 54
Effect of Extirpation of Parastriate Cortex on Learned Visual Discriminations in Monkeys H W Ades—p 60
Neurinoma of Twelfth Nerve. E Haase—p 66
Pyramidal Tract Representation of Lateral Corticospinal Component in Spinal Cord of Cat A M Lassek—p 72
Olivopontocerebellar Atrophy in Cat J W Schut—p 77

**Reinnervation of Paretic Muscles**—Billig and his associates studied the effect of axon branching on the power of muscles of patients with residual paresis resulting from polio myelitis The procedures applied were calculated to cause axon branching of the motor fibers which have escaped destruction in order to innervate with the extra branches muscle fibers which lost their nerve supply Since fiber redistribution was to be eliminated as much as possible, the motor nerve was interrupted as close to the individual muscles as feasible Two methods were used the crushing of the motor nerve after its surgical exposure (surgical method) and the severing of the intramuscular nerve structures by a forceful massage of the muscle (manual method) A total of 923 leg muscles and of 251 arm muscles were treated with the surgical method, 1 429 leg muscles and 702 arm muscles were treated manually The result of the surgical treatment was a definite improvement of the muscles with a low initial rating The muscles with a high initial rating showed a mean loss of muscle power The

application of the surgical method should remain restricted to the muscles of an initial rating lower than "poor" The manual treatment produced a similar mean improvement of the muscle power, but it was not restricted to the muscles of low initial rating The manual treatment thus can be applied to all paretic muscles It was found in the surgical series that the improvements in the arm muscles were greater than those in the muscles of the leg In the manual series the benefit was the greatest in the leg Nontreated control muscles showed only the slightest changes in muscle power during the period of observation No distinct influence of the duration of the paretic state (which was always longer than one year) was observed, nor was a significant influence of the patient's age noted The effect of the manual treatment has reached its maximum after about one year There is evidence that the surgically treated muscles still improve after that period A repetition of the manual treatment after a preceding surgical or manual treatment increased the mean muscle rating only slightly, if at all Paralleling the increase in muscle power, an increase in the size of the action potentials was observed

## Journal Pharmacology & Exper Therap, Baltimore

**86** 1-100 (Jan) 1946 Partial Index

*Effect of Various Drugs on Experimental Asthma Produced in Guinea Pigs by Exposure to Atomized Histamine E R Loew Margaret E Kaiser and V Moore —p 1
Cutaneous Vasodilating Action of Pitressin R A Woodbury and R P Ahlquist —p 14
Pharmacologic Studies on Streptothricin II J Robinson, O E Graessle Mary Gundel and R H Silber —p *22*
Chronic Toxicity of Sulfites. O G Fitzhugh, Lila F Knudsen and A A Nelson —p *37*
Action of Picrotoxin and of Nikethamide (Diethylamide of Pyridine 3 Carboxylic Acid) on Neuromuscular Conductivity F Huidobro and J Jordon —p 49
Action of Erythrophleum Alkaloids on Isolated Mammalian Heart. Harriet M Maling and O Krayer —p 66
Influence of Epinephrine and Atropine on Pulmonary Pressor Action of Histamine R A Woodbury —p *79*
Certain Inhibitory Properties Possessed by Homologous Series of p-n Alkyloxyphenylethylamines W A Broom and E J Wayne —p 83

**Effects of Drugs on Asthma Produced by Histamine** —Loew and his associates have published data indicating that benhydryl alkamine ethers and other antihistamine agents are effective in reducing the severity of bronchoconstriction following exposure of guinea pigs to atomized histamine solutions It is important to determine whether the drugs found to be effective are limited to those employed clinically by virtue of their recognized efficacy in bronchial asthma and to those which possess a demonstrable antihistamine or antispasmodic action A comparison was made of the effectiveness of bronchodilator drugs, uterine and gastrointestinal antispasmodics, and other types of drugs in experimental asthma induced with atomized histamine The authors found that trasentin, pavatrine and syntropan failed to alleviate experimental asthma induced by histamine Effective antispasmodic drugs in order of decreasing potency were epinephrine, benadryl, isonipecaine, atropine, papaverine and aminophylline Bronchoconstriction referable to inhalation of histamine was not diminished by ergotamine tartrate, the local anesthetics procaine and nupercaine, or by respiratory depressants such as morphine and pentobarbital Physostigmine and ephedrine increased the severity of the experimental asthma The failure of procaine and nupercaine to decrease histamine shock is of experimental interest because procaine is frequently used as a local anesthetic when intravenous injections are made in experiments dealing with histamine and anaphylactic shock

## Medical Annals of District of Columbia, Washington

**15** 1-54 (Jan) 1946

Syndrome of Premature Ventricular Excitation in Which PR Interval is Short and QRS Complex is Prolonged (Wolff Parkinson White Syndrome) Report of 4 Cases. J M Barker —p 1
Toxicity and Potential Dangers of DDT to Humans and Warm Blooded Animals P A Neal and W F von Oettingen —p 15
Study to Determine the Antibacterial Efficiency of Combined Tyrothricin and Sulfadiazine R Kelso and B Thompson —p 20
Successful Use of Oral Penicillin in Treatment of Subacute Bacterial Endocarditis Report of Case F G Burke S Ross B J Walsh and P A McLendon —p 22

## New England Journal of Medicine, Boston

**234** 103-136 (Jan 24) 1946

Hodgkin's Disease VII Treatment and Prognosis H Jackson Jr and F Parker Jr —p 103
Wolff Parkinson White Syndrome N H Boyer —p 111
Syncope in Blood Donors W C Moloney, L R Lonnergan and J K. McClintock —p 114
*Electroencephalographic Studies in Diabetes Mellitus. M Greenblatt, J Murray and H F Root —p 119
Symposium on Medical Sociology Medical Economics N Sinai —p 122.
Parathyroid Adenoma —p 125
Ewing's Sarcoma of Pubis —p 127

**Electroencephalographic Studies in Diabetes Mellitus** —In a study of 40 patients with uncomplicated diabetes Greenblatt and his associates found that the incidence of cerebral dysrhythmia as evidenced by abnormal electroencephalograms is not increased over that in normal persons Long duration of diabetes does not alter the incidence of cerebral dysrhythmia Administration of insulin over long periods has no apparent effect on the electroencephalograms Fifty-one per cent of diabetic patients with frequent severe insulin reactions were found to have abnormal electroencephalograms Thus the electroencephalograms are of aid in the evaluation of the stability of cortical function in diabetic patients with such reactions

## New York State Journal of Medicine, New York

**46** 113-224 (Jan 15) 1946

Effective Control Program for Rabies R H Broad and A Zeissig —p 167
Possibility of Exterminating Mammary Carcinoma in Mice by Simple Preventive Measure Its Practical Implication for Human Pathology L Gross —p 172
Thrombophlebitis and Phlebothrombosis L L Hobler —p 177
Destructive Granuloma of Bone in Skull M I Salomon and C. L. Engelsher —p 183
Extreme Case of Alkalosis with Necropsy Findings A A Fischl and Irene Garrow —p 184

**46** 225-336 (Feb 1) 1946

Observations Made During Poliomyelitis Epidemic in 1944 in Hornell State Health District, New York J A Conway and D E Bigwood Jr —p 275
Diagnosis and Management of Certain Tropical Diseases in Returning Veterans W Kaufmann —p 290
Review of Various Methods Used in Treatment of Phlebothrombosis of Extremities F W Bancroft —p 299
Group Practice E C Foster and J A Hatch —p 306
Functions of a Blood Bank S M Bouton Jr —p 311
Artificial Pneumoperitoneum by Cul De Sac Puncture New Technic for Pelvic Pneumograms A Decker —p 314
Radiologic Diagnosis of Ectopic Pregnancy R H Marshak —p 317

**46** 337-448 (Feb 15) 1946

Rh Factor in Pregnancy and Isohemolytic Disease R J Pieri and R C Schwartz.—p 387
Comments on War Neuroses N A Levy —p 395
Colloidal Sulfur Some Pharmacodynamic Considerations and Their Therapeutic Application in Seborrheic Dermatoses F C Combes. —p 401
Objectors to Electric Shock Treatment Are Refractory to Its Therapy H L Gordon —p 407
Management of Varicose Ulcers L. K Stalker —p 411
Duodenal Obstruction Caused by Chronic Pyelonephritis and Hydronephrosis B Sherwin and E E Rockey —p 414
Occlusion of Aortic Bifurcation with Theoretical Considerations Regarding Production of Signs and Symptoms in 2 Cases E. E Santemma —p 416

## North Carolina Medical Journal, Winston-Salem

**7** 1-44 (Jan) 1946

Suggested Plan for Statewide Voluntary Health Insurance V K Hart —p 1
Practical Use of Digitalis R A Broome Jr and E S Orgain —p 3
Meningitis Due to Hemophilus Influenzae Report of Case Treated with Sulfadiazine Streptomycin and Antiserum with Recovery L J Butler Martha Dukes Yow and J B Reinhart —p 8
Cervical Ribs and Scalenus Anticus Syndrome Review of Literature and Report of Case J F Patterson Jr —p 13
Antimycotic Effect of Diethylstilbestrol F K Harder —p 20

**7** 45-92 (Feb) 1946

Richard Henry Whitehead W deB MacNider —p 45
Pathogenesis of Toxemias of Late Pregnancy J K. Aikawa —p 46
Incarceration of Meckel's Diverticulum in Femoral Hernia Report of Case F M Simmons Patterson —p 59
Cardiac Glycosides R A Broome Jr and E S Orgain —p 61
Analysis of 3 701 Admissions to United States Public Health Service Medical Center in Durham N C H L Holley and G Fein —p 65

## Northwest Medicine, Seattle

**45** 1-72 (Jan) 1946

Mediterranean Anemia Report of Case in Negro M H Stiles, C H Manlove and C D Dangerfield—p 23
Narcosynthesis Under Sodium Amytal Adjunct to Psychiatric Diagnosis and Treatment. T M Barber—p 27
Treatment of Supracondylar Fractures of Humerus in Childhood J F LeCocq and I Slade—p 30
Disability Evaluation of Injured Extremity W C Smith—p 33
Intrasternal Route in Acute Circulatory Failure D M Green—p 38
Extrauterine Pregnancy Five Year Study A F Lee—p 40

**45** 73-144 (Feb) 1946

Hepatic Abscess Secondary to Perforated Duodenal Ulcer M G Beaver P B Davis and R S Smith—p 94
Primary Carcinoma of Liver in Infants and Children M S Rosenblatt and J A May—p 96
Results of Four Years of Tuberculosis Screening by Selective Service and Armed Forces Induction Station R E Purvine and H M Erickson—p 98
Short PR Interval Syndrome M Scarf and C W Coffen—p 100
Symptoms Developed in Workers Cutting and Welding Galvanized Iron T E P Gocher—p 102
Disability Evaluation of Injured Extremity W C Smith—p 104

## Occupational Medicine, Chicago

**1** 1-98 (Jan) 1946

Physical Capacity for Work Principles of Industrial Physiology and Psychology Related to Evaluation of Working Capacity of the Physically Impaired V K Harvey and E P Luongo—p 1
*Spontaneous Coma Due to Hypoglycemia in Undernourished Persons. H Gounelle and J Marche.—p 48.
Group Psychotherapy for Neuropsychiatric Patients Being Discharged from the Army J J Michaels and E. O Milton—p 60
Latent Neurologic Manifestations Following Decompression Report of Case of Severe Reaction Following Ascent to 38 000 Feet D W Lund J H Lawrence and L B Lawrence—p 75
*Penicillin Lozenges in Treatment of Oral Infections R. O Levitt and W W Leathen—p 81

**Hypoglycemia in Undernourished Persons**—Gounelle and Marche observed spontaneous hypoglycemia among persons subjected to prolonged undernourishment in France during the years 1941 and 1942 Of interest is the occurrence of spontaneous hypoglycemia in persons whose diets were deficient in proteins and fats and not in carbohydrates Apparently deficiency of protein and fat causes hypoglycemia, just as it causes edema In most of the cases there is a characteristic clinical picture associated with complete coma disturbances of respiration, muscle spasms and a bilateral Babinski sign Special note is made of the frequent absence of convulsions and perspiration, the opposite of what is generally observed in coma caused by hypoglycemia with hyperinsulinism Examination of the blood reveals a fall in blood sugar generally to below 0 4 Gm in a liter There is a moderate excess of nitrogen in the blood (around 1 Gm), the two disturbances seem to be associated. Diagnosis of these attacks is often confused with meningeal hemorrhage. Therapy should be instituted immediately in the form of intravenous injection of hypertonic dextrose solution (minimum 40 cc. of a 30 per cent solution) When successful, a return to consciousness is noted as soon as the injection is finished Some irreversible cases exist in which all therapy fails After consciousness is regained, sugar syrup should be given by mouth and dextrose solution hypodermically A diet rich in fats and protein should be given for a long period because the blood sugar often remains low for weeks and recurrence of the disease is frequent Anatomic study of nutritional spontaneous hypoglycemia revealed atrophy of the glandular part of the hypophysis and lesions of the diencephalon There are apparently two factors associated in producing this syndrome an unbalanced diet, particularly a deficiency of fat and protein, and an endocrine deficiency acting on the system causing hyperglycemia (hypophysis, adrenals, thyroid) secondary to the nutritional deficiency

**Penicillin Lozenges in Oral Infections**—One hundred and seventeen patients of the armed forces with acute infection of the nasopharynx and tonsils were treated with penicillin lozenges of 500 units strength each The lozenge was made of acacia and penicillin in the required dosage and included powdered sugar and peppermint as flavoring agents The patients were warned not to chew or suck the lozenge but to permit it to dissolve Of these 117 patients cures were produced rapidly in 110 (94.2 per cent) Hospital days were fewer for patients treated with penicillin than for those receiving nonspecific treatment. Eighty-seven patients were successfully treated on an outpatient status, thereby saving many hospital beds and man hours for effective duty Vincent's infections of the mouth are successfully treated with penicillin lozenges Penicillin locally appears to have no effect on deep tonsillar infections

## Oklahoma State Medical Assn Jour, Oklahoma City

**39** 1-54 (Jan) 1946

Hemorrhage and Shock in Obstetrics E N Smith—p 1
Chronic Sinusitis Safe Management and Treatment J M McMillan—p 9

**39** 55-100 (Feb) 1946

Occupational Dermatitis C Brundage—p 55
Pathologic Aspects of Certain Surgical Diseases of Stomach and Duodenum C Donovan—p 58
Surgical Treatment of Intestinal Obstruction Preoperative Preparation J H Robinson—p 61

## Psychoanalytic Quarterly, Albany, N Y

**15** 1-138 (Jan) 1946

The Function of Drawings and Meaning of the Creative Spell in a Schizophrenic Artist E Pappenheim and E Kris—p 6
Telepathy and Problems of Psychoanalysis J Eisenbud—p. 32
Psychoanalysis and History The Nibelungs and the Bible F Wittels—p 88

## Psychosomatic Medicine, Baltimore

**8** 1-74 (Jan.-Feb) 1946

Stress Tolerance Test Preliminary Experiments with New Projective Technic Utilizing Both Meaningful and Meaningless Stimuli M. R Harrower and R R. Grinker—p 3
Study of Conditioned Vasomotor Responses in 10 Human Subjects L A Gottschalk—p 16
Narcolepsy as Psychogenic Symptom L. A Spiegel—p 28
*Analysis of Influence of Alcohol on Experimental Neuroses in Cats J H Masserman—p 36

**Influence of Alcohol on Experimental Neuroses in Cats**—Twenty-one cats were taught first to obtain food by opening a box, then to respond to various conditional signals and finally to solve difficult problems involving the passage of barriers and the manipulation of switches to secure their reward Masserman and Yum observed that alcoholic intoxication in the cats disintegrated the adaptive patterns to a varying degree, particularly those that were most complex and most recently learned Normal animals however, showed complete restitution of function on recovery from intoxication, little habituation to alcohol, and no signs of developing a preference for the drug The animals were subjected to special experimental procedures that induced and reinforced motivational conflicts between hunger and fear Under such circumstances they developed "experimental neuroses," characterized by pervasive inhibitions of normal goal responses, hypersensitivities and aversions to stimuli associated with the conflictful field, loss of group dominance and persistent aberrations of somatic and motor function The administration of small doses of alcohol again disintegrated these relatively complex "neurotic patterns and permitted relatively simple goal oriented responses to supervene. A significant number of cats repeatedly experiencing such relief from neurotic tensions developed a preference for alcoholic drinks, i e showed evidences of addiction to alcohol However, as their re-exploratory behavior while mildly intoxicated partially resolved conflicts, this addiction diminished until nearly normal food choices were restored

## Public Health Reports, Washington, D C

**61** 129-156 (Feb 1) 1946

Preparation of Slides for Measurement of Dust Particle Size W E McCormick.—p 129
Composition of Some Trade Name Solvents Used for Cleaning and Degreasing and for Thinning Paints A D Brandt W J McConnell and R H Flinn—p 132

**61** 157-202 (Feb 8) 1946

Influence of *p*H and Temperature on Survival of Coliforms and Enteric Pathogens when Exposed to Chloramine C. T Butterfield and Elsie Wattie—p 157

**61** 203-250 (Feb 15) 1946

Diphtheria Incidence and Trends in Relation to Artificial Immunization with Some Comparative Data for Scarlet Fever S D Collins.—p 203

## Review of Gastroenterology, New York

**13** 1-76 (Jan.-Feb.) 1946

Recovery from Botulism Coma Following Ultraviolet Blood Irradiation Knott Technic G P Miley —p 17
Evaluation of Gastroscopic Roentgen Sigmoidoscopic and Laboratory Procedures in 500 Gastrointestinal Cases H A Monat and C M Thompson —p 19
*Perforation of Esophagus Caused by Flexible Gastroscope Case Report W D Paul and E H Antes —p 23
Gastroscopy I Mechanics of Gastroscopy H Barowsky —p 25
Tuberculosis of Stomach C Windwer —p 38

**Perforation of Esophagus Caused by Flexible Gastroscope**—Paul and Antes previously reported a case of perforation of the esophagus by the flexible gastroscope at the University of Iowa Hospital. In that case death resulted within twenty-four hours. They report a similar perforation which resulted in retropharyngeal abscess formation. Considerable manipulation was necessary in order to pass the instrument into the esophagus. This was undoubtedly a factor in the causation of the retropharyngeal perforation. Prompt recognition and treatment of this complication saved the life of the patient. The 2 cases of perforation occurred in more than 1,850 gastroscopies. This complication has fortunately become rare since the introduction of the flexible gastroscope.

## Surgery, St. Louis

**19** 1-166 (Jan.) 1946

*SYMPOSIUM ON CANCER OF BREAST*

Experimental Induction of Mammary Cancer M B Shimkin —p 1
Parental Influences on Mammary Tumor Incidence C C Little —p 25
Prognosis of Benign Lesions of Female Breast S Warren —p 32
The Bleeding Nipple O J Campbell —p 40
Intraductal Biopsy of Certain Pathologic Processes of Breast R Leborgne —p 47
Sarcoma of Breast Report of 30 Cases F E Adair and J B Herrmann —p 55
Histologic Classification of Carcinoma of Breast F W Foote Jr. and I W Stewart —p 74
Technic for Radical Mastectomy C D Haagensen —p 100
Treatment of Inoperable Carcinoma of Breast with Irradiation C L. Martin —p 132
Problem of Local Recurrence After Radical Mastectomy for Carcinoma W C White —p 149
Survival Rates of Radical Mastectomy for Unilateral and Bilateral Carcinoma of Breast S W Harrington —p 154

## Surgery, Gynecology and Obstetrics, Chicago

**82** 113-238 (Feb.) 1946

Operative Closure of Patent Ductus Arteriosus A Blalock —p 113
*Blood Amylase Activity in Pancreatitis and Other Diseases Simple Diagnostic Aid D Polowe —p 115
*Amino Acids in Therapy of Disease Parenteral and Oral Administrations Compared S C Madden S H Bassett, J H Remington F J C Martin R R Woods and F W Shull —p 131
Repair of Large Abdominal Defects by Pedicled Fascial Flaps O H Wangensteen —p 144
Chemotherapy and Control of Infection Among Victims of Cocoanut Grove Disaster M Finland C S Davidson and S S Levenson —p 151
Experience in Management of Abdominal Wounds of Warfare F J Jarvis W L. Byers and E V Platt —p 174
Effects of Pedicle Jejunal Transplants in Stomach on Mann Williamson Dogs H C Saltzstein and I J Kurtz.—p 194
Primary Carcinoma of Fallopian Tubes K A Lofgren and M B Dockerty —p 199
Spontaneous Rupture of Spleen J B Littlefield.—p 207
*Accidental Transplantation of Cancer in Operating Room Case Report W W Brandes W C White and J B Sutton —p 212
Intercorporal Bone Graft in Spinal Fusion After Disk Removal I A Taslow —p 215
Initial Surgical Treatment of Penetrating Wounds of Rectum H Lauf man —p 219
Use of Curare in Anesthesia for Thoracic Surgery Preliminary Report Phyllis Harroun and H R Hathaway —p 229

**Blood Amylase Activity in Pancreatitis**—Polowe's study is based on 78 blood amylase activity determinations on 69 patients. Moderate to intense blood amylase activity is almost always associated with disease of the pancreas. Normal or decreased blood amylase activity almost always excludes pancreatitis. Where pancreatitis exists in conjunction with a normal or decreased blood amylase activity it may be safely assumed, if the patient's clinical status bears it out, that the pancreatitis has subsided or is subsiding. A slightly increased activity of the blood amylase may be regarded as indicating pancreatic involvement secondary to pathologic change elsewhere. When in doubt, tests should be repeated every day or every other day. The presence of multiple pathologic changes is the rule rather than the exception in acute pancreatitis. Biliary tract disease is the commonest complicating factor. An attack of acute pancreatitis may be the first clinical sign of the presence of biliary tract disease. In acute pancreatitis a history of repeated attacks of epigastric pain, sometimes dating back several years, may be obtained in almost every case. Decreased or absent blood amylase activity in this series of 69 cases was in no instance associated with acute pancreatitis. The liver is one of the main sources of blood amylase, and decreased or absent blood amylase activity may be interpreted as evidence of impaired liver function. When so interpreted the test should be corroborated by other liver function tests.

**Parenteral and Oral Administration of Amino Acids**—Madden and his associates point out that nitrogen balance has been obtained in human beings with threonine, valine, leucine isoleucine, lysine tryptophan, phenylalanine and methionine. The mixtures used by the authors contained in addition to the aforementioned eight amino acids, histidine, arginine and aminoacetic acid. For parenteral administration the amino acids were dissolved in distilled water just below the boiling point filtered and autoclaved and were given intravenously or subcutaneously in 6 to 13 per cent concentrations. In the first patient, who had chronic ulcerative colitis, nitrogen balance and considerable weight gain were obtained during eighty-five days when amino acids furnished the bulk of the nitrogen intake (85 to 93 per cent). Synthetic mixtures of the ten amino acids essential for the growth of rats and aminoacetic acid provided this nitrogen, except for the period when the protein hydrolysate amigen was given. Neither the amino acid mixture nor the protein hydrolysate amigen was quite as well utilized parenterally as orally and neither was quite as well utilized orally as the better natural food proteins. Omission of histidine from a mixture of amino acids resulted in a negative nitrogen balance. During the oral feeding periods nitrogen retention was considerably greater than during the injection periods. The clinical condition of the patient improved. Observations on 2 other patients proved the value of amino acid mixtures in the preoperative and postoperative nutrition. The case of a child with an unhealed burn of one year's duration demonstrated that a high protein intake may shorten illness and save lives and that the best source of a high protein intake is a diet of natural foods—useful and spectacular though parenteral feeding may be. A high protein intake by this protein depleted patient brought about complete healing after all other treatment had failed. The authors stress that proper mixtures of amino acids are capable of providing the protein nitrogen requirements of man and animals over long periods. Indications for the use of amino acids exist only when natural protein cannot be effectively used.

**Accidental Transplantation of Cancer in Operating Room**—Brandes and his associates discuss a case in which, several months after a radical mastectomy for a highly malignant scirrhous carcinoma of the breast of a woman aged 47, cancer nodules were found in the skin of the donor site on the opposite thigh. The usual precautions had been taken after biopsy of the tumor and before the mastectomy, viz., changing of operators' and nurses' gloves and redraping and reprepara tion of the patient. However, after the mastectomy, when a defect in the skin over the operative site was to be covered, a skin graft was taken from the left anterior thigh without first changing the contaminated gloves used at operation. Washing the gloves in sterile distilled water was apparently insufficient and tumor cells were transferred from the operative site to the raw donor area, where they survived and gave rise to tumor nodules.

## Wisconsin Medical Journal, Madison

**45** 1-172 (Jan.) 1946

Legal Pitfalls for Medical Men W C Woodward —p 33
Wisconsin's Medical Schools University of Wisconsin Medical School Madison W S Middleton —p 34
Marquette University School of Medicine Milwaukee. E. J Carey —p 38

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

### Archives of Disease in Childhood, London

20 145-188 (Dec.) 1945

Infection in Infancy. R. Cruickshank.—p. 145
Clinical Material of Health in Pediatrics: Where to Get It and How to Use It. C. McNeil.—p. 151
Nature of Still's Disease: Report of Case. F. A. Langley.—p. 155
Decrease of Serum Cholesterol Ester in Hemolytic Disease of Newborn. V. Rothe-Meyer and Evely V. Hickmans.—p. 160
Osteomyelitis of Jaws in Infancy Treated with Penicillin. V. M. Jamby and L. Sagorin.—p. 166
Measurement of Nutritional Level of Thiamine in Children by Estimation of Urinary Excretion. E. C. Allibone and E. Finch.—p. 169

### British Heart Journal, London

8 1-52 (Jan.) 1946

Mechanism of the Wenckebach Type of Auriculoventricular Block. G. M. Deckerd and A. Pusin.—p. 6
Hypotonia Tests in Coronary Disease. G. Bjørck.—p. 17
Myxedema with Pericardial Effusion. R. Schnitzer and D. Gutmann.—p. 27
Angina Pectoris with Associated Left Paroxysmal Pain. H. G. Miller and R. Daley.—p. 29
Induced Changes in Circulation in Constrictive Pericarditis. P. H. Lyons and C. S. Burwell.—p. 33
*Paravertebral Block and Electrocardiogram in Angina Pectoris. K. Braun.—p. 47

**Paravertebral Block and Angina Pectoris.**—Braun studied the electrocardiogram in 12 patients who had frequent attacks of angina pectoris before and shortly after paravertebral sympathetic block. Of 11 cases with cardiographic abnormalities before the block, 8 showed an improvement of the cardiogram. The T waves which before the block were flat, diphasic, isoelectric or negative, showed a tendency to return to normal. The improvement of the cardiogram did not always coincide with the relief of pain.

### British Journal of Radiology, London

19 45-88 (Feb.) 1946

Responsibility for Accidents in Radiotherapy Department. W. M. Lerry.—p. 45
Effective Atomic Number and Energy Absorption in Tissues. F. W. Spiers.—p. 52
Anaerobic Cellulitis Due to Perforation of Colon: Case Report with Illustrations of Radiographic Appearances. F. H. Kemp.—p. 64
Displacement of Radiographs by Scintigram. G. H. Illingworth.—p. 67
Localization of Foreign Bodies in Chest: Practical Report. C. J. Hodgson.—p. 70
Anatomy of Blood Vessels of Human Lung as Applied to Case Radiology. T. Lodge.—p. 77

### British Medical Journal, London

1 193-226 (Feb. 9) 1946

*Effect of Daily Vitamin Supplement on Health and Development of Children. E. R. Bransby, J. L. Burn, H. E. Magee and D. M. Markenzie.—p. 193
Effect of Bias on Human Ear. F. B. Thomas.—p. 197
Hippuric Acid Test in Pregnancy. W. Lagueux and H. Oracle.—p. 201
Sulfapyridine Anemia in Gurkhas. C. W. Heale.—p. 202
Acute Pancreatitis. V. G. Godfrey.—p. 203

**Effect of Daily Vitamin Supplement on Children.**—A total of 1,620 children aged 5 to 14 years attending elementary and secondary schools in Stoke-on-Trent and Salford were divided into two groups, one of which received on each school day for a year (1943-1944) a vitamin capsule containing vitamin A 4,000 international units, vitamin $B_1$ 1 mg., riboflavin 2 mg., nicotinamide 20 mg., ascorbic acid 30 mg. and vitamin D 400 international units. The other group received a placebo free of vitamins. The vitamin supplement had no consistent effect on growth, strength, endurance, fatigue, potential incidence or severity of clinical conditions, hearing and absenteeism from school. In the analysis of the data the children were grouped according to social, economic and nutritional status, but no effects of the vitamin supplement could be discerned on the aforementioned criteria. The vitamin supplement had a beneficial effect on gingivitis in Stoke but not in Salford. Evidence from a further series of trials indicated that ascorbic acid alone has no beneficial effect on that condition. Dietary studies made in conjunction with the test showed that the average ascorbic acid intake in the diets was well below the intake recommended by the National Research Council (United States) and that many children probably had intakes of less than 10 mg. daily over long periods. The absence of effect of the vitamin supplement and the generally good nutritional state of the children threw doubt on the validity of the National Research Council standards.

### Glasgow Medical Journal

27 1-28 (Jan.) 1946

Hemoglobin Levels in Blood Donors. Alice J. Marshall.—p. 1
*Ehlers-Danlos Syndrome: Description of 3 Cases. A. Brown.—p. 7
Two Cases of Neonatal Tuberculosis. J. Buchanan.—p. 12

**The Ehlers-Danlos Syndrome.**—Brown says that the Ehlers-Danlos syndrome is characterized by hyperelasticity of the skin, hyperextensibility of joints and a hemorrhagic tendency. Two of the patients mentioned by the author, a mother and daughter, showed hyperextensibility of joints and a hemorrhagic tendency. In four generations of their family 19 of 47 individuals were affected by a similar or closely related defect. Among affected members of this family hyperelasticity was minimal in the earlier and a dominant feature in later generations. An unusual friability of the skin showed an inverse relationship. A third case is described in which increased friability of skin and subcutaneous tissues was associated with almost entire loss of body hair, slight hyperelasticity of skin and a hemorrhagic tendency. These features developed at the age of 53 and there was no evidence of a hereditary element.

### Lancet, London

1 185-220 (Feb. 9) 1946

Chemotherapy of Pneumococcal Meningitis. H. V. Smith, E. S. Duthie and H. Carnes.—p. 193
Tubercle Bacilli in Pleural Effusion of Young Adults. H. G. Close.—p. 193
Criteria of Eosinophilia. G. Discombe.—p. 195
*Nutritive Values of Wheat Flours of Different Extraction Rates. Harriette Chick, A. M. Copping and E. B. Slack.—p. 196

**Nutritive Values of Wheat Flours.**—Chick and her associates show that the content of different B vitamins in wheat flours milled to contain 100 per cent (whole wheat) 85 per cent, 80 per cent and 70 per cent (white flour) of the grain, progressively decreases as the degree of extraction is lowered. The B vitamins tested included vitamin $B_1$ (thiamine), riboflavin, vitamin $B_6$ (pyridoxine), nicotinic acid, pantothenic acid and biotin. In many tests the content of thiamine and riboflavin in flours of 85 per cent extraction was of the same order as that in whole wheat flour; the content in flours of 80 per cent extraction was usually much less. In growth experiments with young rats a lowering of the growth promoting value of the proteins in the flours was demonstrated when the degree of extraction of the wheat fell from 100 per cent to 70 per cent in spite of the fact that the digestibility of the nitrogen of the latter was greater than that of the former. The productivity of the food and nitrogen consumed when the diet contained flours of 85 per cent extraction was not inferior to that observed with whole wheat (100 per cent) flour; the proportion of the nitrogen consumed which was retained in the rats' bodies was however slightly less (24 per cent compared with 26.8 per cent).

### Proceedings of Royal Society of Medicine, London

39 59-102 (Dec.) 1945 Partial Index

Hypertension. T. I. Bennett.—p. 59
Training of Clinical Teachers. V. B. Capon.—p. 65
Trikomethyl Alcekol (Avertin Basenthol) 1929-1945. G. Edwards.—p. 71
Lupus Vulgaris Treated with Cauterel. G. B. Dowling and E. V. F. Thomas.—p. 96

39 103-142 (Jan.) 1946 Partial Index

Reflections on Development and Present General Application of Acrylic to Conservative Procedures. P. Cutler.—p. 103
Discussion on Surgery of Patent Ductus Arteriosus: Infected and Uninfected. J. B. Hunter and others.—p. 107
Acute Pneumonia in Military History. J. A. Glover.—p. 115
Cardiac Folk Lore. J. D. Pollett.—p. 119
Unsuspected Intestinal Granuloma. E. A. Cockel.—p. 122

## Journal de Medecine de Lyon

27 1-44 (Jan 5) 1946 Partial Index

*Analysis of Sternal Puncture in Posthemorragic Anemias P Croizat L Revol and Che Yu Shou —p 7
Clinical Study of Cardiac Output J Enselme —p 13
Fifteen Years of Bronchial Endoscopy (1930 1945) Balance Perspective of Future P Mounier Kuhn —p 25
Treatment of Generalized Idiopathic Epilepsy M Girard —p 37

**Sternal Puncture in Posthemorrhagic Anemias** —Croizat and his associates studied the sternal punctate of 31 patients with posthemorrhagic anemia following severe hemorrhage from various causes Medullary hyperplasia observed in all cases was characterized by an increase in the ratio of the erythroblasts, often more than 40 per cent but rarely exceeding 50 per cent All other medullary changes, particularly decreases of neutrophil granulocytes, were relative or secondary to the erythroblastosis. The cause of the hemorrhage did not have a determining effect on the punctate The character of the hemorrhage had some influence The erythroblastosis which resulted from repeated small hemorrhages seemed to be more important than that from severe acute hemorrhages, in the latter cases the hemohistioblasts and the plasmocytes tended to increase The degree of anemia had little effect on the global ratio of the erythroblasts, but the most immature of these cells were more abundant as the anemia was more pronounced In all the hypochromic anemias, particularly the posthemorrhagic type, disturbances of the maturation at the erythroblasts may occur and are especially pronounced at the orthochromatic stage Erythroblastosis starts within the first two days after the hemorrhage and ceases at the time the ratio of the red blood corpuscles is restored to normal

## Presse Médicale, Paris

53 677 688 (Dec. 15) 1945

Staphylococcus Antitoxin Decade of Therapeutic Application to Diseases Caused by Staphylococcus in Man and in Domestic Animals G Ramon, R Richou, P Mercier and the late G Holstein —p 677
Humoral Balance of Hunger Osteopathy L. de Gennes and G H Deltour —p 678
Cholecystography with Biliselectan [β (4 Oxy 3 5 Diiodophenyl) α Phenyl propion] H Pons —p 679
*Infiltration of Right Splanchnic Nerve Urgency Treatment of Hyperalgesic Vesicular Syndrome G I Bonnet —p 680

**Infiltration of Splanchnic Nerve for Gallbladder Colic** —Bonnet reports 5 cases of severe gallbladder pain in which immediate relief was obtained with procaine hydrochloride infiltration of the right splanchnic nerve It is suggested that by interrupting the sensory tract of the sensomotor splanchnic nerve the secondary painful reflex contraction of the gallbladder is suppressed The analgesia may last for days or months Repeated infiltration at an interval of one or two days is required in the presence of severe biliary colic resistant to morphine or antispasmodics Procaine hydrochloride infiltration of the right splanchnic nerve should not be performed in acute surgical syndromes The author recommends the procedure for atony of the gallbladder, biliary colic resistant to morphine or antispasmodics or for patients intolerant to these drugs, and for true biliary dyskinesia, such as hyperkinetic gallbladder and spasm of the sphincter of Oddi

## Monatsschrift für Geburtshilfe u Gynäkologie, Basel

120 169-224 (Oct) 1945

Study on Infanticide P Hussy —p 13
Rh Factor Its Pathologic Significance and Heterospecific Pregnancy J P Hoet J Vandenbroucke and P De Somer —p 184
Size of Nucleus of Follicular Epithelia and of Granulosa Lutein Cells in Human Ovary E Hintzsche —p 200
*Comparative Estrogenic Activity of Implanted Crystalline Estradiol or Benzoate Estradiol in Ovariectomized Women J Ferin —p 214

**Estrogenic Activity of Implanted Crystalline Estradiol** —Ferin compares the estrogenic effect of implants of 50 mg of estradiol and of 3 mg of estradiol monobenzoate in women after oophorectomy Sites for implantation were studied Implanted pellets of benzoic ester had little or no effect, probably because of slow daily absorption of amounts below the threshold value Differences were found in the sensitivity of various tissues to estrogenic substance in the same woman and also in the same tissues at various times

## Medicina Clinica, Barcelona

5 171-242 (Sept) 1945 Partial Index

Mental Disturbances Following Use of Quinacrine E Guija Morales —p 180
Sepsis of Biliary Origin J Pi Figueras —p 184
Convulsion Urticaria R Trouchtman —p 187
Residual Induration After Appendectomy P Piulachs —p 192
Sciatica by Compression (Diskal Sciatica) and Neuritic or Idiopathic Sciatica I De Gispert Cruz —p 194
*Hepatic Cirrhosis Due to Brucellosis A Abellán Ayala —p 201
Gangrenous Appendicitis R. Montagut Cundrad —p 207
Thrombophlebitis of Cavernous Sinus Cured by Penicillin R Doménech Blade and G Gimenez Andreu —p 209

**Hepatic Cirrhosis and Brucellosis** —Abellan Ayala reports 3 cases of ascitic cirrhosis and brucellosis. The author emphasizes the importance of study of the liver in brucellosis and precaution in the use of arsphenamine and other hepatotoxic drugs in such cases

## Acta Dermato-Venereologica, Stockholm

26 111-204 (Dec.) 1945

*Importance of Bacterial Allergy for Development of Cutaneous Infections Due to Staphylococci J Bjæ —p 111
Incidence of So-Called Resistant Primary Syphilis in Sweden C Bruck —p 137
Parallel Striae of Lumbar Area as a Sign of Spina Bifida Occulta H G Hadley —p 155
Rheumatic Fever Eruptions. H G Hadley —p 157
Two Types of Joint Complaints by Antisyphilitic Treatment E. Hollstrom —p 159
Effects of Sulfur on Skin Clinical and Experimental Observations with Aqueous Solution of Polythionic Acids ('Polythiosol') P Møller and S Lomholt —p 169
Erythrocyte Sedimentation Rate in Acquired Syphilis T E. Olin —p 175

**Bacterial Allergy in Cutaneous Infections Due to Staphylococci** —Bjæ produced hypersensitiveness of the skin against staphylococcic infection by injecting rabbits with 0 5 cc. of a staphylococcus vaccine intracutaneously The hypersensitiveness reached a maximum after five to seven weeks and then declined in spite of continued injections The titer of the hypersensitiveness was determined by the allergic cutaneous reaction produced by the intracutaneous injection of 0 05 cc. of a staphylococcus filtrate in increasing dilutions Intracutaneous injections of a mixture of decreasing amounts of the filtrate with a constant amount of antitoxic serum did not influence the reaction which developed after the injections of staphylococcus vaccine Intracutaneous injections with various other bacteria such as hemolytic streptococcus, pneumococcus and Salmonella proved that the cutaneous reaction was specific. Neither by intracutaneous nor by intravenous injections of the serum of sensitized rabbits could the hypersensitiveness be passively transmitted to normal rabbits In the sensitized rabbits a minimum dose of the bacteria caused considerable local reaction (abscesses) after intracutaneous or subcutaneous injections of either living or formaldehyde killed cultures. The yellow staphylococcus produced more pronounced reactions in the allergic rabbits than the white "avirulent" staphylococcus, but the latter also produced severe lesions in sensitized animals. White staphylococci produced lesions in rabbits sensitized to yellow staphylococci and vice versa Attempts to produce furunculosis in the allergic rabbits failed when virulent staphylococci were rubbed into the skin of the animals or when bandages soaked in such cultures were applied to the skin Intracutaneous or subcutaneous injections of vaccine failed to desensitize the allergic rabbits After intravenous injections of 5 cc of the staphylococcus filtrate which contained possibly a factor of hapten nature the rabbits became completely desensitized in a short time The same effect was produced with the intravenous injection of 10 cc of a concentrated filtrate A preliminary therapeutic trial by intravenous injections of the filtrate was made in 3 cases in which there were chronic staphylococcic infections of the skin In the first case, in which there was severe sycosis of the beard, the treatment was ineffective. In a second case, of furunculosis of the lower extremities, improvement occurred but the disease recurred after treatment was discontinued In a third case, of severe facial acne, there was definite improvement In the course of the treatment reactions were observed in all 3 cases which may have been due to impurities in the filtrate

# Book Notices

**Clinical Roentgenology of the Heart** By John B Schwedel, M D Lt Commander M C (V)S U S N R Annals of Roentgenology Volume XVIII Cloth Price $12 Pp 380, with 749 illustrations. New York Paul B Hoeber Inc 1946

Progress in the early detection and understanding of heart disease has been continuous during the past fifty years Fluoroscopy has not been generally used by cardiologists but some physicians have studied it and contributed significant observations to our knowledge of the beating heart and its great vessels Unlike physical examination and electrocardiography, fluoroscopy has not been given its proper recognition as an essential part of a complete examination of the heart After extensive experience in cardiac fluoroscopy Dr Schwedel has written a comprehensive yet easily understandable book on the subject. Early chapters deal with methods of examination of the patient, cardiac measurements, normal cardiac contours and variations that accompany age, body build, sex, posture, respiration, phases of the cardiac cycle and other minor features *Suggestions that will be of help to the beginner and* of interest to the cardiologist are found among the many sound recommendations in the first chapters Various chambers of the heart are discussed, beginning with the left ventricle and ending with the right auricle

Many well chosen and remarkably clear illustrations are interspersed throughout the text All the illustrations are reproductions of the fluoroscopic image, and the author has done well in avoiding the usual roentgenograms—a practice unfortunately followed by others The book is printed on a good grade of glossy paper, so that the clarity of the fluoroscopic findings is retained Many line drawings to the right of the fluoroscopic pictures point out the salient features of the condition under discussion The author has used remarkable restraint in holding the retouching of fluoroscopic plates to a minimum Retouching is done only when important features would have been missed or when they appeared so vague that they might have been misinterpreted Unfortunately there are too few anatomic photographs showing the relation of the heart and great vessels to other structures With the wealth of clinical and pathologic material available to the author, greater use of photographs of actual pathologic specimens would have added much to the book

General cardiac enlargement is summarized in a short chapter The work of Dr Tinsley Harrison and others should have been briefly mentioned In the discussion of cardiac measurements there are a number of recognized tables However, the tables of Hodges, Adams and Gordon for the prediction of normal cardiac area and transverse diameter, using the frontal cardiac silhouette, for children are not included The discussion of the aorta and diseases of the aorta is well written, thoroughly illustrated and one of the best features of the book. A chapter on the great veins and brachiocephalic vessels is too short to be helpful to those learning fluoroscopy of the cardiovascular system Changes in the lungs often associated with or following heart disease are adequately discussed Several excellent photomicrographs of lung tissue show the pathologic condition under discussion An abundance of well chosen illustrations, proper balance among the several lung conditions and lucid explanations combine to make this chapter one that will help many in the mastery of chest fluoroscopy Discussions of congenital heart disease and cardiac displacement following changes in the thorax are also thoughtful expositions of less important features of cardiovascular conditions The section on pericarditis is a little too short. Roentgen kymograms and more electrocardiograms would have added to an understanding of adhesive pericarditis In spite of these criticisms the volume is a sound, practical guide to physicians interested in cardiology It will be of assistance to those who wish to learn the technic of cardiac fluoroscopy and will be a guide to the cardiologist in his understanding of some of the phenomena of the beating heart Books of this kind will make the medical profession realize that no examination of the heart is complete without *fluoroscopy*

**A Psychiatric Primer for the Veteran's Family and Friends** By Alexander G Dumas M D and Grace Keen Cloth Price $2 Pp 214 with illustrations Minneapolis University of Minnesota Press 1945

This book is exactly what its title describes it to be. It was written in collaboration by a psychiatrist who has had long experience with veterans and a skilful popular writer The content is sound and substantial It is centered about the problems of the uninjured veteran, the physically injured man who requires more treatment, the physically injured man who requires only job rehabilitation, and the mentally wounded Many short case illustrations are used which are sensibly condensed and make their points well It is a book which relatives of patients in veterans' hospitals and veterans undergoing treatment by physicians under the new Veterans Administration plan will find exceedingly useful The reviewer faces at the present moment the problem of giving some type of similar information to three hundred Gray Ladies and others who wish to do voluntary work in a veterans' hospital, such a book as this will certainly prove most helpful

On the critical side, it might be said that the selection of reading might have been better, for example, David H Fink's 'Release from Nervous Tension," announced as likely to "help the reader find and inherit himself," would not receive the endorsement of most psychiatrists Also the original scheme of the book is the presentation of five women waiting on the station platform of a midwestern town for the arrival of the train bringing home their menfolk from the war This excellent idea is mentioned in the first chapter and again at the first of each succeeding chapter, but unfortunately it is never carried through, which gives the reader something of a feeling of having been cheated or at least deprived of an interesting opportunity to learn of the interpersonal relationships of veterans and veterans' wives more specifically

**La protection alimentaire des Ecoliers** Par le Dr Jean Sutter Fondation française pour l'étude des problèmes humains Équipe nutrition Paper Price 150 francs Pp 181 with 16 illustrations Paris Librairie de Médicin 1945

It will surprise no one to find the French working rather desperately on the 'food problem" as it affects children of school age. This paper bound brochure (and the paper is of the poorest quality) does not attempt to 'solve" the matter of production and distribution It does, however, cast about for a look at the way other countries, notably England and the United States, are working at the daily food needs of children in their care. The statistics are by no means flattering in spite of *our notion that* we in America are "the best fed nation in the world" for there in black and white are figures from surveys made in the Bronx and in Manhattan, among other places, to prove that some of our children, at least, go to school hungry This is, to be sure, disgraceful and is not to be tolerated In fact, the boards of education in the various cities are much concerned over it, and yet it seems that no city has as yet solved quite completely the matter of distribution There is still a wanton waste of edibles on farms and in the markets partly because of the time and distance elements, since most foods are perishable This may change for the better, now that the frozen food mart is at hand Strawberries frozen in June are eaten in January and seemingly are right out of the garden The cost is still a deterrent factor and will remain so for a long time to come This is a problem the League of Nations took up, but its solution if any, is not yet at hand Perhaps the UNO may be able to work it out.

**The Physiological Basis of Medical Practice** By Charles Herbert Best C.B.E M.A M D Professor and head of Department of Physiology University of Toronto Toronto Canada and Norman Burke Taylor V.D M D F.R S Professor of Physiology University of Toronto \ University of Toronto Text in Applied Physiology Fourth edition Cloth Price $10 Pp 1169 with 497 illustrations Baltimore Williams & Wilkins Company 1945

This volume has had thirteen reprintings as well as an edition in Spanish and Portuguese. In the new edition the book is set in a two column format which saves space and makes easier reading In the reproduction the size of the illustrations has been reduced and new illustrations have been added. The new material, which represents advancement in medical knowledge, compensates for the deletions The book is one of the most complete and dependable works available in the field of applied physiology

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT, HOWEVER REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## POSTOPERATIVE ORAL FEEDING

*To the Editor*.—There is a difference of opinion at our hospital as to the time for routine feeding of postoperative patients Our staff agrees on the maintenance of the daily requirements of chlorides carbohydrates and protein administered parenterally in the form of transfusion plasma amigen glucose saline solution and distilled water However, opinion differs as to the optimum time for giving fluids and diet by mouth Some physicians routinely order nothing by mouth for the first twenty-four hours while others attempt to give a sufficient diet as soon as tolerated What is the consensus on this point?

M D, New Hampshire

[This inquiry was referred to a surgeon and an internist, whose respective replies follow ]

ANSWER.—Immediately after operation it is undesirable to allow anything to be given by mouth, particularly if the patient has had an abdominal operation or a general anesthetic, because trauma to the abdomen results in a functional physiologic ileus The length of time that such ileus exists is dependent on a number of factors Since the ileus is the result of stimulation of the splanchnics, the greater the operative trauma or the longer the persistence of trauma as in peritonitis, the longer the ileus lasts In cases in which there has been relatively slight trauma, such as an interval appendectomy, physiologic ileus lasts six to eight hours, and following this period sips of tap water or hot broth can be allowed In cases in which the trauma is more extensive, ileus lasts longer and food should be withheld until the ileus has subsided In such an instance it is frequently desirable to introduce a duodenal catheter to prevent vomiting In the absence of extensive trauma, or absence of infection, the ileus usually will have subsided within twenty-four hours After subsidence of ileus, the best stimulant to peristalsis is the administration of food One can determine the ability of the gastrointestinal tract to retain food by first giving small amounts of hot tea, fat-free broth or tap water Following this, cooked cereal can be given It is important to withhold milk, fruit juices and carbonated drinks in the early postoperative period because of the distention which these substances cause A well broiled steak is usually tolerated well shortly after the subsidence of the ileus Dry toast and jello are also tolerated early A full diet, with the exception of milk, fruit juices and carbonated drinks, is allowed soon after the administration of the more readily assimilated foods mentioned

ANSWER.—The resumption of oral feeding depends entirely on the nature of the disease, the operation and the postoperative reaction of the patient It is an individual problem Influencing factors include fever, appetite, nausea, vomiting, distention and diarrhea

At present there is a tendency to early ambulation and prompt return to a normal diet If there is no vomiting after herniotomy, cholecystectomy or appendectomy, water is given by mouth after the operation, followed by other fluids the next day If these are tolerated, a soft and finally a regular diet is allowed After gastrectomy or colectomy, parenteral fluids or only water by mouth are continued for several days before solid foods are given, depending on the factors noted

## TREATMENT OF PINWORM INFESTATION IN INFANTS

*To the Editor*.—In treating pinworm infestation what is the dose and the method of administration for gentian violet and for hexylresorcinol for a 2½ year old child who will not swallow pills tablets or capsules? What is the present status of compound santonin tablets as a pinworm treatment and what would be the proper dosage for a 2½ year old child?

M D Massachusetts

ANSWER.—The accepted treatment of infants for pinworms leaves much to be desired Infants under the age of 2 will not take tablets, and those under 3 also may object. It is advisable with small children to give the tablet with a spoonful of jam The treatment agent of choice, gentian violet, cannot be administered except in coated tablets because of the disagreeable staining of the mouth and the saliva, gentian violet stains on clothing and linens cannot be removed Hexylresorcinol must also be given in coated tablets, because the drug will burn the mucous membranes of the mouth and, furthermore, it is not very effective against pinworms If gentian violet tablets cannot be administered, the best therapy is the use of nightly enemas given for the same twenty-three day interval during which the older members of the household are taking gentian violet The value of the enemas may be enhanced by the use of 1 2,000 hexylresorcinol, but isotonic solution of sodium chloride appears to be as effective

In a critical test, santonin was administered to 20 patients with oxyuriasis in one single daily dose for ten days Nine still harbored the parasites after this treatment, 3 were negative on seven post-treatment checks and 8 were negative on an adequate number of post-treatment checks The efficacy was 55 per cent on the most favorable interpretation of the results The usual adult dosage of santonin is 1 grain (0 065 Gm) daily, and Young's rule may be used to calculate the dosage for children, using the apparent age rather than the chronological age

## CARBONATION AND WATER PURIFICATION—QUALITIES OF ALCOHOLIC BEVERAGES

*To the Editor*.—Can you advise what effect, if any, the carbonation of water has in disinfecting it? The water used is obtained from wells located several kilometers from the nearest habitation and is untreated except for filtration and reduction of the high iron content I do not know the extent of carbonation but the product is similar to seltzer waters in the United States The question is whether such water can be considered safe for drinking purposes I should also like to know of some publication dealing with the manufacture of various alcoholic beverages and analyses of their content I e is it the nature of the basic alcohol, impurities or otherwise which determines the difference between one wine or whisky and another?

James M Bunce Captain M C A U S

ANSWER.—Carbon dioxide under pressure may lower the $p_H$ of a liquid sufficiently to inhibit a number of bacteria and may thus tend to reduce the danger of spread of disease agents The inhibitory activity due to carbonation is, however variable and uncertain and is dependent on the susceptibility of the different bacteria, the buffer capacity of the liquid, the degree of saturation with carbon dioxide, the temperature and the time The acidity of beverages carbonated under pressure varies, but the $p_H$ may be as low as 3 0, whereas that of water saturated with carbon dioxide is near 4 0 Carbonated beverages purchased on the open market have been reported to contain viable Escherichia coli and other organisms, at times in large numbers, and experiments in which Eberthella typhosa, Salmonella paratyphi B and Escherichia coli were experimentally inoculated into carbonated tap water and beverages have shown that these organisms may survive for some days in carbonated liquids Survival of the bacteria was, however, reduced in comparison with that in plain liquids In milk, carbonation under pressure was found to delay but not to inhibit souring, and in ice cream carbonation failed to reduce the number of bacteria These facts do not justify reliance on carbonation for water purification, particularly since other methods, such as chlorination, are well known to be effective

Answers to the questions regarding the qualities of alcoholic beverages can probably best be found in Prescott, S C, and Dunn, C G Industrial Microbiology, New York, McGraw Hill Book Company, 1940

References

McCulloch E C Disinfection and Sterilization Philadelphia Lea & Febiger 1936
Koser S A and Skinner W W *J Bact* **7** 111 1922
Valley G and Rettger L *ibid* **14** 101 1927

## FRIGIDITY AND THE CLITORIS

*To the Editor*.—In Queries and Minor Notes in The Journal Feb 23, 1946 there is a question on frigidity and the clitoris The opinion of Greenhill is quoted that the vagina and not the clitoris is the principal sexual organ of the adult woman It is further stated that frigid women derive sexual excitement and satisfaction from the clitoris From practical observation in many cases I beg to raise a dissenting voice to these opinions In the first place I have repeatedly seen many normal well balanced adult married women whose complaints of lack of sexual pleasure and orgasm in intercourse were remedied by showing them or their husbands the position of the clitoris The apparent frigidity was then cured by a change of intercourse position so that the clitoris was stimulated or by manual stimulation To maintain that such women possess an infantile and not an adult erotic zone seems fallacious To call them frigid is a flagrant distortion of fact In the second place it seems logical on a physiologic basis that the clitoris which is morphologically similar to the glans penis and possesses the neurogenic mechanism for orgasm by friction should be the chief source of orgasm rather than the musculomembranous passage of the vagina especially after the latter has been traumatized by repeated childbirth In the third place the estimate of 35 to 75 per cent of women not deriving pleasure from intercourse is undoubtedly true but it is probably the result of a common lack of understanding of the importance of stimulating the clitoris and not because of frigidity or anatomic infantilism

Maurice J Small M D Parsons, W Va

# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL 131, NO 3 — CHICAGO, ILLINOIS — MAY 18, 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

## THERAPEUTIC RESULTS IN RHEUMATOID ARTHRITIS

OTTO STEINBROCKER M D
New York

To correlate the experience in our clinic with that of others, a survey was made of the recent literature on the treatment of rheumatoid arthritis Study of over two hundred articles revealed the well known multiplicity of therapeutic measures said to produce satisfactory results in a high percentage of patients [1] Striking discrepancies were noted in various reports on the outcome of identical methods of treatment, such as chrysotherapy [2]

This uncertainty in our therapeutic information has been summarized by Gold [3] As late as 1941 he stated

> I know of few subjects in therapeutics which seem to be in a more unsettled and unsatisfactory state than the treatment of arthritis It does not seem possible to chart the progress in this field by other than a horizontal line, with repeated spikes representing new therapeutic ventures The rise of the spike represents the "passive faith" which is so common a reaction to new agents or procedures, and the fall of the peak represents "aggressive skepticism." In few therapeutic fields do we find such sharp contrasts of views concerning matters which should be matters of fact

The chief attention in this survey was directed to the results of gold treatment - The literature of chrysotherapy proved to be a fairly typical example of the rather bewildering state of investigative methods and data in this field By this time over 6,000 cases of rheumatoid arthritis treated with gold salts have accumulated in the reports Such extensive experience would be expected to provide a valuable pool of information for any observer to compare with his own results

In going over this material, however, it soon becomes obvious that certain common denominators, to be considered later, essential for any dependable comparison or correlation of therapeutic experience, are lacking in the bulk of the work published The discussion of the literature of rheumatoid arthritis which follows, and the deductions, constitute an analysis of present day therapeutic methods in this disease There also will be recommended standards of procedure likely to correct some of the current deficiencies These criteria should yield more accurate, uniform and reliable evaluation of therapy Some of the suggestions originate here, some have been adopted already by too few writers A presentation of all of them at this time may stimulate a widespread acceptance of these standards

From the Arthritis Clinic Bellevue Hospital Fourth Medical Division (N Y U) Dr Charles H Nammack director

1 Steinbocker Otto Arthritis in Modern Practice Philadelphia W B Saunders 1941

2 Steinbrocker Otto and Blazer A Experience with Chrysotherapy in Rheumatoid Arthritis in preparation

3 Gold Harry in *Conferences on Therapy* Treatment of Rheumatoid Arthritis New York State J Med. 41: 688 1941

### SOME CONSIDERATIONS IN THE EVALUATION OF TREATMENT IN CHRONIC RHEUMATOID ARTHRITIS

In any therapeutic study of chronic rheumatoid arthritis it must be borne in mind that it is a systemic disease of undetermined origin with variable involvement and symptomatology As long as the cause is unknown, treatment must remain empirical This condition does not present a fixed clinical picture, nor does it pursue a uniform course in its localization and in its severity even in the majority of cases The clinical pattern may assume one of several characteristic forms, or combinations of them—the torpid, fluctuant or fulminating

It is not rare to find some one suffering from moderately advanced rheumatoid arthritis of five or even ten years' duration which has persisted with little obvious change or disability, occasionally without even forcing the patient to seek medical attention, so mild are the symptoms and so slight the impairment of function at the joints The torpid clinical signs and pathologic changes progress so subtly as to be distinguishable only by comparison of findings after long intervals

It also is not unusual to see a patient with rheumatoid arthritis who within a year or less has developed all the stigmas of advanced disease Most commonly, in the rheumatoid patient, we are dealing with a chronic disease which runs a fairly fluctuant life cycle punctuated by intermittent spontaneous recessions, remissions and exacerbations, mild or severe, complete or incomplete The sedimentation rate too is subject to variations at times approximating the normal even while the disease is active

Then there are the combinations of those types A patient may suffer from a low grade, torpid process which suddenly becomes restive, presents florid signs of exacerbation and goes on to a fulminating, devastating course Often a fluctuating, moderate or severe rheumatoid arthritis seems to have reached a stationary state of activity and persists indefinitely and relentlessly, holding the patient in a sort of limbo, or it may gradually or suddenly improve or halt with only slight remaining signs of inflammation and disability Any of these types of activity may slowly recede and finally resolve with no evidence of residual inflammation or only the changes due to an irreversible pathologic process The results of any treatment will be influenced by the incidence of each of these clinical types with their varying refractoriness

The spontaneous onset of improvement or remission intervenes more frequently and sooner, the earlier the

disease The exact incidence of natural recovery in the life cycle of rheumatoid arthritis during its various stages, unfortunately, is not known That it does occur with different frequency in all stages and in proportion to its severity is generally conceded, so that a time factor must be recognized in judging the effect of any form of therapy

An important peculiarity of every type of rheumatoid arthritis, at least under present methods of management, is the spontaneous recurrence of symptoms in many patients who seem to have recovered according to all ascertainable evidence One of our youngest, most rugged and responsive patients suffered a flare-up after two and one half years of clinical inactivity of the disease

Obviously a proper evaluation of treatment must take into account these innate characteristics of the disease The usefulness of therapy must be determined in such a way that our conclusions are not based on factors which may be natural episodes in the evolution of the rheumatoid process, particularly the spontaneous recessions and remissions

Although our subject is chronic rheumatoid arthritis, it is relevant to mention that in our wards in a group of 366 patients diagnosed as having acute rheumatoid polyarthritis, on general medical treatment approximately 90 per cent were discharged as recovered within three months of admission In subacute rheumatoid disease the percentage drops but is still high It is generally accepted that spontaneous recovery is apt to happen much more frequently in early chronic rheumatoid arthritis than in advanced cases With general medical measures Pemberton [4] observed complete recovery in 78 per cent of his army patients with (early) rheumatoid disease in World War I Those who are inclined to institute chrysotherapy or any specific medication for patients whose disease is of three months' duration or less, or for patients with early rheumatoid arthritis, must weigh the results in the light of these facts

*Analysis of Thirty-Four Papers on Chrysotherapy* *

| No Lumping of Results | Classification of Treated Cases According to Stages of Disease | Specific Criteria of Response Stated | At Least One Year Follow Up Period | Data on Response of Relapses |
|---|---|---|---|---|
| 21 | 16 | 15 | 7 | 6 |

* Table by Dr Alfred Blazer

As a sample of the status of recent therapeutic contributions to our subject, there is included a tabulation of the latest development, the American and British literature on chrysotherapy [5] Some of the sources of discrepancy, in my opinion, their occurrence in these publications, and the recommendations for their correction will now be considered

### INCLUSION OF PATIENTS WITH UNQUESTIONABLE RHEUMATOID DISEASE

In a therapeutic study of an unestablished drug in rheumatoid arthritis, only those patients should be included whose diagnosis is positive Some excellent treatises on the subject are marred by the failure to omit cases with a variety of chronic arthritic disorders—gonorrheal, tuberculous, chronic infectious and ankylosing spondylitis—all forms of "chronic arthritis" The number of such nonrheumatoid patients is also not specified, so that their place in the total results cannot be determined

There are many articular disorders which may resemble rheumatoid arthritis Unless precautions are taken to exclude them, inaccurate results may be obtained Some of these conditions are the specific infectious arthritides, atypical rheumatic fever, traumatic arthritis, osteoarthritis with chance elevation of the sedimentation rate, and a host of rheumatoid-like arthropathies, arthralgias and myalgias Recent authors appear to be more careful in their diagnosis of rheumatoid arthritis and in the selection of cases for special therapy, such as gold salts

### CLASSIFICATION OF PATIENTS ACCORDING TO STAGE OF DISEASE

For clinical insight and a more reliable prognosis, rheumatoid arthritis should be classified according to the stage to which it has progressed, just as in tuberculosis or heart disease An excellent classification along these lines has been worked out by Taylor [6] and seems to be worthy of general acceptance

4 Pemberton Ralph Arthritis and Rheumatoid Conditions Their Nature and Treatment Philadelphia Lea & Febiger 1929

5 Literature on Chrysotherapy

Bach F Gold Therapy in Rheumatic Diseases St Bartholomew's Hosp J **43** 206 1936

Cadham P T Specific Therapy Canad M A. J **26** 287 1932.

Cecil R L Kammerer W H and DePrume F J Gold Salts Study of 245 Cases Ann Int Med **16** 811 1942

Cohen A Goldman J and Dubbs A W The Treatment of Rheumatoid Arthritis with 417 Courses of Gold New England J Med **233** *199, 1945*

Crain D C Present Status of Sulfur Bee Venom Vitamin D Chaulmoogra Oil and Gold M Ann District of Columbia **10** 1 1941

Copeman W S C and Tegner W Gold Therapy Review Lancet **1**: 554, *1937*

Douthwaite, A H Gold Treatment of Rheumatoid Arthritis Brit J Rheumat **1** 33, 1938

Dawson M H Boots R H and Tyson, T L. Gold Salts Therapy in Rheumatoid Arthritis (Sodium Gold Thiomalate and Solganol) Tr A Am Physicians **56**: 330 1941

Driscoll R. E and Markson D E. One Hundred Cases Treated with Comparatively Nontoxic Gold Compound Illinois M J **78** 503 1940

Ellman P Laurence J S and Thorold G P Gold Therapy in Rheumatoid Arthritis, Brit M J **2**: 314 1940

Forestier J Gold Salts in Rheumatoid Arthritis Results of Six Years Experience J Lab & Clin Med **20** 827 1935

Fraser T M Gold Treatment in Rheumatoid Arthritis Ann. Rheum Dis **4** 71 1945

Furlong J J Gold Therapy in Rheumatoid Arthritis Wisconsin M J **41** 910 1942

Gardner, E. R Gold (Solganol B) Therapy in Rheumatoid Arthritis M Rec **153**: 321 1941

Graham J W and Fletcher A A. Gold Therapy in Rheumatoid Arthritis Canada M A J **49** 483, 1943

Hartfall S J Garland H G and Goldie W Gold Review of 900 Cases Lancet **2** 784 1937

Hartung E F Therapy in Rheumatoid Arthritis Including Gold Salts Bull New York Acad Med **19** *693, 1943*

Key J A Rosenfeld, H T and Tjoflat O E Gold Salts in Proliferative Arthritis *J Bone & Joint Surg* **24**: *339 1939*

Logehel R C and Hoffman R A Gold Therapy in Rheumatoid Arthritis Journal Lancet **61** 221 1941

McCarthy A C Use of Gold in Treatment of Arthritis Kentucky M J **33** 107 1941

Oren H Arthritis and Its Therapy with Gold Salts J M Soc New Jersey **33** 591 1936

Parr L J A and Shipton E. H Chrysotherapy in Rheumatoid Arthritis, M J Australia **1**: 864 1937

Pemberton H S Gold in 100 Cases of Chronic Arthritis, Lancet **1** *1037 1935*

Philips R. T Gold Salts in Rheumatoid Arthritis New England J Med **214** 114, 1936

Price A E and Lichtentritt B Gold Therapy in Rheumatoid Arthritis Ann Int Med **19**: 70 1943

Rawls W B, and others Gold Salts Analysis of Results Obtained with Small Doses Am J M Sc **207** 528 1944

Robinson D Gold Therapy in Rheumatoid Arthritis Canad M A. J **47**: 158 1942

Sashin D Spanbock J, and Kling D H Gold Therapy in Rheumatoid Arthritis *J Bone & Joint Surg* **21** *723 1939*

Scully, F J Value of Gold Salts in Chronic Arthritis Tri State M J **14** *2755 1942*

Short.[12]

Slot G Gold Treatment with Clinical Notes, Lancet **1**: *73* 1934

Smyth C J and Freyberg R H Gold Salts Preliminary Report of 80 Cases Univ Hosp Bull Ann Arbor **7**: 45 1941

Snyder, R G Traeger C, and Kelly L. Gold Therapy in Rheumatoid Arthritis Observations in 100 Cases Treated with Gold Sodium Thiosulfate and Aurocein Ann Int Med **12** *1672* 1939

Tarsy J M Clinical Experiences with Gold Salts in Rheumatoid Arthritis New York State J Med **40** 1185 1940

6 Taylor D A Table to Indicate the Degree of Involvement in Chronic Arthritis Canad M A J **36**: *608* 1937

A careful evaluation of any method of therapy certainly requires tabulation of patients according to such categories of the disease Accurate reporting should include definite information as to the proportion of early, moderately advanced and greatly advanced, active cases in the group

It is generally accepted that early rheumatoid disease shows more frequent spontaneous and therapeutic response Pathologic and physiologic disturbances in later phases of the condition may become so severe as to alter reactivity to therapeutic procedures It is possible, therefore that appreciable differences in the incidence of the stages of the disease in various published series account to some extent for the seeming discrepancies in the results Of thirty-four authors, sixteen segregated their cases according to severity, and not all of these stated the exact proportion of the various stages

## THE USE OF SPECIFIC CRITERIA FOR ASSESSING RESULTS

A survey of the reports on various "satisfactory" methods of treating rheumatoid arthritis and the conflicting outcome of identical measures employed by different workers must reveal to any discerning reader that the lack of uniform, objective and precise criteria of response is the greatest source of discrepancy in the literature

Many rheumatologists must be aware of the need for definite standards of assessing results of treatment A few have expressed their views on this subject Baylis and Hall [8] have devised a helpful "yardstick" to accomplish it The Therapeutic Score Card employed in our clinic has proved a useful means of accurate estimation of response to treatment [9]

The basic standards of judging response to treatment must be objective, free from the influence of the patient's impression and the enthusiasm of the observer Joint swelling is the pathognomonic sign of rheumatoid activity Yet it receives surprisingly little attention and is apparently accorded minor consideration by many authors in estimating the outcome of treatment

The criteria for estimating response to therapy in rheumatoid disease may be divided into three groups—objective clinical, laboratory aids and subjective clinical The most objective basis of judgment is joint swelling Joint motion and tenderness are hardly as impersonal, but they are more objective than other information to be mentioned The laboratory or technical aids of value are the sedimentation rate, the hemoglobin (or erythrocyte count) and possibly weight gain The clinical features greatly influenced by subjective favors are pain, well-being and functional capacity The last two symptoms are of doubtful significance They are so widely employed, however, that they cannot be dismissed altogether Their share in any evaluation should be kept to a minimum

Some generally accepted and precise formula for employing all these features of the disease for accurate estimation of response to treatment, such as the "yardstick" of Baylis and Hall or our Therapeutic Score Card, would lead to more reliable and helpful therapeutic investigation The difficulty in comparing various results is emphasized by the failure of nineteen of thirty-four authors to include definite criteria of response on which their reports are based, as shown in the table

## DIFFERENTIATING THERAPEUTIC EFFECTS ON RHEUMATOID ACTIVITY FROM INFLUENCE ON FUNCTIONAL CAPACITY

Naturally, in our therapeutic goals we must distinguish the reversible, active inflammatory signs of rheumatoid disease from the irreversible, fixed changes While special surgical procedures and other measures may improve or correct some of the damage done, it would be unfair to a therapeutic agent to discredit it for unresponsive features already irreparable and beyond the effects of medical therapy from the start

The most prevalent fallacy in gaging therapeutic results, however, seems to be a failure to differentiate effects on the rheumatoid process from influence on the patient When a drug is under study for treatment of such an inflammatory disease as rheumatoid arthritis, surely it must be judged by the objective evidence of subsiding activity or arrest of that disease reflected almost entirely by the response of such features as joint swelling above all, then motion, tenderness and pain The proof of the effectiveness of the remedy must remain its ability to suppress or abolish the objective signs of active disease

Beneficial influence on the patient as a whole, with enhanced well being and even increased function, does not necessarily imply similar effects on the activity of the disease Nevertheless, in some of the outstanding contributions to chrysotherapy evaluation of results is made largely on such a functional basis When the rheumatoid process is ameliorated or arrested, increased use of joints is bound to occur unless complications or irreversible changes interfere On the contrary, greater or complete functional capacity may be inspired without any effect on the rheumatoid activity This point is well illustrated by Weiss and English,[10] who state

> One has only to witness the countless thousands of people who visit shrines and faith healers Most of these people are suffering from some form of chronic arthritis Many magical shrines are famed for the piles of crutches that have been thrown away by cripples, who, for the moment, consider themselves cured but most of whom have to buy more crutches after they get home

The enthusiastic, revivalist atmosphere surrounding the inauguration of some much publicized new method of treatment also stirs into action powerful, if transient, suggestive forces Suggestion exercises its effects through various therapeutic procedures in different hands It has been said by pharmacologists that chronically ill patients often respond well to a new treatment —or a new doctor—sometimes for long periods [11]

Much temporary or lasting benefit has been observed from the whole treatment program usually employed This includes constitutional measures, physical therapy, orthopedic aids and the influence of the patient-physician relationship Specific or palliative remedies as a rule are administered as a supplement to some or all of the aforementioned regimen When a substance is under investigation for its special effects on rheumatoid arthritis, the careful investigator would be expected to exclude any other treatment or to demon-

7 Cecil R. The Necessity of Certain Criteria for the Diagnosis and Cure of Rheumatoid Arthritis Ann Int Med 2: 637 1937 Baylis and Hall.[8]

8. Baylis, B and Hall M G Gold Salts Therapy Yardstick Applied to Patients New England J Med 228: 418 1943

9 Steinbrocker Otto and Blazer, Alfred A Method of Appraising Results in Rheumatoid Arthritis The Therapeutic Score Card to be published

10 Weiss, E. and English O S Psychosomatic Medicine Philadelphia W B Saunders Company 1943

11 Hirschhorn Louis Personal communication to the author

disease The exact incidence of natural recovery in the life cycle of rheumatoid arthritis during its various stages, unfortunately, is not known That it does occur with different frequency in all stages and in proportion to its severity is generally conceded, so that a time factor must be recognized in judging the effect of any form of therapy

An important peculiarity of every type of rheumatoid arthritis, at least under present methods of manage ment, is the spontaneous recurrence of symptoms many patients who seem to have recovered accor to all ascertainable evidence One of our yo most rugged and responsive patients suffered a after two and one half years of clinical inactiv disease

Obviously a proper evaluation of treatme into account these innate characteristics The usefulness of therapy must be det a way that our conclusions are not which may be natural episodes in t rheumatoid process, particularly th sions and remissions

Although our subject is chro it is relevant to mention that of 366 patients diagnosed

*Analysis of Thirty-Fo*

| No Lumping of Results | Classification Treated Ca According Stages of |
|---|---|
| 21 | |

* Table by Dr

and ation In ors happen to degrees of improve- not identical

ology of results with the same where, an international nomenclature, was need Such a simple grouping as appar- ted (complete objective and subjective polyarthrit greatly improved (over 50 per cent resolu- mately 9 of objective signs), slightly improved (25 to 50 three per cent recovery), unimproved and worse seems to disea provide a clear and adequate grading of response to a gene therapeutic procedure in rheumatoid disease ha

## ELIMINATION OF LUMPING, OR WISHFUL STATISTICS

It is a common custom to lump all improvements, from arrested cases to slightly improved, in the conclusions with one figure for "improvement" produced by the remedy Some reports mention that "slightly improved" represents only a subjective estimate by the patient This figure usually is included in the "improvements" In this way "the inevitable 70 per cent," or higher, appear to respond to almost every agent.[12] When a drug is on trial in rheumatoid disease, gold salts for example, it is doubtful whether anything less than great improvement provides favorable testimony or dependable information to be embodied in the conclusion

It is not unusual to read an enthusiastic discussion on the treatment of a series of patients only to find that the number of arrested and/or greatly improved cases fail to support the author's partiality When he finally gives his conclusions and lumps the "slightly" and "moderately" helped patients with those experiencing greater benefit, an impressive figure for improvement is produced This misleading custom is so widespread that it is responsible for much of the cloud-

discrepar publica tion

r understanding of the true merits of therasures Its abandonment would promote more owledge and more incisive evaluation of a gent The American and British reports tment represent on the whole the most refore the most careful therapeutic studies disease Lumping was found, neverthe- reports, as shown in the table

HING THERAPEUTIC SPECIFICITY D PALLIATIVE ACTION

written about the special therapeutic remedies in rheumatoid arthritis ly little distinction made as to their merits Usually an effort is made alities to various substances based nce of "improvement" when they

in the therapy of rheumatoid position should be indicated for paration advocated Is it a specific Or is it a superior palliative, but still palliative?

The results usually are stated from left to right in columns "arrested," "greatly improved," "unimproved," "worse" The index of specificity must be recognized as the percentage of cases appearing to the left in the "arrested" column Unfortunately, in much of the discussion of many "specifics" that have been advocated in the past and recently the "arrested" column is almost blank When any remedy produces an impressive therapeutic shift to the left in the "results" columns, it is likely to command undebatable acceptance, as with penicillin, the sulfonamides and the arsenicals

The evaluation of a palliative agent is an even more formidable problem than that of a specific It would require that an ameliorative substance should be demonstrated to yield a definitely higher percentage of relief than that experienced by an untreated control group or provided by other palliative remedies The results would have to be controlled by the various safeguards and criteria already discussed An appreciably higher percentage of improvement, statistically adequate, would have to be found

The usually unmentioned distinction between specificity and palliation has befuddled much of the discussion of therapy in rheumatoid arthritis[2] The value of "specifics" has been established largely by implication There is no reason why the definite palliative action of a drug on rheumatoid disease should be considered derogatory Rheumatoid arthritis is such a serious condition that a superior palliative would constitute a valuable addition to our therapeutic resources at this time The evidence and the distinction, however, should be clearcut

Palliatives, nevertheless, should not be mistakenly regarded as specifics Although palliative therapy can be a great help in the patients' comfort and management, it does not solve the problem of arresting rheumatoid disease The role of any agent should be plain and emphatic so that therapeutic progress is not discouraged by a smug attitude Until a remedy has been discovered which arrests rheumatoid activity in an impressive proportion of cases within a reasonable period, the therapeutic problem of rheumatoid arthritis must be regarded as unsolved

12 Nathan J., quoted by Hench P S Bauer W Dawson M H Hall Francis Holbrook W F and Key J A The Problem of Rheumatism and Arthritis Review of American and English Literature for 1936 Ann. Int. Med. 12: 1005, 1939

### INCLUSION OF A FOLLOW-UP PERIOD OR A PERIOD OF POTENTIAL RELAPSE

The tendency of rheumatoid arthritis toward a high percentage of recurrence for long periods after apparently successful treatment by present methods makes all conclusions as to therapeutic results unreliable unless an adequate follow-up period has elapsed Three years would probably be the safest interval to set arbitrarily as the period of potential relapse Five years have been suggested as a reasonable standard and would certainly afford still more dependable information [13]

In the literature on rheumatoid arthritis follow-up studies are almost nonexistent This void has been recognized in chrysotherapy, yet in the publications on gold treatment we have found only seven reports which included a fair follow-up period with a statement of the number of relapses that appeared It is important to know the final figures of response after these recurrent cases are treated in order to derive a thorough assay of the therapeutic agent After all, if a drug produces so many merely temporary remissions that in due time the percentage of arrests to be expected does not appreciably exceed the number occurring naturally, its contribution to therapy is of doubtful value, especially when there are hazards of toxicity

The ultimate fate of greatly improved patients and the proportion of relapse among them provide information as essential as in the arrested cases The value of medication sometimes is attributed to its superior palliative action, as in the case of gold salts in so many reports The incidence of relapse among the greatly improved patients then becomes the chief clue to the usefulness of the remedy In only six papers is there a follow-up report on the relapses among greatly improved patients [2]

### CONTROL SERIES

It is remarkable that in a search of the literature there was not uncovered a true control series of rheumatoid patients followed for a long enough period to give dependable information as to the life cycle of the untreated disease The most informative study of this kind, by Short, included 300 patients treated by simple, conventional medical measures and followed for ten years Whether therapy influences the severity and duration of rheumatoid arthritis must remain a matter of clinical judgment until a satisfactory basis of comparison is provided by an untreated control series followed for a sufficient time

Where enough patients are available, if alternate subjects are given only placebo therapy while the others are treated with the agent under study, more useful therapeutic assay could be conducted If the experiment is carried out as a blindfold test with the observer unaware of which patients are receiving the active substance a more fruitful study can be carried out While this discussion was being prepared the paper of Fraser appeared Because it embodies some of the criteria already mentioned, particularly the blindfold test, it should prove a really enlightening contribution to the subject

Many of the remarks on therapeutic investigation in rheumatoid arthritis could be applied with slight variation to other chronic diseases Similar pitfalls and like standards are involved This discussion is concerned only with rheumatoid disease

13 Short C L. Gold Therapy in Rheumatoid Arthritis, Bull New England M Center 4: 31 1942

### SUMMARY

The greatest advance in rheumatoid arthritis has been its recognition and segregation as a separate entity from other articular disorders The time has arrived to apply more generally to the study of its treatment the rigid and exact criteria prevailing in other clinical and laboratory fields When uniform standards are followed universally, much inconclusive effort will be avoided and the results should prove more valuable in a shorter time A more consistent and better integrated pool of information would be provided Unwarranted exploitation of poorly controlled studies by commercial interests at least would become less frequent

It would advance research in this field if its official agencies sponsored a set of essential principles to guide therapeutic investigation in rheumatoid arthritis along the lines discussed here An organized study of chrysotherapy under such auspices, conducted by several cooperating clinics taking part in a "blindfold" test, would prove invaluable

To assure more informative and reliable therapeutic studies of agents advocated for rheumatoid arthritis, the following safeguards are recommended

1 Inclusion only of cases definitely presenting the features of chronic rheumatoid arthritis according to the official classification of the American Rheumatism Association

2 Segregation of patients in such studies according to the stages of rheumatoid severity, as in Taylor's classification, to break down each observer's results and to distinguish the response of each category

3 Use of specific criteria for evaluating and grading results, such as the "yardstick" of Baylis and Hall or our Therapeutic Score Card

4 Differentiating therapeutic effects on disease activity from influence on functional capacity

5 A standard terminology of results—arrested, greatly improved, slightly improved, unimproved and worse, with definite significance for each

6 Elimination of lumping in evaluating results of a therapeutic agent on trial

7 Distinguishing specificity and palliative action

8 A reasonable interval after treatment—the period of potential relapse—at least three years, to intervene—followed by confirmatory follow-up examination, before apparent "arrest" or "great improvement" is acceptable for final reports

9 Control series alternated with those receiving anti-rheumatoid medication

121 East Sixtieth Street

**Scientific Research Demands Absolute Integrity**—We usually regard as honest a person who does not knowingly tell or report as facts what he knows not to be so or who does not leave out in his speech or writing some essential which actually changes the meaning or significance of what he does tell or report It is in this sphere that men in science have or should have, greater experience, training and conditioning than the rest of mankind because the scientific method and scientific research demand absolute integrity, the absolute sticking to the facts as known or discovered This does not mean that the scientific investigator is by heredity more honest than other fellow citizens It merely means that science and dishonesty do not mix—they are incompatibles—Carlson A J Is There 'A Standard to Which the Wise and the Honest Can Repair?' *Science* **103** 377 (March 29) 1946

strate the superiority of supplementary therapy with that agent as compared with other patients similarly treated without the new preparation A significant increase in the number of arrested or greatly improved cases would have to be produced to prove some added therapeutic response

### USE OF A STANDARD NOMENCLATURE OF RESPONSE

One of the great causes of confusion in any attempt to correlate the reported outcome of treatment in rheumatoid arthritis is the mixed terminology used and rarely clarified by definition Without a precise description of the author's meaning it is difficult to interpret such groupings as "distinctly improved," "definitely improved," "much improved," "greatly improved," "moderately improved," "good improvement," "slightly but definitely improved," "fair improvement," "slightly improved" and other similar gradations In the majority of papers these categories are not explained

Even when the writers define their terms, a great complexity of degrees of improvement confronts the student of rheumatology The task of correlating much of this material is magnified by the conflicting importance attached by various workers to subjective and objective factors in arriving at their evaluation In some instances, therefore, when authors happen to employ the same expressions for degrees of improvement their implications are not identical

A uniform terminology of results with the same significance everywhere, an international nomenclature, is an obvious need Such a simple grouping as apparently arrested (complete objective and subjective recovery), greatly improved (over 50 per cent resolution of objective signs), slightly improved (25 to 50 per cent recovery), unimproved and worse seems to provide a clear and adequate grading of response to a therapeutic procedure in rheumatoid disease

### ELIMINATION OF LUMPING, OR WISHFUL STATISTICS

It is a common custom to lump all improvements, from arrested cases to slightly improved, in the conclusions with one figure for "improvement" produced by the remedy Some reports mention that "slightly improved" represents only a subjective estimate by the patient This figure usually is included in the "improvements" In this way "the inevitable 70 per cent," or higher, appear to respond to almost every agent [12] When a drug is on trial in rheumatoid disease, gold salts for example, it is doubtful whether anything less than great improvement provides favorable testimony or dependable information to be embodied in the conclusion

It is not unusual to read an enthusiastic discussion on the treatment of a series of patients only to find that the number of arrested and/or greatly improved cases fail to support the author's partiality When he finally gives his conclusions and lumps the "slightly" and 'moderately" helped patients with those experiencing greater benefit, an impressive figure for improvement is produced This misleading custom is so widespread that it is responsible for much of the clouding of our understanding of the true merits of therapeutic measures Its abandonment would promote more accurate knowledge and more incisive evaluation of a therapeutic agent The American and British reports on gold treatment represent on the whole the most recent and therefore the most careful therapeutic studies in rheumatoid disease Lumping was found, nevertheless, in 13 of 34 reports, as shown in the table

### DISTINGUISHING THERAPEUTIC SPECIFICITY AND PALLIATIVE ACTION

Much has been written about the special therapeutic virtues of various remedies in rheumatoid arthritis There is surprisingly little distinction made as to their specific or palliative merits Usually an effort is made to imply superior qualities to various substances based on the greater incidence of "improvement" when they are used

The time has come in the therapy of rheumatoid disease when a clearcut position should be indicated for any therapeutic preparation advocated Is it a specific curative agent? Or is it a superior palliative, but still only a palliative?

The results usually are stated from left to right in columns "arrested," "greatly improved," "unimproved," "worse" The index of specificity must be recognized as the percentage of cases appearing to the left in the "arrested" column Unfortunately, in much of the discussion of many "specifics" that have been advocated in the past and recently the "arrested" column is almost blank When any remedy produces an impressive therapeutic shift to the left in the "results" columns, it is likely to command undebatable acceptance, as with penicillin, the sulfonamides and the arsenicals

The evaluation of a palliative agent is an even more formidable problem than that of a specific It would require that an ameliorative substance should be demonstrated to yield a definitely higher percentage of relief than that experienced by an untreated control group or provided by other palliative remedies The results would have to be controlled by the various safeguards and criteria already discussed An appreciably higher percentage of improvement, statistically adequate, would have to be found

The usually unmentioned distinction between specificity and palliation has befuddled much of the discussion of therapy in rheumatoid arthritis [2] The value of "specifics" has been established largely by implication There is no reason why the definite palliative action of a drug on rheumatoid disease should be considered derogatory Rheumatoid arthritis is such a serious condition that a superior palliative would constitute a valuable addition to our therapeutic resources at this time The evidence and the distinction, however, should be clearcut

Palliatives, nevertheless, should not be mistakenly regarded as specifics Although palliative therapy can be a great help in the patients' comfort and management, it does not solve the problem of arresting rheumatoid disease The role of any agent should be plain and emphatic so that therapeutic progress is not discouraged by a smug attitude Until a remedy has been discovered which arrests rheumatoid activity in an impressive proportion of cases within a reasonable period, the therapeutic problem of rheumatoid arthritis must be regarded as unsolved

12. Nathan J quoted by Hench P S Bauer W Dawson M H Hall Francis Holbrook W F and Key J A The Problem of Rheumatism and Arthritis Review of American and English Literature for 1930 Ann. Int. Med. 12: 1005 1939

### INCLUSION OF A FOLLOW-UP PERIOD OR A PERIOD OF POTENTIAL RELAPSE

The tendency of rheumatoid arthritis toward a high percentage of recurrence for long periods after apparently successful treatment by present methods makes all conclusions as to therapeutic results unreliable unless an adequate follow-up period has elapsed Three years would probably be the safest interval to set arbitrarily as the period of potential relapse Five years have been suggested as a reasonable standard and would certainly afford still more dependable information [13]

In the literature on rheumatoid arthritis follow-up studies are almost nonexistent This void has been recognized in chrysotherapy, yet in the publications on gold treatment we have found only seven reports which included a fair follow-up period with a statement of the number of relapses that appeared It is important to know the final figures of response after these recurrent cases are treated in order to derive a thorough assay of the therapeutic agent After all, if a drug produces so many merely temporary remissions that in due time the percentage of arrests to be expected does not appreciably exceed the number occurring naturally, its contribution to therapy is of doubtful value, especially when there are hazards of toxicity

The ultimate fate of greatly improved patients and the proportion of relapse among them provide information as essential as in the arrested cases The value of medication sometimes is attributed to its superior palliative action, as in the case of gold salts in so many reports The incidence of relapse among the greatly improved patients then becomes the chief clue to the usefulness of the remedy In only six papers is there a follow-up report on the relapses among greatly improved patients [2]

### CONTROL SERIES

It is remarkable that in a search of the literature there was not uncovered a true control series of rheumatoid patients followed for a long enough period to give dependable information as to the life cycle of the untreated disease The most informative study of this kind, by Short included 300 patients treated by simple, conventional medical measures and followed for ten years Whether therapy influences the severity and duration of rheumatoid arthritis must remain a matter of clinical judgment until a satisfactory basis of comparison is provided by an untreated control series followed for a sufficient time

Where enough patients are available, if alternate subjects are given only placebo therapy while the others are treated with the agent under study, more useful therapeutic assay could be conducted If the experiment is carried out as a blindfold test with the observer unaware of which patients are receiving the active substance a more fruitful study can be carried out While this discussion was being prepared the paper of Fraser appeared Because it embodies some of the criteria already mentioned, particularly the blindfold test, it should prove a really enlightening contribution to the subject

Many of the remarks on therapeutic investigation in rheumatoid arthritis could be applied with slight variation to other chronic diseases Similar pitfalls and like standards are involved This discussion is concerned only with rheumatoid disease

13 Short C L Gold Therapy in Rheumatoid Arthritis Bull New England M Center 4 31 1942

### SUMMARY

The greatest advance in rheumatoid arthritis has been its recognition and segregation as a separate entity from other articular disorders The time has arrived to apply more generally to the study of its treatment the rigid and exact criteria prevailing in other clinical and laboratory fields When uniform standards are followed universally, much inconclusive effort will be avoided and the results should prove more valuable in a shorter time A more consistent and better integrated pool of information would be provided Unwarranted exploitation of poorly controlled studies by commercial interests at least would become less frequent

It would advance research in this field if its official agencies sponsored a set of essential principles to guide therapeutic investigation in rheumatoid arthritis along the lines discussed here An organized study of chrysotherapy under such auspices, conducted by several cooperating clinics taking part in a "blindfold" test, would prove invaluable

To assure more informative and reliable therapeutic studies of agents advocated for rheumatoid arthritis, the following safeguards are recommended

1 Inclusion only of cases definitely presenting the features of chronic rheumatoid arthritis according to the official classification of the American Rheumatism Association

2 Segregation of patients in such studies according to the stages of rheumatoid severity, as in Taylor's classification, to break down each observer's results and to distinguish the response of each category

3 Use of specific criteria for evaluating and grading results, such as the "yardstick" of Bayliss and Hall or our Therapeutic Score Card

4 Differentiating therapeutic effects on disease activity from influence on functional capacity

5 A standard terminology of results—arrested greatly improved, slightly improved, unimproved and worse, with definite significance for each

6 Elimination of lumping in evaluating results of a therapeutic agent on trial

7 Distinguishing specificity and palliative action

8 A reasonable interval after treatment—the period of potential relapse—at least three years, to intervene—followed by confirmatory follow-up examination, before apparent "arrest" or "great improvement" is acceptable for final reports

9 Control series alternated with those receiving anti-rheumatoid medication

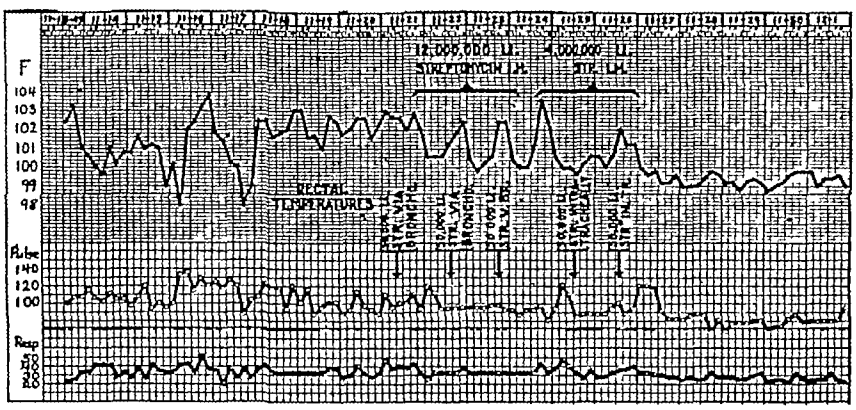
121 East Sixtieth Street.

**Scientific Research Demands Absolute Integrity**—We usually regard as honest a person who does not knowingly tell or report as facts what he knows not to be so or who does not leave out in his speech or writing some essential which actually changes the meaning or significance of what he does tell or report. It is in this sphere that men in science have, or should have, greater experience, training and conditioning than the rest of mankind because the scientific method and scientific research demand absolute integrity, the absolute sticking to the facts as known or discovered This does not mean that the scientific investigator is by heredity more honest than other fellow citizens It merely means that science and dishonesty do not mix—they are incompatibles—Carlson, A J Is There "A Standard to Which the Wise and the Honest Can Repair" *Science* **103** 377 (March 29) 1946

# STREPTOMYCIN THERAPY IN HEMOPHILUS INFLUENZAE PULMONARY INFECTIONS

THOMAS M. DURANT, M.D., A. J. SOKALCHUK, M.D., CHARLES M. NORRIS, M.D., and CHARLES L. BROWN, M.D.
Philadelphia

The recent introduction of streptomycin as a therapeutic agent[1] has added another powerful antibiotic to the armamentarium of the physician. Especially is this agent of value since it is efficacious against many members of the gram-negative group of bacteria, organisms which are in no degree susceptible to the influence of penicillin. Included in this group of susceptible organisms is Hemophilus influenzae. The opportunity has been afforded us recently to study the effectiveness of this agent in pulmonary infections caused by this bacillus. Three cases so treated are reported in this communication. The first of these represents an overwhelming acute pneumonitis, and, because of the extremely dramatic response in a case that otherwise would no doubt have been fatal, the course in this case is reported in detail. In the second case the influenza bacillus infection represented an acute episode in the course of a chronic bronchiectasis. In the third there was persistent influenza bacillus infection following lobectomy for suppurative pneumonitis.




Clinical course in case 1. The sharp temperature spike on November 24 occurred in association with reaction to intramuscular administration of crude streptomycin.

## REPORT OF CASES

CASE 1.—P. S., a white man aged 56, had been a dye worker for about thirty years, exposed to the fumes of various acids, bleaching agents and dyestuffs. There had been a chronic cough for a number of years and annual episodes of acute bronchitis. He had considered himself essentially well, however, until three weeks before admission to the hospital, when he became extremely tired and had aches and pains in his back and legs. These symptoms were sufficiently disabling to render him unable to work. About one week later he developed chills and fever, together with a cough, which rapidly became productive of a large amount of purulent, yellow-green sputum. At this time both sulfadiazine and penicillin therapy had been instituted at home, but despite this the patient became progressively worse and required hospitalization.

He was admitted to Temple University Hospital at the beginning of the third week of his illness with a temperature of 103 F., pulse rate 108, respiratory rate 24 and blood pressure 124/70. He was dyspneic and slightly cyanotic and coughed incessantly, bringing up large quantities of purulent sputum which separated into three layers on standing. The heart was normal in size, the sounds were of good quality and there were no murmurs. Dulness was present over both lung bases, and throughout both lung fields there were coarse moist rales and rhonchi. There was no evidence of consolidation in either lung. The remainder of the physical examination was negative.

The urinalysis, blood serologic reaction and blood culture were negative. The blood count was negative except for a decided leukocytosis. Roentgenologic examination of the chest demonstrated bilateral lower lobe mottled densities with diffusively distributed small cavities extending higher in the right lung field than in the left. Bronchoscopy showed a high degree of acute congestion and thickening of the laryngeal and tracheobronchial mucosa. Large amounts of thick purulent secretion were encountered in the bronchial tree on each side. No obstructive lesion was found anywhere in the accessible bronchi. Bacteriologic studies of the bronchial secretions established Hemophilus influenzae, type B, as the predominant organism.

The course in the hospital is represented in the accompanying chart. On admission penicillin therapy was started in a dosage of 20 000 units intramuscularly every three hours. This therapy was without any appreciable effect, as would be expected from the bacteriologic findings which were subsequently reported. At the beginning of the second week in the hospital the patient's condition was critical; there was cyanosis and dyspnea despite oxygen therapy and repeated bronchoscopic aspirations, and the amount of sputum ranged from 30 to 40 ounces in twenty-four hours. It was at this time that streptomycin became available. The first administration of this material was by the intratracheal route, 50,000 units[2] being instilled into the bronchial tree. The solution used contained 10 000 units per cubic centimeter. The effect of this single administration on the production of sputum was dramatic. In contrast to the 6 ounces of sputum produced every four hours, on the average, prior to this instillation, the next eight hours witnessed the production of only 5 cc. of sputum. Examination of the chest at this time revealed no evidence of retained secretions; in fact, the rales were noticeably less numerous. Eight hours after the bronchoscopic treatment parenteral administration of purified streptomycin by intramuscular drip was started. Twelve million units of this purified material was available, and this amount was given over a period of slightly more than two days. No reactions were noted. After the supply of purified material was exhausted, treatment was continued with a less purified preparation. Although the condition of the patient had much improved at this time, it was deemed advisable to do this despite the risk of possible reaction, since it was not certain that the infection was completely under control. Four million units of this material was administered over a period of two days by the intramuscular route. This was done intermittently, since severe reactions were encountered and it was finally necessary to discontinue entirely. The reactions to the crude material were almost purely sympathomimetic in character. The patient would become restless and even irrational, and the blood pressure would rise rapidly to as high as 172 systolic, the pulse rising to as much as 132 and the respirations to 48. The skin and conjunctivas would become blanched and the abdomen distended, and the muscles of the arms and legs would twitch. At some

From the Departments of Medicine and Broncho-Esophagology, Temple University School of Medicine.

The streptomycin used in this study was made available through the courtesy of Merck & Co., Inc., Rahway, N. J.

1. Waksman, S. A.: Production and Activity of Streptomycin, J. Bact. 46: 299, 1943. Waksman, S. A., Bugie, E., and Schatz, A.: Isolation of Antibiotic Substances from Soil Micro-Organisms, with Special Reference to Streptothricin and Streptomycin, Proc. Staff Meet., Mayo Clin. 19: 537, 1944.

2. The units of streptomycin as reported in this article may be translated into weight of streptomycin base as follows: 1 unit equals 0.001 mg. of streptomycin base, 1 000 units equals 1.0 mg. of streptomycin base and 1 000 000 units equals 1.0 Gm. of streptomycin base.

time during the reaction a cold clammy perspiration would develop The reaction would subside within one or two hours after the drug was stopped Throughout the entire period of intramuscular administration, intrabronchial instillations were continued at almost daily intervals 50,000 units of the crude material being instilled on each of five occasions

The response to the streptomycin therapy was dramatic Not only did the temperature, pulse and respiratory rate show rapid improvement, but the dyspnea, cyanosis and cough were rapidly lessened and the appetite and strength improved in a remarkable way The response in the hematologic findings is recorded in the accompanying table The first of these blood counts (Nov 14, 1945) was that done on admission to the hospital The second (November 21) represents the count on the day on which streptomycin administration was started The third and fourth were taken during the period of administration and the last two followed the discontinuation of the antibiotic therapy The bronchial secretion continued to show Hemophilus influenzae in greatly reduced numbers until November 21 Following this none of these organisms were found

The streptomycin susceptibility of Hemophilus influenzae found in this case was such that the organism was inhibited by 0 5 unit of streptomycin per cubic centimeter of medium [1] On November 24 the blood streptomycin level was 15 units per cubic centimeter of plasma The bronchial secretion on the same day showed a streptomycin concentration of 10.2 units per cubic centimeter On November 26 the concentration in the blood was 11 8 units per cubic centimeter of plasma

The roentgenogram taken one week after the termination of streptomycin therapy indicated resolution of the pneumonic process in both lungs During the last four days in the hospital the rectal temperatures were entirely within normal range. The patient was discharged from the hospital nineteen days from the date of admission Except for some dyspnea on exertion he has remained well since discharge

CASE 2—I S a student nurse aged 19, had had a chronic cough for six years One year before admission to the hospital this cough had become productive of purulent sputum, and lipiodol bronchography had shown bilateral lower lobe cylindric bronchiectasis Bilateral maxillary sinusitis also was found. During the ensuing year there had been repeated upper respiratory infections, each of which aggravated the symptoms of the bronchiectasis but in each instance the intramuscular administration of penicillin had resulted in prompt improvement. In October 1945 she was admitted to Temple University Hospital for an intensive course of intramuscular penicillin and conservative, though intensive, treatment of the sinuses She then felt quite well following discharge from the hospital until December 1945 when she contracted a severe sore throat and her temperature rose to 102 F Examination at this time showed coarse rales at both lung bases but no signs of consolidation She was given 20 000 units of penicillin intramuscularly every two hours and admitted to the hospital the following day The sputum was then frankly bloody for the first time in the course of her bronchiectatic disease, and it was considerably increased in quantity The chest roentgenogram showed an extensive pneumonitis in the right lower lobe with mottled and stringy densities The increased markings previously noted at the left lung base were unchanged The white blood cell count was 5,350 with 74 per cent polymorphonuclear neutrophils Culture of the bronchial secretions revealed many Hemophilus influenzae organisms resistant to penicillin and very susceptible to streptomycin. There were a few viridans streptococci and an occasional hemolytic streptococcus and Neisseria flava

The temperature followed a septic course, ranging from 97.2 to 102 4 F for the first seven days in the hospital On the seventh day 50 000 units of crude streptomycin was introduced intrabronchially The temperature fell to normal dramatically following this instillation and reached as high as 99 F only once thereafter The sputum became much reduced in amount and was no longer bloody There was improvement in the general appearance and feeling of well being of the patient Three more instillations of streptomycin were given over a period of eight days The patient is now in excellent condition, and pulmonary surgery is contemplated in the near future.

CASE 3—W M, a white man aged 50, was first seen on Aug 29, 1945 complaining of cough productive of foul sputum with frequent hemoptyses and occasional febrile attacks Roentgenographic examination of the chest showed abnormal mottled density throughout the left lower chest, with an abscess cavity about 3 cm in diameter On bronchoscopy large amounts of odorous blood-stained purulent secretion were encountered in the left main and lower lobe bronchi and appeared from the branch bronchi of the left lower lobe on cough There was no obstructive lesion in any of the accessible bronchi Cultures of the secretion obtained bronchoscopically showed anaerobic hemolytic streptococcus group A with many Hemophilus influenzae organisms and a few viridans streptococci Roentgenograms made following instillation of lipiodol for bronchography showed advanced saccular bronchiectasis involving all segments of the left lower lobe except the superior with cylindric and mild saccular bronchiectasis in the lingular portion of the left upper lobe A subsequent bronchogram demonstrated no abnormality of the bronchial tree throughout the right lung

Improvement on conservative treatment, including postural drainage and bronchoscopic aspiration, with oral sulfadiazine penicillin by intramuscular injection and inhalation transfusions and other supportive measures was not satisfactory after a two month period Lobectomy was decided on, and this was performed by Dr W Emory Burnett on October 31 with removal of the entire left lower lobe and the lingular portion of the left upper lobe.

*Hematologic Examinations in Case 1*

| | 11/14/45 | 11/21 | 11/24 | 11/26 | 11/29 | 12/1 |
|---|---|---|---|---|---|---|
| Red blood cells | 5 02 | 5 08 | | | | |
| Hemoglobin | 85 2% | 96 8% | | | | |
| White blood cells | 20,900 | 19,300 | 17 400 | 17 150 | 9 600 | 9 000 |
| Polymorphonuclears | 92% | 93% | 91% | 90% | 58% | 55% |
| Filamentous | 17% | 20% | 41% | 37% | 23% | 22% |
| Nonfilamentous | 75% | 73% | 50% | 53% | 35% | 33% |
| Lymphocytes | 5% | 2% | 3% | 3% | 36% | 40% |
| Mononuclears | 3% | 4% | 4% | 4% | 2% | 3% |
| Eosinophils | 0% | 0% | 0% | 1% | 2% | 0% |
| Basophils | 0% | 0% | 0% | 0% | 1% | 0% |
| Abnormal cells | 0% | 1% | 2% | 2% | 1% | 2% |

Convalescence appeared satisfactory the pleural drainage tube was removed on the sixth day, there being no evidence of pleural infection and the temperature followed an essentially normal course after the thirteenth postoperative day However, a roentgenogram on November 13 showed that the remaining portion of the left upper lobe had failed to expand, and bronchoscopy the following day revealed large amounts of unusually viscid purulent secretion occluding the left bronchus Cultures of the secretion showed many Hemophilus influenzae organisms and a moderate number of Neisseria catarrhalis organisms Several bronchoscopic aspirations were performed during the ensuing three weeks The roentgenograms on November 16 showed some reaeration but on the 28th again demonstrated complete airlessness of the remaining portion of the left upper lobe Large quantities of thick secretion were found at each bronchoscopy and cultures on November 16 and 30 showed many H influenzae organisms very susceptible to streptomycin and a few hemolytic streptococci group A moderately susceptible to streptomycin

Streptomycin was then given by intratracheal instillation daily for six days 5 cc. of a solution containing 10 000 units of streptomycin per cubic centimeter being employed and gravitation of the solution into the left bronchus being favored

[1] The medium used was streptomycin agar (Stebbins, with added blood

by posture. The amount of secretion seen bronchoscopically diminished rapidly, and cultures showed only a few H influenzae organisms Bronschoscopic cultures three days after the last instillation showed no H influenzae organisms or hemolytic streptococci Complete reaeration was evident on the roentgenograms of Dec. 8, 1945 and Jan 10, 1946 and the patient is now clinically well

### COMMENT

The first of these patients represents a therapeutic response of an extremely dramatic type His acute suppurative pneumonitis may well have been superimposed on a preexisting bronchiectasis, but whether or not this is true, the infection with type B Hemophilus influenzae constituted a serious threat to his existence and there can be little question from a careful survey of his case record that he owes his life to streptomycin The organism was shown to be extremely susceptible in vitro to this antibiotic, and the blood concentrations which were obtained by a combination of intramuscular and intrabronchial administration exceeded this susceptibility by as much as thirty times It is impossible to estimate which of the two routes of administration used was the more effective in controlling the infection However, it is of great interest that improvement had already been apparent in the eight hour period between the first intrabronchial administration and the commencement of the intramuscular administration Especially should it be noted that the sputum output dramatically diminished during this eight hour period It is our impression that intrabronchial administration played an extremely important part in the outcome of this case

The second and third cases did not represent as severe infections as the first, but in each Hemophilus influenzae was responsible for a very distressing and potentially serious complication in the course of chronic suppurative pulmonary disease In these 2 cases treatment was limited to intrabronchial administration of crude streptomycin, the reason for this being the limited supply available In each instance the response was prompt and clearcut, leading to a disappearance of the complicating infection, and in the last case, of the associated atelectasis These 2 cases, in which necessity dictated the employment of the intrabronchial route alone, lend support to our impression that this route allows a satisfactory and effective approach to pulmonary Hemophilus influenzae infections

Reactions to the administration of streptomycin were noted only in the first case, and then they occurred solely following the administration of crude material intramuscularly, a procedure which we do not recommend but which was dictated by the lack of pure material and the urgency of the situation During the period in which the purified streptomycin was being introduced intramuscularly there were no auditory symptoms or other unfavorable manifestations whatever

### SUMMARY

The effectiveness of streptomycin therapy in type B Hemophilus influenzae pulmonary infections was demonstrated in 3 cases The intrabronchial route of administration of the antibiotic was alone effective in 2 cases, and in 1, an extremely severe acute bilateral suppurative pneumonitis, the combination of intramuscular and intrabronchial routes was used effectively No reactions were observed except when a crude preparation was administered intramuscularly

## HEPARIN THERAPY IN ACUTE DEEP VENOUS THROMBOSIS

GUNNAR BAUER M D
Mariestad Sweden

In the summer of 1940 at the Mariestad Hospital a method was introduced for treating thrombosis of the deep veins of the leg, the main principles of which were (1) early diagnosis, (2) intensive heparin treatment and (3) early mobilization This procedure has now been in routine use without an alteration for more than five years

The combination of measures characterizing this method was the result of studies on thrombosis and embolism which have been in progress at Mariestad since 1938 In the course of these investigations phlebograms were made on nearly 600 patients, all relevant clinical data being at the same time noted and compared with the roentgenologic findings The con

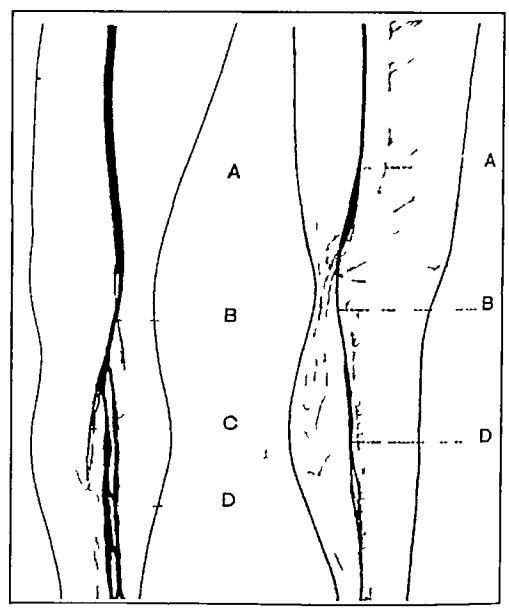



Fig 1—Diagrammatic representation of normal phlebogram at left, posteroanterior view at right lateral view *A* femoral vein *B* popliteal vein *C* posterior tibial vein *D* fibular vein

ditions in acute deep thrombosis of the leg were studied in 246 cases In another group, nearly as large, an examination was made of what might be called the chronic stage of the disease, i e the fate of thrombosis patients in the decade to follow The normal anatomy of the veins of the leg was also ascertained, about 130 phlebographs and a number of dissections being made for that purpose (fig 1)

As a result of these investigations some facts were established concerning the origin and course of the thrombo-embolic disease which seemed able to throw fresh light on several points in this field and at the same time to provide the means of making certain a very early diagnosis Since these facts form the background to the treatment used in Mariestad, as I believe they will to any other rational therapy, they will be briefly set forth here before a detailed description of heparin treatment is entered upon

From the General Hospital Mariestad Sweden surgeon in chief Dr Gunnar Bauer

## STARTING POINT AND COURSE OF ACUTE THROMBOSIS OF THE DEEP VEINS

As was pointed out in previous papers,[1] from the beginning it was considered necessary to make a definite distinction between two different forms of venous disease It is now almost generally agreed that thrombophlebitis is a primary disorder of the wall of mainly the subcutaneous veins secondarily followed by a thrombotic obliteration of the venous segment attacked This disorder will not be dealt with here Solely the large, deep veins of the leg will be considered in the present paper In these the clotting of the blood is the primary factor, and only secondarily is the wall of the vein drawn into the pathologic process Acute thrombosis of the deep veins is the term that ought to be employed by those who do not prefer the expression phlebothrombosis introduced by Ochsner and De Bakey[2]

Up to 1936 the thrombotic process was universally considered to commence in the femoral or pelvic veins Investigations during the following years by pathologists and later also by clinicians made it increasingly probable that in a considerable number of cases the process begins in the lower part of the leg instead (Homans,[3] Ochsner[4] Hunter,[5] Bauer[6])

These investigations, however suffered from the fault that they were based almost entirely on autopsy material Not until phlebography had been taken into use was it possible to carry research a step further and make studies direct on the living subject Using the x-ray technic described in earlier papers[7] I was able[8] in the year 1940 to submit a definite theory regarding the origin as well as the further course of acute thrombosis of the deep veins This theory has been confirmed by subsequent investigations at the Mariestad Hospital, now covering about 250 cases of this type The course followed by the disease appears in brief, to be that described here

The whole process begins with a thrombus, which arises for some as yet unknown reason in a muscle vein and projects into the lumen of one of the large venous trunks of the lower part of the leg Here it becomes the starting point of a deposition thrombus which continues growing upward in the direction of the blood stream

The next stage is for the large veins of the lower part of the leg to become progressively filled and for the thrombotic mass gradually to occlude the entire lumen and become attached to the vessel wall (fig 2) Concurrently in at least 80 per cent of the cases there is a longitudinal growth up the femoral vein Thus this vein will contain, at a certain stage freely waving about in the blood stream, an eel-like formation, dark red, with a smooth, slippery surface and sometimes up to 40 to 50 cm in length The thrombus forms as it were, a cast of the lumen of the large vein, though it does not completely occlude it The wall of the vein is as yet not involved in any way, and the thrombus is anchored only at its lowermost end far down in the lower part of the leg

This condition, which obviously entails a great risk of embolism, does not generally last more than twenty-four to forty-eight hours Within that time a development takes place which may proceed along two different lines One is that the waving thrombus, by breaking off at some point or other, gives rise to an embolus By far the commonest development, however, is for the thrombus to continue growing in thickness block up the lumen of the femoral vein, begin to involve the endothelium and to become attached to the vascular wall along its entire length A typical phlegmasia alba dolens arises (fig 3)

A sufficiently large number of cases were observed at the Mariestad Hospital to convince us that this is the natural course followed by thrombosis when no countermeasures are taken The starting point of the clotting process was in the lower part of the leg in all cases except 3 among 190, i e in more than 98 per cent of the cases, and there are phlebograms to demonstrate all the different phases of evolution from the initial clot not more than a few centimeters in length in one of the main trunks of the fibular vein to the complete obliteration of all deep venous channels Also there is evidence to show that, as long as there is no more than a waving thrombus, the vein itself is in no way affected It is not until the thrombus begins to fill up the whole lumen and attach itself to the vessel wall that the latter begins to be irritated and gradually becomes the seat of an aseptic inflammatory process This results on one hand, in the firm rooting and, later on organization of the thrombus, and, on the other hand, in a phlebitis and periphlebitis which gives rise to fever, tenderness on palpation and vasospastic reflexes When the vein attacked, as for instance in the lower part of the leg, is comparatively small, the clinical phenomena will not be so pronounced as when the powerful femoral vein is attacked As in addition, the phlebitis always appears to be secondary to the thrombosis there seems to be hardly any reason to differentiate an "ileofemoral thrombophlebitis" as a special entity

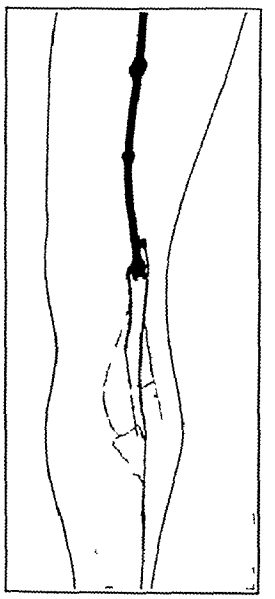


Figure 2

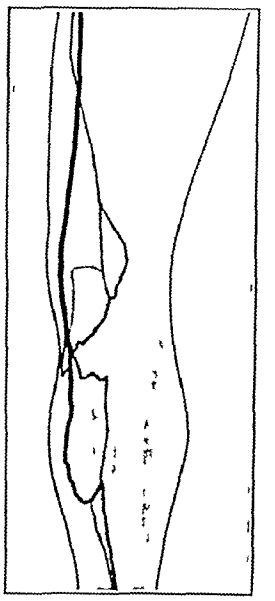


Figure 3

Fig 2.—Incipient thrombosis confined to lower part of leg No contrast filling of the deep venous trunks of the lower part of leg Only a few fine superficial veins are visible

Fig 3.—Thrombosis of the deep venous trunks in both lower part of leg and thigh Relatively early stage A well developed compensatory drainage system from lower part of leg Great saphenous vein straight and of powerful caliber Superficial veins in lower part of leg relatively fine and not tortuous

1 Bauer, G Acta chir Scandinav (supp 61) **84** 1 1940 Felt ström E. Nord med **19** 1285 1943
2 Ochsner A and De Bakey M South Surgeon **8** 269 1939
3 Homans J Surg, Gynec & Obst **79** 70 1944 New England J Med **231**: 51 1944 footnote 9
4 Ochsner A Surgery **17** 240 1945
5 Hunter W C Krygier J J Kennedy J C and Sneeden V D Surgery **17** 178 1945
6 Bauer G Acta chir Scandinav (supp 74) **86** 1 1942
7 Bauer footnotes 1 and 6
8 Bauer G Acta med Scandinav **107** 136 1941 Venous Thrombosis Arch Surg **43** 462 (Sept) 1941

It may finally be mentioned that in untreated cases thrombosis also appeared in the other leg in at least 30 per cent of the cases Phlebography showed that as a rule the thrombosis there also started in the lower part of the leg

### THE SUBSEQUENT FATE OF THROMBOSIS PATIENTS

The different stages of the process, once the thrombosis has developed the classic clinical symptoms, are too well known to need description In general, after about six weeks in bed and a further period of convalescence, the patients have been allowed to leave the hospital, with one or both of their legs still much swollen, and finally, after a still further lapse of time, they have generally been able to resume their work

The fact has been but little known, however, that even then the disease is not overcome On the contrary, it passes into a chronic stage, and most of those who have suffered from thrombosis have to look forward to after-effects of a very serious nature On this aspect our knowledge up to the present has been highly defi-

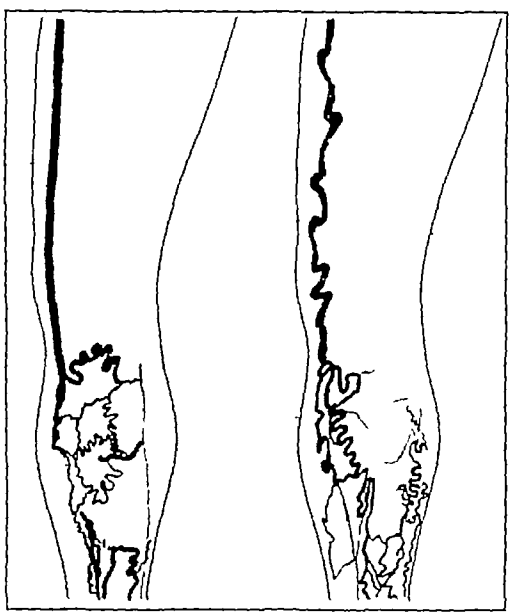


Fig 4 —At left chronic thrombosis of long standing Far advanced degeneration of superficial veins of lower part of leg Great saphenous vein still straight Swelling and induration present At right chronic thrombosis still older Degeneration and tortuousness of great saphenous vein also apparent. Swelling induration and ulceration present

cient, and no follow-up investigations appear to have been made on the subject Homans,[9] however, in 1939 suggested that, at least in some of the patients, chronic ulcers on the lower part of the leg may be due to deep thrombosis suffered earlier in life, and Birger [10] observed this etiologic factor in at least one third of his patients In pursuance of our phlebographic studies on the thrombotic disease at the Mariestad Hospital, we widened our investigations to include the roentgenographic appearance of the venous system in thrombosis sequelae and in this connection also took in the clinical aspects The results obtained have already been described in an earlier paper [6] The following is a brief account of what was found

After the deep blood channels in the leg have been destroyed by thrombosis, recanalization of these veins practically never occurs For the rest of the patient's life the drainage of the venous blood from the lower part of the leg is taken care of by an accessory system of veins consisting exclusively of subcutaneous veins, usually with the great saphenous vein acting as the chief carrier of the venous return (fig 3) As long as these superficial veins are intact they are capable of transporting the blood from the lower part of the leg in a satisfactory manner A mild state of venous stasis is always present, however, causing chronic edema in the lower part of the leg As a result of unfavorable emptying conditions and of constant overloading there arises in the accessory system during the course of the years a state of degeneration which is manifested in the fact that the superficial veins become distended and tortuous and the valves defective (fig 4) This degeneration causes nutritional disturbance and leads in time to the appearance of the typical, leathery indurative lesions on the lower part of the leg and to leg ulcers

These lesions, which up to the present have almost always been thought to be due to varices, were instead caused, in our material, in 80 to 90 per cent of the patients by an earlier deep thrombosis The generally used name varicose ulcer ought therefore, by rights, to be changed to post-thrombotic ulcer

According to figures worked out from the investigations in Mariestad and recently corroborated in a report by Zilliacus [11] from other Swedish clinics, it looks, in fact, as though the ultimate fate of patients who have once suffered from deep thrombosis in the leg and received no specific treatment is that they all have permanent swelling of the leg, and more than nine tenths acquire indurative lesions and about four fifths leg ulcers

### EARLY DIAGNOSIS OF THROMBOSIS

It must be considered as highly desirable to make as early a diagnosis as possible of the thrombosis, preferably while it is still confined to the lower part of the leg Only by this means will it be possible to intervene early enough to prevent the occurrence of otherwise fatal pulmonary emboli by ligation of the vein or by means of anticoagulants Those making use of the rapidly acting heparin also have by that means the possibility of stopping the thrombotic process already in the lower part of the leg, preventing thrombotic obliteration of the popliteal vein and thereby saving the patient from late thrombotic troubles

Up to the present, however, it has been difficult to make a sufficiently early clinical diagnosis The text books, it is true, supply detailed descriptions of the fully developed, well known stages of thromboembolic disease, but they contain surprisingly little information as to how the thrombosis can be detected at a much earlier stage Now, as knowledge spreads that the thrombosis almost invariably starts in the lower part of the leg, it is beginning to become clear that it is there a search ought to be made for the earliest signs A report of the experiences gained at the Mariestad Hospital were published as early as 1941 by Bauer and Hellsten [12] and have since been further developed,[13] but there is no reason to enter closely into these points here, as they are well known by all authors who have acquired a modern view of the thrombotic question Summing up, it may be said that every inexplicable rise of the pulse and temperature curves, as well as symptoms from the lungs in the form of even slight pain or stitch in one side of the chest, must always arouse suspicions that thrombosis may be present and should

9 Homans, J Circulatory Diseases of the Extremities New York Macmillan Company 1939
10 Birger J Nord med 16: 1240 1941

11 Zilliacus, H Acta obst et gynec Scandinav 1946 to be published
12 Bauer G and Hellsten W Svenska läkartidning 1941 p 2777
13 Bauer G Tidskr f d norske lægefor 65: 259 1945 Acta chir Scandinav 86 267 1942

lead to an examination of the lower part of the patient's leg Of course, if a pronounced swelling and cyanosis and intense tenderness along the back of the calf are then found, there can hardly be any doubt of the diagnosis Unfortunately, however, this is then already somewhat too late The fact is that at this stage, as phlebography shows, there is often already a long waving thrombus in the femoral vein, immediate embolism threatens, and the popliteal vein is frequently beyond helping Diagnosis at a considerably earlier stage must be the goal, but, as only relatively small venous areas are then as yet attacked, the clinical signs are correspondingly less pronounced At Mariestad we found that tenderness over a certain segment to palpation from the back of the calf into the depths was the most constant sign and made thrombosis a probable diagnosis Our experience showed, however, that neither alone nor in combination with a mild swelling of the calf muscles and spontaneous pains was this symptom a sure indication that thrombosis was present Recourse was had to phlebography in all such patients, and it was found that one third to one half of them were free from thrombosis These accordingly received no treatment of any kind, and not one of them subsequently developed the slightest symptoms indicative of thrombosis

Thus, in our opinion, all cases showing very vague symptoms, a condition desirable in itself, require roentgenologic control before therapy is commenced, in any case if the latter is intended to be of such a drastic nature as ligation of the femoral veins or higher up There are, however, also cases with seemingly more pronounced symptoms in which it nevertheless cannot be said with certainty that thrombosis is present, e g with legs already swollen or tender on account of fracture, traumatism or local inflammatory processes, including superficial thrombophlebitis According to the opinion to which we have come, phlebography should constitute a routine method at all hospitals in all cases of suspected early thrombosis

It may be added that it is obviously impossible to handle a series of cases strictly scientifically without making sure in every case by roentgenologic control that the trouble present is actually thrombosis

According to our experience, summarized in a recent paper,[14] the interpretation of the x-ray pictures does not give rise to difficulties or false conclusions, provided careful technic is observed and some experience is at hand

## HEPARIN THERAPY

At the Mariestad Hospital we were in rather a unique position in 1939 and the beginning of 1940 We had suddenly come in possession of a method of diagnosing a thrombosis in its initial stage, but we found ourselves unable to prevent the process from following the path we only too well knew it would take During this period we were faced on 29 occasions with cases in which phlebography disclosed that an incipient thrombotization of the lower part of the leg was present As no effective therapy was available, we had the painful experience of remaining inactive and seeing how the process in 24 cases spread after one or two days to the femoral vein and brought about a phlegmasia alba dolens In 5 cases there was a propagation to the large pelvic veins Pulmonary embolism occurred in 11 cases, 2 of which were fatal In 10 cases the other leg also was attacked by thrombosis

The number of deaths would probably have been still higher if recourse had not been taken to ligation of the femoral vein in 2 cases with iterated pulmonary infarcts On 1 occasion we were strongly minded to introduce this treatment as a routine method, but the knowledge we were just then acquiring respecting the late results of thrombosis, when the popliteal and femoral veins were put out of function, kept us from doing so

It was in this position that we decided to make a trial with heparin

Concerning this drug, a fair number of facts, exhaustively reported by Jorpes [15] and by Crafoord and Jorpes [16] had at that time accumulated Sorting these out, it appeared to us as though prophylactic treatment could be ruled out as a routine method and also that treatment of fully developed thrombosis cases had not yielded results that were fully satisfactory, even if Murray [17] had been rather successful in a series of cases of embolism or thrombophlebitis However, being in possession of a method of diagnosing thrombosis at an earlier stage than had formerly been possible, it occurred to us that if heparin was to be introduced at such a moment a better result might be expected Accordingly, after consulting Jorpes and Crafoord as to the size of the heparin doses, we started treatment along these lines in October 1940 From the outset the results were favorable, and it was found that the entire course of the disease was completely changed No spreading of the thrombotic process occurred, and fever, swelling and pain disappeared in a surprisingly short time The patients were, as a rule, able to leave their beds in less than a week completely healed

In December 1940 at the joint meeting of the Swedish Surgical and Medical associations I [8] had the opportunity of presenting the first 21 cases of this abortive treatment of thrombosis, the main features of which were (and are) (1) early diagnosis, (2) immediate intensive heparinization, (3) movements of the leg from the beginning and (4) getting the patient out of bed the moment the acute thrombosis symptoms disappear, before the termination of heparin injections

These precepts, which have not been altered in any way, were applied in the treatment of all thrombosis patients at the Mariestad Hospital for more than five years The technic, results and other points of interest will now be discussed

## THE TECHNIC IN HEPARIN TREATMENT

The technic used in the Mariestad Hospital was as follows

The heparin was administered by intermittent intravenous injections The brand of drug used was that manufactured in Stockholm by Vitrum & Co, Ltd, under the supervision of Dr Jorpes The Swedish heparin contains 80 international units per milligram of water-free substance

Immediately after the diagnosis of thrombosis (or pulmonary embolism) had been made, 150 mg of heparin was administered Depending on the time of day at which the treatment was started, a further one or two doses of the same size were given An interval of four hours was always allowed to elapse between doses however The last dose was given late

14 Bauer G Acta radiol **26** 577 1945

15 Jorpes E Acta med Scandinav **107** 107 1941 Svenska lak tidning 1943 p 1

16 Crafoord C, and Jorpes E Heparin as a Prophylactic Against Thrombosis J A M A **116** 2831 (June 28) 1941

17 Murray G D W Heparin in Surgical Treatment of Blood Vessels Arch Surg **40** 307 (Feb) 1940

at night On the following days three to four injections were usually given, with early morning and night doses of 150 mg and a mid-day dose (or doses) of 100 mg After a few days the temperature generally returned to normal (or to a level only a few tenths of a degree C above normal), and the swelling and

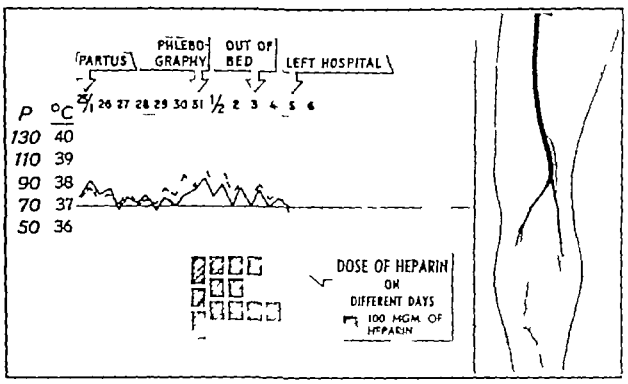



Fig 5—A typical example of abortive treatment with heparin On sixth day after normal partus rise in temperature and pulse rate and slight tenderness on palpation over middle third of calf On phlebographic examination no contrast filling of deep veins of lower part of leg but femoral vein normal Thus incipient thrombosis still confined to lower part of leg Heparin treatment instituted First day 150 + 100 + 150 mg of heparin Second and third days 100 mg three times a day After that successively reduced doses Total dose of heparin 1 300 mg Result On third day all tenderness disappeared and temperature normal Patient allowed to get up On fifth day patient discharged after being supplied with an Unna's paste stocking

palpation tenderness in the leg disappeared The heparin doses were then decreased to two injections of 100 mg, and on the last day to an evening dose alone The treatment was then at an end (fig 5) During the entire treatment the patient was allowed to move about freely in bed and was made to execute whole series of bending and stretching movements of the legs at intervals throughout the day On the day the heparin doses were first decreased he was allowed to get up and even to walk about a little The length of time out of bed was increased each day, and as a rule the patient could leave the hospital two or three days after first getting up

When leaving bed he was provided with an elastic bandage on the foot and the lower part of the leg in order to counteract the mild swelling generally arising in this region in the evening during the first few weeks The bandage may be an elastic dressing or a length of tricot tubing, at Mariestad we generally used an Unna's paste stocking This bandage was worn for only two or three weeks At the end of this time most of the patients were capable of resuming their work

We found it of the utmost importance that the patients should get up when or, rather, before the heparinization is terminated Most of the failures experienced with heparin treatment are due to the fact that this rule is not observed This was the case, for instance, in regard to at least one of the deaths in the Mariestad Hospital As a rule, the explanation of the failures is probably that, owing to old prejudices, doubt is felt as to the wisdom of allowing a thrombosis patient to move about It should be stressed, however, that when heparin is no longer being administered the patient is even on the following day totally unprotected against, and open to, the risk of a fresh thrombosing process The best way in which this risk can be counteracted is to allow the patients to get up and begin moving about

In certain conditions this rule is naturally inapplicable, such as, for instance when the patient's main disease prevents him from getting up (e g in fractures of the lower extremity, when it is impossible for the patient to walk, and in many internal cases) These cases are not infrequently encountered Our practice was then to insure as good a blood circulation as possible in the limb by making the patients perform all the tension and relaxation exercises of the muscles that are practicable within a plaster cast and also by giving what we called a protracted heparin treatment (fig 7) After the acute signs of thrombosis had subsided and the actual heparin therapy terminated, we continued to administer to these patients an evening dose of 100 mg each day for, at the most, one week After that, one injection every other evening was given for another week, and then a couple of injections every third evening The treatment was then discontinued The body, it was thought, may then be regarded as having adapted itself to the new conditions, and the risk of a recurrence of thrombosis is probably no greater than it is in any other patient confined to bed This procedure was adopted with 22 patients, and in none of them was there a recurrence In 2 of these cases of fracture it was even possible, nineteen and eight days respectively after the temperature had returned to normal, to perform an osteosynthesis on the tibia without the slightest sign of thrombosis appearing during the subsequent course

As regards the cases in which the disease made its first appearance as a massive pulmonary embolism the treatment followed the same lines as those already described During the first twenty-four hours, however, we found it advisable to administer heparin (150 mg) every four hours The customary eupaverin treatment was not neglected [18]

If a phlegmasia alba dolens was already manifest before the beginning of treatment (as was often observed in patients sent in by practitioners), this too did not materially influence the therapeutic rules that have been set down Some of these cases responded quite as

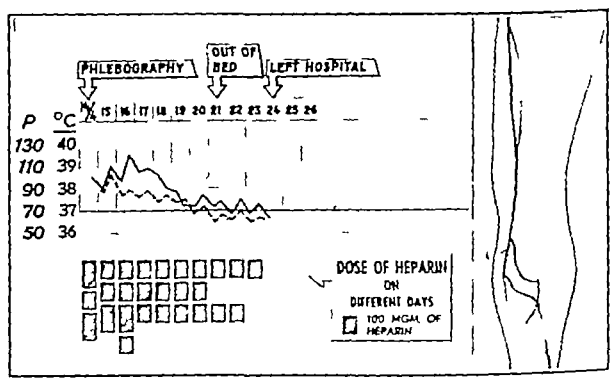



Fig 6—An example of heparin treatment in phlegmasia alba dolens Patient treated at home for postpartum thrombosis After a few days pulmonary embolism of medium severity developed and the patient was sent to the Mariestad Hospital On admission condition poor she was dyspneic and very restless Severe phlegmasia alba dolens in right leg Phlebographic examination revealed total absence of all deep venous trunks Thus, incipient thrombosis in both lower part of leg and thigh Heparin treatment instituted First days doses large after that successively reduced Total heparin dose, 3 000 mg Result Stitch and restlessness disappeared after first injection At end of two days during which temperature had continued to rise the fever rapidly subsided and all local symptoms disappeared On seventh day patient was symptom free and could get up On tenth day she was discharged with only minimal signs of leg swelling

rapidly to heparin treatment as very early cases, while in others somewhat larger doses and a slightly prolonged period of treatment were found necessary (fig 6)

18 Eupaverin is a proprietary name for methylene dioxy benzyl methyl methylene-dioxy isoquinoline a synthetic antispasmodic.

RESULTS OF TREATMENT WITH HEPARIN

For a period of five years which began Oct 1, 1940 and ended Sept 30, 1945, 209 cases of acute thrombosis of the deep veins of the leg were treated at Mariestad Hospital In practically all cases the diagnosis was verified with the aid of phlebography

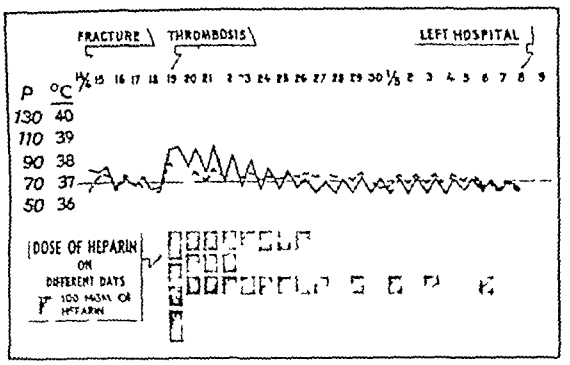



Fig 7—An example of heparin treatment when the patient is prevented from getting up immediately after termination of heparin treatment Five days after fracture of the tibia a rise in temperature and pulse rate and thrombosis in lower part of fractured limb Heparin treatment instituted. First day 150 + 100 + 100 + 150 mg After that successively reduced doses On fifth day (April 24) all local symptoms had vanished and temperature was normal Normally the patient ought now to have got up On account of fracture this was not possible Instead heparin in gradually diminishing doses was given both morning and evening during first few days then only in evenings then every second evening and finally every third evening Nineteen days after onset of thrombosis all risk of recurrence was considered to have passed, and patient was sent home to await normal healing of the fracture

Any judgment of the results should take cognizance of two questions (*a*) On what grounds is the judgment to be made? (*b*) How can a suitable material for comparison be obtained?

With respect to the first question, it is generally known that the dangers hitherto existing from the thromboembolic disease are associated with the following factors (1) A large group of the patients die of pulmonary embolism, (2) the survivors have to lie in bed for a long time on account of their thrombosis and during this time have great distress and are especially difficult to attend, (3) in the majority of the cases the thrombosis involves incapacitating after-troubles A newly introduced method of treatment must therefore be examined with regard to its effect on these three factors

As far as a suitable comparison material is concerned, this can be obtained from table 1, which has been drawn up after a comparative study of the largest series of conservatively treated cases of thrombosis that have been published, among them Robertson's [19] of no fewer than 2,196,841 surgical cases The frequency figure for traumatic cases is derived from a recent analysis made by me [20] showing that in such cases thrombosis is much commoner than has been supposed Nonetheless it seemed to me that the best picture of how the new method had worked would be obtained by making a comparison with material from the same hospital during another, sufficiently long, period during which the old, conservative method of treatment had been applied (table 2) An account follows of a study on these lines

An analysis of the two series with regard to the three factors according to which a comparison ought to be made shows the following

19 Robertson H E Am J Surg **41** 81 1938
20 Bauer G Acta chir Scandinav **90** 229 1944

MORTALITY

Among 264 cases of thrombosis in the ten year series there were 47 deaths caused by pulmonary embolism The thrombosis mortality was thus then 18 per cent, a figure that corresponds well with that given in table 1 for surgical cases During the five year period, on the other hand, only 3 of 209 thrombosis patients died The mortality therefore dropped to 1 4 per cent The mortality from pulmonary embolism among all patients admitted likewise fell from 0 2 per cent to 0 018 per cent Only 3 patients died during the heparin period, if the conservative procedure had been retained, it would have been necessary to reckon with 33 deaths, instead, during the same five years

As mentioned, however, there were 3 deaths In 1 of these, which occurred at the very beginning of the series, the patient already had a far advanced thrombosis on admission to the hospital On account of deficient experience she was not allowed to get up after completion of the heparin treatment, she subsequently had a recurrence of her thrombosis and a few weeks later died of an embolism springing from a fresh thrombosis in the other leg Another patient with peripheral thrombophlebitis was allowed to lie in bed without heparin treatment, a procedure we now know to be incorrect In an insidious manner there developed a deep seated thrombosis, which caused the pulmonary embolism that killed the patient before recourse could be had to heparinization The third patient was 70 years of age, was greatly debilitated and had suffered a fracture of the neck of the femur and had an uncompensated organic heart defect A massive thrombosis was discovered one evening and she was given a first heparin dose of 150 mg Three hours later a pulmonary embolism suddenly appeared and she died within a few minutes

In the first 2 lethal cases technical errors, as we now view the matter, were committed In the third the issue was fatal in spite of heparin The 3 cases are naturally regrettable, but they do not alter the fact that

TABLE 1—*Comparison of the Frequency and Mortality of Thrombosis in Certain Important Groups of Patients*

| | Frequency of Thrombosis | Mortality Among Cases of Thrombosis | Total Mortality from Thrombo embolism |
|---|---|---|---|
| *After surgical operations* | 1 61% | 10 0% | 0.26 % |
| After parturitions | 1.2 % | 3 6% | 0 033% |
| Among internal cases | 2.1 % | 19 % | 0 4 % |
| After trauma to lower extremity | (12 %) | | |

TABLE 2—*Comparison of the Thrombosis Material at Mariestad Hospital Sweden During a Ten Year Period When an Old Fashioned Treatment Was Used and a Five Year Period When Heparin Treatment Was Used*

| | 1929 1938 Conservative Treatment | 10/1/40-9/30/45 Heparin Treatment |
|---|---|---|
| Number of patients admitted | 25 628 | 16 495 |
| Number of thrombosis cases | 264 | 209 |
| Fatal embolism | 47 | 3 |
| Mortality among thrombosis cases | 18% | 1 4% |
| Total mortality from thromboembolism | 0 2% | 0 018% |

* Out of these 70 patients (two fifths) were admitted because of thrombosis which had been contracted in their homes or at other hospitals but had not received any treatment

since heparin was introduced at Mariestad Hospital the mortality from pulmonary embolism has dropped to less than one tenth of what it was before

It deserves special mention that during the whole heparin period, five years, not a single postoperative death occurred from pulmonary embolism. During this period the number of operations was about 7,000.

### DECUBITUS

The period during which a patient is compelled to remain in bed on account of his thrombosis has been made the subject of several investigations, among others by Hellsten,[21] Linde [22] and Jorpes [23] and may be regarded as determined. On an average it has amounted to six weeks, or about forty days. During the heparin period in Mariestad, on the other hand, all patients for whom the primary disease did not constitute an obstacle got up after an average period of 4.7 days. Thus the use of heparin shortened the period of attendance *by thirty-five days. It should also be mentioned* that the patients had no pain even during the few days they were confined to bed and, as previously pointed out, were not compelled to lie anxiously immovable but could move freely and were thus not in any way difficult for the staff to manage.

TABLE 3.—*Results of Heparin Treatment at Mariestad Hospital Compared with Conservative Treatment*

| | Conservative Treatment | Heparin Treatment |
|---|---|---|
| Mortality among thrombosis cases | 18% | 1.4% |
| Average duration of stay in bed | 40 days | 4.7 days |
| Incapacitating after-effects | Serious | None or very slight |

There is hardly need to stress the social significance of this improvement in the form of reduced hospital expenses, decreased claims on costly hospital beds and the early return of the patients to productive work.

### INCAPACITATING AFTER-EFFECTS

Judging from the experience gained at Mariestad Hospital, heparin exercises its chief effect by instantly stopping any further propagation of the thrombotic process. In an earlier work [6] it was shown—*inter alia*, by means of cases in which repeated phlebography was undertaken—that the thrombosis never propagated beyond the upper limit that it had reached at the moment the first heparin injection was given. This circumstance proved to be of great significance not only immediately but also, and in a still higher degree, for the subsequent course.

As was pointed out earlier in this paper, one of the not least harmful consequences of thrombosis consists in the serious after-effects that are as a rule involved. The social importance of the post-thrombotic leg ulcers and the amount of pain and risk of infection which accompanies the post-thrombotic state can hardly be overrated. In Sweden, for instance, Birger,[24] using statistical material from the State Pensions Bureau, has shown that so many new grants of life annuities are made each year on account of leg ulcers that, as a cause of disablement, this complaint outdistances such important illness groups as diabetes or tuberculosis of the bones and joints.

There seemed, however, to be a possibility of bringing about a change in this state of affairs with the aid of heparin, for in 149 of the Mariestad cases the thrombosis was discovered so early that it was then still confined to the lower part of the leg, and the heparin then prevented it from propagating to the popliteal vein, the thrombotic obliteration of which appears to be the factor that determines the arising of post-thrombotic troubles. Consequently these 149 cases were in all probability saved from this fate. Of course, whether or not this will actually be the case can be determined definitely only after five or ten years, but we made a preliminary follow-up examination that clearly pointed in this direction. Among 78 patients in whom between two and five years had elapsed since they had their heparin-treated thrombosis of the lower part of the leg, 62 exhibited an absolutely normal leg, while 16 periodically had a slight swelling of the lower part. No case of severe swelling, induration, ulcer formation or pain occurred.

### SUMMARY OF THE RESULTS

In table 3 a collection has been made of the results obtained from the method of treatment employed in Mariestad. With its aid the following were attained:

1. The mortality from thromboembolism was decreased to less than one tenth of what it had formerly been.
2. The length of stay in bed was reduced from about forty days to less than five days.
3. Incapacitating after-effects will probably not appear in the majority of the cases.

It does not appear unjustifiable to assert that as far as the treatment of thrombosis is concerned a veritable reformation was in this way established at the hospital.

In the course of years the treatment of thrombosis has been taken up on practically the same lines as in Mariestad by a number of clinics in Sweden. The results have been similar. An account of the total material will be given in another paper.

### COMPLICATIONS AND CONTRAINDICATIONS

Among those who are not acquainted with the properties of heparin there seems to be a tendency to believe that the use of this drug entails definite risks of bleeding. As against this it must be stated that the experiences gained at Mariestad Hospital were the diametrically opposite. On no single occasion did heparin give rise to either intra-abdominal, subcutaneous or other serious hemorrhages, hardly even to small bleedings, and was not at all combined with any demonstrable tendency to bleed.

The only complications of any kind that were observed consisted of a mild hematuria, which was observed in 3 cases. There was a very moderate admixture of red blood cells in the urine. The condition lasted for only two days at most and was not followed by other signs of renal irritation. It passed off of itself without there being any need to break off the heparinization or even reduce the doses. In 2 other cases there was a mild hemarthrosis of the knee joint, which had been operated on for laceration of the meniscus. The thrombosis appeared unusually early in these cases, i. e. two and three days respectively after the intervention. In both cases the heparin treatment, which had already gone on a few days, was broken off without the thrombosis flaring up as a result. Nor did any injury to

21. Hellsten, W.: Acta chir. Scandinav. (supp. 73) **86**: 1, 1942.
22. Linde, S.: Acta chir. Scandinav. **84**: 310, 1941.
23. Jorpe, E.: *Acta obst. et gynec. Scandinav.* **23**: 256, 1943.
24. Birger, I.: Nord. med. **12**: 3542, 1941.

the knee joints arise On the other hand, a case was observed in which a strongly positive Weber reaction in the feces changed to a negative one during the course of a heparin cure

From what has been said here and from the general experience gained it appears that, as against other anticoagulants, there are hardly any contraindications to the use of heparin as a treatment for thrombosis This drug may doubtless be regarded as the body's own preventive of coagulation and diseases of the liver, kidneys or other parenchymal organs are in no way badly influenced by its use Puerperal bleeding was not affected, and existing traumatic hematomas were not enlarged We were not afraid of heparinizing even patients bleeding from gastric ulcers, nevertheless, some caution should probably be exercised in cases of that kind

SUMMARY

Investigations going on since 1938 and consisting in phlebographic examinations on nearly 600 patients, as well as coordinated clinical observations, gave evidence that acute thrombosis of the deep veins of the leg practically always (in 98 per cent) begins in the calf veins and from there propagates in the cranial direction

This knowledge makes possible a very early diagnosis of incipient thrombosis At the least suspicion the examination can at once be directed toward the lower part of the leg The clinical signs of thrombosis there are now becoming known The diagnosis should if possible be verified by phlebography

As soon as the diagnosis has been made, treatment should be instituted The method that I introduced consisted in giving these patients an intensive heparin treatment Forceful active leg movements were insisted on from the first day The patients were made to leave bed one day before the heparin cure was terminated

This plan of treatment was followed for more than five years, 209 cases of acute deep leg thrombosis were treated There was no death from postoperative pulmonary embolism Three fatal cases were recorded among the patients not operated on, 206 cases were cured In these, fever, leg swelling and pain disappeared so rapidly that the patients were able to leave bed after, on an average, 4 7 days

In comparison with material treated in the old conservative way, heparin treatment resulted in depressing the mortality to less than one tenth and in reducing the time of staying in bed from the previously customary forty days to about five days

There seems to be every probability that heparin-treated patients will as a rule, escape those troublesome after-effects, which, according to our experience, regularly appear in conservatively treated thrombosis patients and consist in permanent swelling of the leg and, later on, brown induration and ulcers

**Neglecting the Distant Consequences**—Human wisdom fails most conspicuously in passing judgment and acting on immediate needs and in neglecting the distant consequences This is intellectual shortsightedness—mental myopia Man—that is, the human race—has dwelt on this earth at least a million years It seems to me it is high time that those who would be wise should look ahead as to the consequences of their individual national and international actions not only today and tomorrow but a hundred, a thousand a hundred thousand years ahead—Carlson A J Is There "A Standard to Which the Wise and the Honest Can Repair?" *Science* **103** 577 (March 29) 1946

## EFFECT OF ANTEPARTUM VITAMIN K ON RETINAL HEMORRHAGE

HAROLD F FALLS M D, and HARRY N JUROW M D
Ann Arbor Mich

Does the antepartum administration of vitamin K influence the incidence of retinal hemorrhage in the newborn? Recent research in the field of hemorrhagic diathesis has proved the frequency of hemorrhages occurring in the newborn Hypoprothrombinemia was suggested by Lucas, Dearing, Hoobler, Cox, Jones and Smyth [1] as the possible etiologic factor of bleeding tendencies in the newborn With the advent of an accurate and simple method of blood prothrombin determination,[2] much information concerning so-called hemorrhagic diseases of the newborn became available It is to be recalled that a fall occurs in the prothrombin concentration of infant blood during the first few days of life [3] This drop begins about the second and continues to the fifth day of life [4] Infant bleeding developing during this period has been attributed to this lowered blood prothrombin level Maumenee, Hellman and Shettles [5] observed that retinal hemorrhages appeared more frequently in newborn infants having lower prothrombin levels than in infants with normal levels The same authors maintained that the incidence of retinal hemorrhages could be reduced materially by the administration of vitamin K to the mother during labor Maumenee and his co-workers also held that if vitamin K was given prior to the onset of labor the incidence of hemorrhage could be practically eliminated Hellman, Moore and Shettles [6] were able to elevate the blood prothrombin level in infants by feeding vitamin K directly to the infant or by the administration to the mother prior to delivery Sharp, Konder Heide and Good [7] attributed a curative effect of vitamin K in the hypoprothrombinemic states The early enthusiasm accorded vitamin K as a preventive of infant bleeding has been dampened by more recent investigation Sanford, Schmigelsky and Chapin [8] reported that they had been unable to show that hemorrhagic manifestations in the newborn were associated with a prothrombin deficiency They also maintained that the incidence of such hemorrhages does not appear to be lessened by the administration of vitamin K Maumanee and his associates [5] were unable to establish a correlation between the extent of retinal hemorrhage and the degree of hypoprothrombinemia

From the Department of Ophthalmology and the Department of Obstetrics and Gynecology University of Michigan Hospital

Dr Norman F Miller professor of obstetrics and gynecology, University of Michigan Medical School gave advice in the preparation of this paper

1 Lucas W P Dearing, B F Hoobler H R, Cox, A, Jones M R and Smyth F S Blood Studies in Newborn Morphology Chemical Coagulation Urobilin and Bilirubin Am J Dis Child **22** 525 (Dec) 1921

2 Quick A J On Various Properties of Thromboplastin (Aqueous Tissue Extracts) Am J Physiol **114** 283 (Jan) 1936

3 Quick A J and Grossman A M Prothrombin Concentration in the Newborn Proc Soc Exper Biol & Med **41** 227 (May) 1939

4 Bray W E and Kelly O R Prothrombin Studies Especially in Newborn Am J Clin Path **10** 154 (Feb) 1940

5 Maumenee A E Hellman L M and Shettles L B Factors Influencing Plasma Prothrombin in Newborn Infant Effect of Antenatal Administration of Vitamin K on Incidence of Retinal Hemorrhages in the Newborn Bull Johns Hopkins Hosp **68** 158 (Feb) 1941

6 Hellman L M Moore W T and Shettles L B Factors Influencing Plasma Prothrombin in Newborn Infant Study of Vitamin K Activity of Various Naphthohydroquinone Derivatives Bull Johns Hopkins Hosp **66** 379 (June) 1940

7 Sharp A E Konder Heide E C and Good W H Vitamin K Activity of 2 Methyl 1 4 Naphthoquinone and 4-Amino-2 Methyl 1 Naphthol in Hypoprothrombinemia J Lab & Clin Med **26** 818 (Feb) 1941

8 Sanford H N Schmigelsky I and Chapin J M Is Administration of Vitamin K to Newborn of Clinical Value? J A M A **118** 697 (Feb 28) 1942

PROCEDURE

The fundi of 432 consecutive infants were examined at the Maternity Clinic of the University of Michigan Hospital twenty-four to forty-eight hours after birth Homatropine 0 5 per cent was employed as the mydriatic and was instilled in both eyes at intervals of five minutes until sufficient dilatation was present to permit adequate funduscopy The fundi were examined one-half hour before the 2 p m feeding of the infants

Throughout the entire study the ophthalmologist was not permitted to know which infant's mother had or had not received vitamin K The fundi were examined within twenty-four to forty-eight hours after birth, since many superficial flame shaped retinal hemorrhages disappear within that period Fundi exhibiting hemorrhagic changes were followed daily until the retinas were clear Normal fundi were followed for seventy-two hours No attempt was made to classify the retinal hemorrhages as to extent, type or shape

Eighty-three of the 432 cases were followed by determining the prothrombin time of the infants seventy-two hours after birth and again at nine days after birth The technic employed was the micromethod of Kato [9]

TABLE 1—*Multiparas versus Primiparas*

| Groups | Percentage of Retinal Hemorrhages |
|---|---|
| Multiparas | |
| Received no vitamin K | 51 5 |
| Received vitamin K | 20.3 |
| Primiparas | |
| Received no vitamin K | 23 0 |
| Received vitamin K | 37 7 |

TABLE 2—*Duration of Labor*

| Groups Not Receiving Vitamin K | Duration of Labor |
|---|---|
| With hemorrhage | 9 0 hours |
| Without hemorrhage | 9 8 hours |
| Groups Receiving Vitamin K | |
| With hemorrhage | 12 5 hours |
| Without hemorrhage | 12 0 hours |

TABLE 3—*Retinal Hemorrhage*

| | Number of Patients | Retinal Hemorrhages | |
|---|---|---|---|
| | | Number | Percentage |
| Received vitamin K | 151 | 47 | 31 1 |
| Did not receive vitamin K | 281 | 94 | 33 4 |
| Total | 4 2 | 141 | 32 6 |

TABLE 4—*Prothrombin Time Without Vitamin K*

| | Number of Cases | Average Prothrombin Time |
|---|---|---|
| Received no vitamin K | | |
| No retinal hemorrhage | 33 | 77% |
| With retinal hemorrhage | 17 | 70% |

Commercially prepared thromboplastin was employed for the test, and this preparation was checked each day against a known normal blood prior to determining the prothrombin time of the infant

The prothrombin time was checked in infants (1) from mothers who had received no supplementary vitamin K and (2) from mothers who received vitamin K in various amounts For the most part the mother received this medication in the form of menadione tablets orally, 1 to 2 mg every three to four hours during labor Some mothers received 2 mg of "Synkamin" [10] orally every day for a period varying from two to twenty-two days before delivery

OBSERVATIONS

The data obtained by this study were classified as to effect on the incidence of retinal hemorrhages in the newborn and also in relation to the age of the mother, multiparas versus primiparas, duration of labor, method of delivery, position of the fetus, sex of the baby, weight of the baby and the type of maternal pelvis

HEMORRHAGIC INCIDENCE CORRELATED WITH MATERNAL AGE

The average age of the group of mothers whose infants displayed retinal hemorrhages was 24 5 years, whereas that of the group not displaying retinal hemorrhages was 25 4 years Whether vitamin K was administered or not, the age of the mother bore no significant relation to the incidence of retinal hemorrhages in the newborn

MULTIPARAS VERSUS PRIMIPARAS

Table 1 tends to indicate that vitamin K administered to multiparas reduces the incidence of retinal hemorrhage, while in primiparas the incidence of hemorrhage tends to increase These findings are not entirely clear

TABLE 5—*Prothrombin Time with Vitamin K*

| | Number of Cases | Average Prothrombin Time |
|---|---|---|
| Received vitamin K | | |
| No retinal hemorrhage | 29 | 89% |
| With retinal hemorrhage | 8 | 92% |

They can be partly explained by the fact that the two groups were not homogeneous, since the group which received vitamin K was made up of 57 per cent multiparas while the group not receiving vitamin K was only 31 per cent multiparas

RELATIONSHIP OF THE DURATION OF LABOR AND RETINAL HEMORRHAGE

The average length of labor in groups with and without retinal hemorrhage was 10 4 hours and 10 7 hours respectively Breaking this down further, table 2 shows that the length of labor has no definite relationship to retinal hemorrhage

METHOD OF DELIVERY, POSITION OF FETUS AND TYPE OF MATERNAL PELVIS IN RELATION TO INCIDENCE OF RETINAL HEMORRHAGE

An analysis of the method of delivery, the birth position of the fetus and the type of maternal pelvis indicates that there is no significant relationship between these factors and the incidence of retinal hemorrhages This holds true whether vitamin K was administered or withheld In both groups the incidence of retinal hemorrhage is slightly greater in difficult deliveries than in normal ones The difference, however, is of no statistical significance

SEX AND BABY WEIGHT IN RELATION TO RETINAL HEMORRHAGE

No evidence is present that retinal hemorrhage is correlated to the sex of the baby The average weight of the newborn was 3,378 Gm in the group displaying

9 Kato Katsuji Microprothrombin Test with Capillary Whole Blood Modification of Quick's Quantitative Method Am J Clin Path 10 147 (Feb) 1940

10 5 4 amino-2 methyl 1 naphthol

retinal hemorrhages and 3,295 Gm in the group without retinal hemorrhages No evidence of any vitamin K influence is noted in these groups

### EFFECT OF VITAMIN K ON TOTAL INCIDENCE OF RETINAL HEMORRHAGE

The results of our series of 432 cases are expressed in table 3 A difference of 1 3 per cent in the incidence of retinal hemorrhage in the two groups can hardly be called significant as to the effectiveness of vitamin K

### RELATION OF PROTHROMBIN TIME AND RETINAL HEMORRHAGES

Prothrombin time was determined in 83 infants of this series Although the group was relatively small, we believe that certain facts stand out sufficiently to warrant their presentation

In this series of 83 cases the average infant prothrombin time, seventy-two hours after birth, was 82 5 per cent, while at nine days post partum it had risen to 93 3 per cent The instances in which the mother received no vitamin K averaged 77 6 per cent and 93 0 per cent for the seventy-two hour and nine day interval respectively The instances in which the mother received vitamin K showed the infant prothrombin time averaging 87 3 per cent and 93 6 per cent at seventy-two hours and nine days respectively Thus there was a significant elevation (about 10 per cent) in the seventy-two hour prothrombin level in infants whose mothers received vitamin K By the ninth postpartum day the prothrombin time levels off, except in cases in which severe hypoprothrombinemia exists

In the group of 83 mothers, 50 received no vitamin K As shown by table 4, the difference of the average prothrombin time of these infants, whether retinal hemorrhage was present or not, is only 2 per cent

Thirty-three patients in this group received vitamin K The results are presented in table 5 The difference in the average prothrombin time in the infants with and without retinal hemorrhage is merely 3 per cent

This difference of 2 per cent and 3 per cent in the two groups is well within the limits of error as far as prothrombin time determinations are concerned

### COMMENT

It is to be emphasized that the observations made in this paper have been solely devoted to hemorrhages seen at birth or within the first forty-eight hours thereafter If all bleeding seen in the newborn constitutes hemorrhagic disease of the newborn (as has been intimated by much of the literature), then one must specify these hemorrhages as the "early type" in contradistinction to the "delayed type." In following the retinal hemorrhages from day to day it was significantly noted that their absorption occurred very rapidly, leaving little or no trace In fact, it was necessary to observe the majority of the fundi within the first twenty-four hours in order to be accurate regarding the true incidence of retinal hemorrhages This is important, as one would actually anticipate a persistence and possible increase in the number of retinal hemorrhages after forty-eight hours if hypoprothrombinemia were the sole etiologic factor, this in the light of repeatedly observed decrease in the prothrombin level of the infant's blood during the second third and fourth days of life [3]

In discussing the etiology of hemorrhage, one must recall that there may be an alteration of the integrity of the vascular endothelium Hypoprothrombinemia cannot be conceived as effecting an endothelial change Actual trauma and anoxia seem to be the more important factors in the production of hemorrhages in the retina of the newborn. The opportunities for anoxia and trauma in the passage through the birth canal are myriad and well accepted Since the great majority of infants have essentially normal prothrombin levels at birth, it would not seem that the hypoprothrombinemia is of much importance in the etiology of retinal hemorrhages The determination of infant prothrombin content has been reported in values below those found in the maternal blood yet well above the danger levels Most infants have rapid coagulation times which have no correlation to their prothrombin levels

This study offers support to the fact that vitamin K administration raises the prothrombin level in the newborn during the physiologic decline of the prothrombin content and may play a role in prevention of certain hemorrhages Issue is, however, taken with the reported findings that antepartum vitamin K administration materially reduces the incidence of retinal and other tissue hemorrhages We agree with Sanford, Schmigelsky and Chapin [8] that vitamin K given ante partum does not reduce the incidence of retinal hemorrhages in the newborn

### CONCLUSIONS

1 Vitamin K administered either ante partum or intra partum does not reduce the incidence of retinal hemorrhages in the newborn

2 Vitamin K thus administered raises the infant prothrombin time during the physiologic decline

771 Fisher Building, Detroit 2

---

## RELATION OF TOBACCO SMOKING TO ARTERIOSCLEROSIS OBLITERANS IN DIABETES MELLITUS

LEONARD A. WEINROTH M D
and
JOSEPH HERZSTEIN, M D
New York

Our purpose in this study was to determine the relative incidence of occlusive arterial disease in diabetic patients who smoked tobacco as compared with similar patients who abstained from its use Any factor, like tobacco, which may affect the circulation is of especial importance to the diabetic As we have recently reemphasized,[1] the incidence of peripheral vascular disease in diabetes mellitus is high On this account the diabetic patient is often incapacitated by intermittent claudication, ulcers, gangrene and amputations As Joslin [2] says, "An elucidation of the relative importance of the various factors contributing to its [occlusive vascular disease] causation, together with improvements in our methods of preventing and of treating these complications when they arise, represent perhaps the most urgent need in diabetic treatment today"

### SCOPE OF THE WORK

The clinical material available for our study comprised 301 male diabetic patients chosen at random in the diabetic clinic A few were in the wards or the

From the Peripheral Vascular Disease Clinic and the Metabolism Clinic, Mount Sinai Hospital

Dr Samuel Silbert, chief of the Peripheral Vascular Disease Clinic of the Mount Sinai Hospital offered helpful criticism Dr Franklin Hollander assisted with the statistical evaluation of the observations

1 Herzstein, J , and Weinroth L. A Arteriosclerotic Peripheral Vascular Disease in Diabetes Arch Int. Med 76 34 38 (July) 1945

2 Joslin E P Root, H F White Priscilla and Marble Alexander Treatment of Diabetes Mellitus, Philadelphia Lea & Febiger 1940 p 419

Mount Sinai Hospital The ages ranged from 16 to 88 years The investigation was limited to males, because few of our female patients were smokers

The patients were questioned about their smoking habits in order to fit them into classifications of nonsmoker and light, moderate or heavy smoker

TABLE 1—*Arteriosclerosis Obliterans in Relation to Smoking*

| | Nonsmokers | Smokers |
|---|---|---|
| Total number of patients | 83 | 218 |
| Average age | 57.5 | 57 1 |
| Arteriosclerosis obliterans | | |
| Present | 31 (37 3%) | 1°6 (57 8%) |
| Absent | 52 (6° 7%) | 92 (4° 2%) |

Chi square = 10 08 n = 1 P = 0 1o%

Symptoms referable to the lower extremities were carefully investigated in order to evaluate those due to intermittent claudication in contradistinction to those of orthopedic, arthritic or neuritic origin The lower extremities were examined by palpation of the arteries The dorsalis pedis, anterior and posterior tibial, popliteal and femoral arteries were palpated In approximately two thirds of the patients oscillometric studies were made

When there was no intermittent claudication and the vessels in both extremities were open, the patient was considered as not having arteriosclerosis obliterans Also, if the dorsalis pedis pulse alone could not be felt, no abnormality was diagnosed This pulse is not palpable in about 5 per cent of normal persons When there was no pulsation in one or several of the other arteries the patient was considered to have occlusive vascular disease Ruling out thromboangiitis obliterans and embolism, we assumed that when thrombosis was present it was on an arteriosclerotic basis We divided our patients into two groups, namely those with or those without arteriosclerosis obliterans

This method of appraisal is not presumed to reveal the exact condition of the arteries Patients may have x-ray evidence of arterial calcification and yet have no symptoms because of sufficient patency of their vessels Again, some arteries may become thrombosed in the presence of minimal clinical evidence of arteriosclerosis while others remain open in spite of extensive pathologic change

TABLE 2—*Arteriosclerosis Obliterans in Various Age Groups*

| | Nonsmokers | | | Smokers | | |
|---|---|---|---|---|---|---|
| Age Group | Total in Age Group | No in Group | Condition Present | No in Group | Disease Present | Disease Absent |
| Under 20 years | 20 | 4 | 0 | 16 | 4 (2o% ) | 12 |
| 30 to 39 | 12 | 3 | 0 | 9 | 3 (33 3%) | 6 |
| 40 to 49 | 36 | 8 | 1 (12.o%) | 28 | 13 (46 4%) | 15 |
| 50 to 59.. | 80 | 27 | 6 (22.2%) | 53 | 30 (56 6%) | 23 |
| 60 to 69 | 97 | 24 | 12 (o0% ) | 73 | 49 (67 1%) | 24 |
| Over 70 | o6 | 17 | 12 (70 6%) | 39 | 27 (69 2%) | 12 |

INCIDENCE OF PERIPHERAL VASCULAR DISEASE

*In Relation to Age*—Among the entire group of 301 patients there were 83 smokers and 218 nonsmokers The average age for the two groups was similar As shown in table 1, 37 3 per cent of the nonsmokers had arteriosclerosis obliterans as against 57 8 per cent of the smokers, a difference of 20 5 per cent favoring the nonsmokers

When the factors of smoking and vascular closure are tabulated according to ascending age groups (table 2) they show, as one might anticipate, an increasing incidence in successive decades Among the older patients more arteriosclerotic vascular disease was expected and found In the group of patients aged 70 or more the same incidence of disease occurred, about 70 per cent in each group However, in the decades before this it will be noted that there were fewer patients with thrombosed vessels among the nonsmokers In the decade 50-59 years, which presented a fairly large group of patients, the number with thrombosed vessels was approximately half as great in the nonsmokers as compared with the smokers

Because of the relatively small number of nonsmokers in the younger age groups we have condensed table 2 into two large groups, eliminating the age group of 70 and over The data appear in table 3 As in table 1, the figures indicate a smaller proportion of patients

TABLE 3—*Arteriosclerosis Obliterans by Age Groups*

(Condensation of Table 2)

| | | Nonsmokers | | Smokers | |
|---|---|---|---|---|---|
| Age Group | Total in Age Group | No in Group | Condition Present | No in Group | Condition Present |
| Up to 49 years | 68 | 15 | 1 ( 6 7%) | 53 | 20 (37 7%)* |
| 50 to 59 | 177 | 51 | 18 (3o 3%) | 126 | 79 (62.7%)† |
| Total | 245 | 66 | 19 (28.8%) | 179 | 99 (oo.3%) |

* Chi square = o 29 n = 1 P = 2.2%
† Chi square = 11 01 n = 1 P = 0 09%

TABLE 4—*Arteriosclerosis Obliterans in Relation to Amount of Smoking* *

| | Total Number of Patients | Condition Present |
|---|---|---|
| Nonsmokers | 74 | 26 (3o 1%) |
| *Light smokers.* | 37 | 20 (o5 0%) |
| Moderate smokers | 82 | 45 (54.9%) |
| Heavy smokers | 9> | 56 (o8.9%) |

* In this and in subsequent tables the total number of patients in each group is less than in the preceding tables owing to the incompleteness of all the records in some of the factors other than the presence of arteriosclerosis obliterans The actual percentage incidence of this condition in the smoker and nonsmoker groups remains practically unaltered

with thrombosed vessels among nonsmokers Tables 1 and 3 have been submitted to careful analysis to determine their statistical significance The calculations indicate that the correlations are significant and are not due to chance sampling The probability figures supplied by Dr Franklin Hollander of the Gastroenterology Research Laboratory of the Mount Sinai Hospital appear in tables 1 and 3

*In Relation to Grade of Smoking*—A patient who smoked up to 5 cigarets a day was considered a light smoker Those who smoked from 5 to 15 cigarets a day were placed in the group of moderate smokers The heavy smokers were those who smoked more than 15 cigarets each day When the patient smoked cigars or a pipe the amount of tobacco used was a gage in the classification An analysis of the possible effects of degree of smoking as revealed in table 4 did not show any significant difference between heavy smokers and light or moderate smokers It is possible that real differences might be lost because of the difficulty of making truly quantitative subdivisions of grade of smoking

As shown in table 5, among the smokers from whom the information was obtained there is a possible suggestion that a prolonged period of smoking may be associated with increased vascular disease

*In Relation to Duration of Diabetes*—It is to be expected that patients who have diabetes for a long time will be more likely to have peripheral arterial disease some metabolic factor operating here presumably to induce it Should smoking aggravate the condition, then people with diabetes even of short duration might experience more involvement if they smoked That this is the case is suggested in table 6 In the nonsmokers arteriosclerosis obliterans tends to be slightly less frequent than in the group of smokers There were 105 patients with diabetes up to five years in duration For the group as a whole the incidence of arteriosclerosis obliterans was 44 per cent For the nonsmokers in the group the incidence was less, namely 23 per cent Among the smokers the incidence was much higher, namely 53 per cent

TABLE 5—*Arteriosclerosis Obliterans and Years of Smoking*

| Number of Years | Number of Patients | Condition Present |
|---|---|---|
| Under 5 years | 2 | 0 |
| 6-10 | 11 | 3 |
| 11 19 | 9 | 2 |
| 20-29 | 24 | 14 |
| 30 or more | 113 | 6 |

TABLE 6—*Arteriosclerosis Obliterans in Relation to Duration of Diabetes and Smoking*

| | Nonsmokers | | Smokers | |
|---|---|---|---|---|
| Years Duration | Total Number of Patients | Condition Present | Total Number of Patients | Condition Present |
| Under 3 years | 22 | 4 (18.2%) | 60 | 31 (51 7%) |
| 4 to 5.. | 8 | 3 (37.5%) | 15 | 8 (53.3%) |
| 6 to 10 | 24 | 11 (45.8%) | 57 | 31 (54 4%) |
| 11 or more | 19 | 7 (36.8%) | 79 | 48 (60.8%) |

*In Relation to Severity of Diabetes*—Depending on such factors as blood sugar levels and insulin requirements, the patients were classified according to the severity of their illness as having mild, moderately severe and severe diabetes In table 7 it is seen that in each grade of severity of diabetes the percentage involvement with arteriosclerosis obliterans is less among the nonsmokers We had more patients with mild and moderately severe diabetes than with severe diabetes When the first two types are grouped together, 36 per cent of the nonsmokers had occluded vessels as against 60 per cent for the smokers

*In Relation to Degree of Diabetic Control*—From the figures in table 8 which show the relation between arteriosclerosis, adequacy of control and smoking, it appears that there is a penalty for smoking Among 41 well controlled diabetic patients who did not use tobacco 13, or 31 8 per cent, had occluded vessels Among 117 similarly well controlled patients who were smokers 67, or 57 3 per cent, were affected by the condition The patients whose diabetes was only under fair control had about the same incidence of arteriosclerosis obliterans whether they smoked or not However, a difference did exist in the group of poorly controlled patients Here the nonsmokers had less arteriosclerosis obliterans than the smokers Five out of 19 poorly controlled nonsmokers, or 26 3 per cent, had occluded vessels In a corresponding group of 40 poorly controlled patients who smoked 20, or 50 per cent, had closed peripheral arteries

TABLE 7—*Severity of Diabetes and Arteriosclerosis Obliterans and Smoking*

| | Nonsmokers | | Smokers | |
|---|---|---|---|---|
| Severity of Disease | Total Number of Patients | Condition Present | Total Number of Patients | Condition Present |
| Mild | 43 | 15 (34.9%) | 109 | 67 (61.5%) |
| Moderately severe | 19 | 7 (36 8%) | 6. | 37 (58 7%) |
| Severe. | 10 | 2 (20 0%) | 36 | 12 (33.3%) |

TABLE 8—*Control of Diabetes, Arteriosclerosis Obliterans and Smoking*

| | Nonsmokers | | Smokers | |
|---|---|---|---|---|
| | Total Number of Patients | Condition Present | Total Number of Patients | Condition Present |
| Good | 41 | 13 (31.8%) | 117 | 67 (57.3%) |
| Fair | 12 | 6 (50 0%) | 51 | 28 (55 0%) |
| Poor | 19 | 5 (26 3%) | 40 | 20 (50 0%) |

*In Relation to Obesity*—The factor of obesity in our patients was gaged by an appraisal of their past and present weights The thin men and those who did not weigh more than 150 pounds (68 Kg ) were considered nonobese On the basis of obesity alone we found peripheral vascular disease as frequently in the nonobese as in the obese The figures for the added factor of tobacco smoking appear in table 9 Among nonobese diabetic patients alone, those who did not smoke experienced less arteriosclerosis obliterans than those who did The percentage incidence for the thin or normal weight nonsmokers was 35 7 as against 53 2 for smokers of similar build In our series of patients there were 176 men who were obese at one time or another Taking this group as a whole, 52 per cent had arteriosclerosis obliterans When these obese patients are considered in the light of their smoking habits, less arteriosclerosis obliterans was found in those who abstained from the use of tobacco Out of 44 obese nonsmokers 14 or

TABLE 9—*Obesity and Arteriosclerosis Obliterans and Smoking*

| | Nonsmokers | | Smokers | |
|---|---|---|---|---|
| Type | Total Number of Patients | Condition Present | Total Number of Patients | Condition Present |
| Never obese. | 23 | 10 (3. 7%) | 77 | 41 (53.2%) |
| Obese at time of examination or previously | 44 | 14 (31 8%) | 132 | 77 (58.3%) |

TABLE 10—*Hypertension and Arteriosclerosis Obliterans and Smoking*

| | Nonsmokers | | Smokers | |
|---|---|---|---|---|
| Group | Total Number of Patients | Condition Present | Total Number of Patients | Condition Present |
| No hypertension | 37 | 10 (27 0%) | 112 | 65 (. to 1%) |
| Hypertension present | 33 | 14 (42.4%) | 93 | 60 (64.5%) |

31 8 per cent had occluded vessels, which is less than the figure of 52 per cent for the obese group as a whole Among 132 obese patients who did use tobacco 77, or 58 3 per cent, had occluded vessels, a figure which is 26 5 per cent higher than that for the nonsmokers of similar constitution

*In Relation to Hypertension*—We used a systolic tension of 150 mm and a diastolic of 90 mm to separate the hypertensive from the nonhypertensive patients On the basis of arterial tension alone the hypertensive patients had a somewhat higher incidence of arteriosclerosis obliterans For the patients without hypertension the incidence was 44 per cent as against 58 7 per cent among the patients with hypertension Adding the factor of smoking (table 10), the figures become altered in a direction favoring the nonsmokers in each group Among 37 patients without hypertension who abstained from the use of tobacco 10, or 27 per cent, had occluded vessels Among 112 patients with similar arterial tension but who did use tobacco there were 55, or 49 1 per cent, who had closed vessels Turning to the hypertensive patients a similar condition favoring the nonsmokers was found to exist Nonsmokers in the hypertensive group had an incidence of 42 4 per cent of arteriosclerosis obliterans, while smokers in the hypertensive group experienced a percentage of 64 5 for the condition

## COMMENT

Our findings indicate a significantly higher incidence of occlusive vascular disease in diabetic patients who smoked tobacco as compared with diabetic nonsmokers This held true in all decades up to 70 years

In searching through the literature we find a paucity of references on the possible relationship between smoking and the incidence of thrombosis of the peripheral arteries Whereas it is generally admitted that smoking because of its vasoconstrictor effect is harmful to patients who already have arteriosclerotic peripheral vascular disease, tobacco is not believed to be a contributing factor in its causation

Several workers have reported such a link on the basis of animal experiments, but, as Thienes and Butt [3] point out, most of the tests were inadequately controlled In this connection Thienes and Butt [3] suggest that the acute peripheral vasoconstriction associated with tobacco smoking might exaggerate the effects of existing vascular disease Blotner [4] reported a fatal case of diabetic gangrene in a man aged 34 who smoked 60 cigarets a day and thought that the patient's excessive smoking might possibly have precipitated the gangrene which ensued

Recent work done mostly on healthy persons shows almost uniformly that tobacco smoke produces vasoconstriction, elevation of the blood pressure and an increase in pulse rate Graybiel, Starr and White,[5] among others, noted the lowering and inversion of T waves in the electrocardiogram during smoking tests

Ralli and Oppenheimer [6] presented evidence of peripheral vasoconstriction during smoking with a rise in blood pressure and onset of precordial pain in patients with "tobacco angina" Hines and Roth [7] found that a rise in blood pressure occurred in the majority of persons given a standard smoking test Excessive rises were noted in individuals with hyperactive vascular systems as measured by cold pressor tests Short and Johnson [8] compared the reactions to tobacco smoke with those induced by epinephrine and found the reactions parallel, both causing a rise in pulse rate, blood pressure and blood sugar Curiously enough this slight rise in blood sugar was thought by Haggard and Greenberg [9] to be the source of the smoker's gratification In animals injected with nicotine they noted a rise in blood sugar and respiratory quotient when these values were low

The peripheral vasoconstricting action of tobacco smoking in man has been repeatedly demonstrated Simici and Marcu [10] presented plethysmographic data showing the vasoconstrictor action of tobacco smoke. Wright and Moffat [11] found that after smoking there occurred a decided drop in surface temperature of the tips of the fingers and toes They also noted a frequent slowing and stoppage of the blood flow in capillaries of the nail fold The length of time the subject had been a smoker and number of cigarets habitually smoked daily had no determinable effect on the degree of temperature drop Moyer and Maddock [12] also induced skin temperature fall after smoking, with no significant difference in response between light and heavy smokers Johnson and Short,[13] Maddock and Coller,[14] Weatherby [15] and Roth, McDonald and Sheard [16] were able to demonstrate a drop in skin temperature consequent to tobacco smoking

We have been unable to find any statistical reports with which we could compare our observations There are however several contributions which relate smoking and age groups to coronary artery disease White and Sharber [17] found no statistical relationship between tobacco smoking and angina pectoris They did believe, however, that in occasional instances the use of tobacco might precipitate an attack

Glendy Levine and White [18] stated that among 88 patients below 40 years of age suffering from coronary artery disease 93 per cent were smokers English Willius and Berkson [19] found that in age groups 40-49 and 50-59 there was a significantly greater incidence of coronary artery disease among smokers as compared to similar nonsmoking controls Beyond 60 years of age no noteworthy difference was observed Willius [20]

3 Thienes C H and Butt E M Chronic Circulatory Effects of Tobacco and Nicotine, Am J M Sc **195** 522 529 (April) 1938

4 Blotner, H Excessive Smoking as a Possible Precipitating Factor in Diabetic Gangrene with a Case Report Ann Int Med **9**: 987 991 (Jan ) 1936

5 Graybiel A Starr R S and White P D Electrocardiographic Changes Following the Inhalation of Tobacco Am Heart J **15** 89 99 (Jan ) 1938

6 Ralli Elaine P and Oppenheimer B S Changes in the Peripheral Circulation Accompanying Tobacco Angina Proc Soc Exper Biol & Med **26**: 9 11 (Oct.) 1928

7 Hines E A, Jr and Roth G M The Effect of Tobacco on the Blood Pressure as Measured by a Standard Smoking Test Proc. Staff Meet , Mayo Clin **13** 524-526 1938.

8 Short J J and Johnson H J A Direct Comparison of the Reactions of the Human System to Tobacco Smoke and Adrenalin J Lab & Clin Med **24** 590-593 (March) 1939

9 Haggard H W and Greenberg, L A The Effects of Cigaret Smoking on the Blood Sugar Science **79**: 165 1934

10 Simici D, and Marcu I J de physiol et de path gen **25** 58 1927

11 Wright I S and Moffat D The Effect of Tobacco on the Peripheral Vascular System, J A M A **103**: 318-323 (Aug 4) 1934

12 Moyer, C A and Maddock, W G Peripheral Vasospasm from Tobacco, Arch Surg **40**: 277 285 (Feb ) 1940

13 Johnson H J and Short J J Effect of Smoking on Skin Temperature J Lab & Clin Med **19** 962 966 (June) 1934

14 Maddock W G and Coller F A Peripheral Vasoconstriction by Tobacco Demonstrated by Skin Temperature Changes Proc. Soc. Exper Biol & Med **29** 487-488 (Jan ) 1932

15 Weatherby J H Skin Temperature Changes Caused by Smoking and Other Sympathomimetic Stimuli Am Heart J **24** 17 30 (July) 1942

16 Roth, G M McDonald J B and Sheard C The Effect of Smoking Cigarets and of Intravenous Administration of Nicotine on the Electrocardiogram Basal Metabolic Rate Cutaneous Temperature Blood Pressure and Pulse Rate of Normal Persons J A M A **125**: 761 767 (July 15) 1944

17 White P D and Sharber T Tobacco Alcohol and Angina Pectoris J A M A **102** 655 657 (March 3) 1934

18 Glendy R E Levine S A and White P D Coronary Disease in Youth J A M A **109** 1775-1781 (Nov 27) 1937

19 English J P Willius F A and Berkson J Tobacco and Coronary Disease J A M A. **115** 1327 1329 (Oct 19) 1940

20 Willius F A *Coronary Sclerosis and the Doctor* Proc Internat. Post-Grad M A North America 1942, p 308

remarks elsewhere that tobacco has its greatest damaging possibilities in the younger age groups Interestingly enough Pearl [21] in his investigation of smoking on longevity came to the conclusion that up to the age of 70 nonsmokers outlive smokers Beyond this age smoking tobacco had no influence on longevity

The mechanism of the increased frequency of occlusive arterial disease which we have noted in diabetic smokers is not clear It is conceivable that over a period of time by virtue of its vasoconstrictor effect an already constricted arteriosclerotic vessel may become still further narrowed Such encroachment on the lumen would favor thrombus formation It is also conceivable that functional constriction of an artery may increase the tendency to rupture of an atheromatous plaque or to a hemorrhage into it with subsequent thrombosis

SUMMARY

In a group of 301 male diabetic patients a significantly higher incidence of thrombosed peripheral arteries was found in smokers as compared with abstainers from tobacco

This condition existed among those who had diabetes for less than five years as well as in those with diabetes of longer duration Regardless of such factors as severity of the illness, adequacy of control, presence of obesity or hypertension, a lower frequency of arteriosclerosis obliterans prevailed in general among nonsmokers

*1148 Fifth Avenue—115 East Ninety-Second Street*

## RHEUMATIC FEVER IN NAVAL ENLISTED PERSONNEL

### III The Physiologic and Toxic Effects of Intensive Salicylate Therapy in Acute Cases

COMMANDER R. C. MANCHESTER (MC), U S N R

Acute rheumatic fever in young adults, either in naval service [1] or in civilian life,[2] begins primarily as an acute infection exhibiting acute polyarticular arthritis as the major manifestation Intensive salicylate therapy, when instituted early in the acute phase,[3] following the principles outlined by Coburn,[4] successfully suppresses infection in such cases [5] The incidence of polycylic recrudescences and residual chronic infection is materially reduced Cardiac residua are prevented if therapy is instituted before significant clinically recognizable carditis has appeared and already existing carditis is favorably influenced

In applying Coburn's therapeutic regimens to young men, 10 Gm or more of salicylates, given intravenously or orally, is usually required Even smaller doses are known to depress plasma prothrombin, induce alterations in acid base equilibrium and precipitate serious toxic reactions Therefore the safe yet effective application of the method hinges on the dosages required, the physiologic and toxic effects of such dosages, the incidence of serious toxic reactions and means for their avoidance An analysis of these factors is presented in this paper

#### PLAN OF STUDY AND METHODS

The group for study comprised 54 young men who were afflicted with acute rheumatic fever Each patient exhibited a temperature of 100 F or over and acute articular and/or visceral manifestations when therapy was instituted Thirty-five patients received 10 Gm of sodium salicylate in a liter of saline solution or Ringer's lactate solution intravenously daily for four to ten days, followed by oral therapy Nineteen additional patients received oral therapy throughout the course of treatment Intravenous medication was begun at 9 a m and completed at 3 p m , requiring six hours for administration Oral medication consisted of between 10 and 12 Gm of acetylsalicylic acid or sodium salicylate daily, usually in conjunction with 8 Gm of sodium bicarbonate and was given in equally divided doses each four hours

Blood salicylates were determined on serum by the method of Brodie, Undenfriend and Coburn [6] Quick's method [7] was employed for prothrombin clotting time Values are expressed in percentages of normal control bloods analyzed at the same time Plasma carbon dioxide combining power was used as an index of alterations in acid base balance and was determined by Van Slyke's gasometric method [8]

#### OBSERVATIONS FROM LITERATURE AND RESULTS OF STUDY

1 *Blood Salicylate Values on Different Regimens*—Coburn [4] observed that minimum plasma salicylate levels of 35 mg per hundred cubic centimeters were required to suppress rheumatic infection in young adults suffering from acute attacks Ten gram quantities of sodium salicylate orally daily in equally divided dosages each four hours produced mean levels of 35 6 mg per hundred cubic centimeters ordinarily attained within forty-eight hours after treatment was instituted Ten Gm intravenously produced higher values during and immediately after actual administration, but levels frequently fell below 35 mg per hundred cubic centimeters in the interval before the next injection Smull, Wegria and Leland [9] found that sodium bicarbonate given in conjunction with salicylates orally produced lower blood levels than when salicylates were given alone The observations of Coombs [10] indicate that this depressing effect is due to increased urinary excretion

Serum salicylate levels obtained on intravenous and different oral regimens were studied In table 1 are represented the values found at 8 30 a m , immediately before, and at 3 30 p m , thirty minutes after, the six hour period of actual intravenous administration A relatively stable morning pretreatment level, averaging between 25 and 28 mg per hundred cubic centimeters, was attained after the second injection During

21 Pearl Raymond Tobacco Smoking and Longevity Science 87: 216-217 (March 4) 1938

From the U S Naval Hospital Seattle

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the United States Navy The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the Navy Department

1 Manchester, R C. Rheumatic Fever in Naval Enlisted Personnel I An Analysis of the Major Manifestations Observed the Factors Involved in Its Occurrence and the Cardiac Residua to be published

2 Cohn A E and Lingg C. The Natural History of Rheumatic Cardiac Disease J A M A **121** 1-8 (Jan 2) 1943

3 Manchester R C Rheumatic Fever in Naval Enlisted Personnel II. The Effectiveness of Intensive Salicylate Therapy in Acute Cases, to be published

4 Coburn A F Salicylate Therapy in Rheumatic Fever Rational Technic, Bull Johns Hopkins Hosp **73**: 435 464 (Dec ) 1943

5 Manchester [3] Coburn [4]

6 Brodie B B Undenfriend S and Coburn A F The Determination of Salicylic Acid in Plasma, J Pharmacol & Exper Therap **80** 114-117 (Jan ) 1944

7 Quick A J The Hemorrhagic Diseases and the Physiology of Hemostasis, Springfield Ill. Charles C Thomas Publisher 1942

8 Hawk P B Bergeim O Oser, B L., and Cole, A G Practical Physiological Chemistry ed 11 Philadelphia, P Blakiston s Son & Co 1937 p 499 Levinson S A and MacFate, R. P Clinical Laboratory Diagnosis Philadelphia Lea & Febiger 1937

9 Smull K Wegria R and Leland, J Effect of Sodium Bicarbonate on Serum Salicylate Level During Salicylate Therapy of Patients with Acute Rheumatic Fever J A. M A **125** 1173-1175 (Aug 26) 1944

10 Coombs F S Toxicity of Salicylates News Letter A A F Rheumatic Fever Control Program **2** 11 12 (April) 1945

actual administration values rose rapidly and readings taken thirty minutes afterward, at 3 30 p m, averaged between 35 and 46 mg per hundred cubic centimeters Rather wide variations were observed between different individuals receiving the same dosage, but only minor fluctuations occurred in the same individuals from day to day In spite of the fact that serum salicylate values exceeded Coburn's suggested minimum of 35 mg per hundred cubic centimeters for only a fraction of each twenty-four hour period, dramatic therapeutic results were obtained in all 35 cases except 1, in which 20 Gm doses were required on the second and third days for suppression of the acute manifestations

TABLE 1.—*Serum Salicylate Values Obtained Before and After the Daily Intravenous Administration of 10 Gm of Sodium Salicylate*

| | Sodium Salicylate 10 Gm Daily Intravenously in 1 000 Cc of Ringer's Lactate Solution or Saline Begun at 9 a m Completed at 3 p m | | | | | |
|---|---|---|---|---|---|---|
| | 8 30 a m | | | 3 30 p m | | |
| Days of Therapy | High, Mg per 100 Cc | Low Mg per 100 Cc. | Average Mg per 100 Cc | High Mg per 100 Cc. | Low, Mg per 100 Cc | Average Mg per 100 Cc |
| 1 | 0 | 0 | 0 | 41 | 28 | 35 |
| 2 | 26 | 5 | 16 | 53 | 27 | 36 |
| 3 | 45 | 10 | 26 | 61 | 33 | 46 |
| 4 | 44 | 15 | 28 | 54 | 26 | 39 |
| 5 | 40 | 12 | 26 | 52 | 26 | 38 |

Salicylate values obtained under different conditions of oral therapy are presented in table 2 Acetylsalicylic acid and sodium salicylate were equally effective Daily doses of 12 Gm in conjunction with 8 Gm of sodium bicarbonate produced average levels of 38 and 37 mg per hundred cubic centimeters respectively Ten Gm of acetylsalicylic acid in conjunction with 8 Gm of sodium bicarbonate gave somewhat lower levels, averaging 32 mg per hundred cubic centimeters In agreement with Smull, Wegria and Leland [9] sodium bicarbonate was found to have a depressing action, and higher serum levels averaging 44 mg per hundred cubic centimeters were attained when it was omitted As with intravenous therapy, salicylate levels varied rather widely between different individuals on the same dosage but showed only minor fluctuations from week to week in the same individual

TABLE 2.—*Serum Salicylate Levels Secured with Different Oral Regimens*

| | Acetylsalicylic Acid 10 Gm Sodium Bicarbonate 8 Gm Daily, 35 Cases | Acetylsalicylic Acid 12 Gm. Sodium Bicarbonate 8 Gm. Daily 30 Cases | Sodium Salicylate 12 Gm., Sodium Bicarbonate 8 Gm Daily 20 Cases | Acetylsalicylic Acid 12 Gm. Daily, No Soda, 6 Cases |
|---|---|---|---|---|
| | Mg per 100 Cc | Mg per 100 Cc | Mg per 100 Cc | Mg per 100 Cc. |
| High | 53 | 58 | 54 | 53 |
| Low | 15 | 10 | 15 | 28 |
| Average | 32 | 38 | 37 | 44 |

Serum salicylate levels built up rapidly on oral therapy, as shown in table 3, and reached average maximum values within forty-eight hours after starting medication The average produced by 10 Gm of acetylsalicylic acid daily was 21 mg per hundred cubic centimeters in twenty-four hours and 31 mg per hundred cubic centimeters in forty-eight hours Thus, within forty-eight hours salicylate levels secured with oral therapy exceeded those from intravenous medication except during and immediately after the actual period of administration of the latter Nevertheless, intravenous therapy was more effective than oral in alleviating acute manifestations Except for this difference, oral salicylates in between 10 and 12 Gm quantities daily satisfactorily suppressed rheumatic infection [3] Serum salicylate levels of 25 mg per hundred cubic centimeters or higher appeared to be as effective as Coburn's suggested minimum of 35 mg per hundred cubic centimeters

2 *Acid Base Balance*.—Alterations in acid base equilibrium in subjects receiving large doses of salicylates have been attributed to a fixed acid acidosis [11] or to hyperventilation due to central respiratory stimulation.[12] An increase in blood $p_H$ and lowering of carbon dioxide tension have been amply demonstrated in cases exhibiting hyperventilation In addition, Fashena and Walker [13] found that five of six experimental subjects studied showed a small but significant fall in plasma carbon dioxide combining power averaging roughly 12 volumes per cent, equivalent to a 20 per cent decrease in the alkali reserve Since the fall was not accompanied by any respiratory or urinary changes,

TABLE 3.—*Time Required for Serum Salicylate Values to Reach Average Maximum Levels in 5 Patients Receiving 10 Gm of Acetylsalicylic Acid and 8 Gm of Sodium Bicarbonate Each Twenty-Four Hours*

| Elapsed Hours of Treatment | High, Mg per 100 Cc | Low Mg per 100 Cc. | Average, Mg per 100 Cc |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 24 | 30 | 17 | 21 |
| 48 | 42 | 24 | 31 |

TABLE 4.—*Effect of Intravenous Sodium Salicylate on Plasma Carbon Dioxide Combining Power With Saline and Ringer's Lactate Solution as Diluents*

| | 10 Gm of Sodium Salicylate in 1 000 Cc of Isotonic Solution of Sodium Chloride, 6 Cases | | | 10 Gm of Sodium Salicylate in 1,000 Cc of Hartman's Solution 6 Cases | | |
|---|---|---|---|---|---|---|
| Days of Therapy | High Volumes per Cent | Low, Volumes per Cent | Average, Volumes per Cent | High, Volumes per Cent | Low Volumes per Cent | Average Volumes per Cent |
| 0 | 60 | 55 | 58 | 62 | 54 | 57 |
| 6 | 55 | 40 | 45 | 56 | 48 | 50 |

they believed that it could be accounted for only on the basis of the accumulation of fixed acids Therefore it would appear that both the accumulation of fixed acids and hyperventilation may contribute to any alterations observed

The effect of different regimens on acid base equilibrium has been studied by observations on plasma carbon dioxide combining power As recorded in table 4, when intravenous salicylates were administered in a liter of isotonic solution of sodium chloride the plasma carbon dioxide combining power fell in six days to an average of 45 volumes per cent One patient failed to show any significant change The other 5 each

11 Johnson C C. The Salicylates The Question of Acidosis Following Administration of Salicylates J A M A 94 784-789 (March 15) 1930 Fashena and Walker [13]

12 Odin M Is Salicylate Poisoning an Acidosis? Acta med Scandinav 1932, supp 50, pp 177 186 Barnett, H L. Powers J R. Benward J H and Hartman A F Salicylate Intoxication in Infants and Children J Pediat. 21: 214 223 (Aug) 1942 Guest, G M Rapoport S and Roscoe C Clinical and Experimental Studies of Salicylate Poisoning Am J Dis Child 64 200 201 (July) 1942 Ryder H W Murton S and Ferris, E B Salicylism Accompanied by Respiratory Alkalosis and Toxic Encephalopathy Report of a Fatal Case New England J Med 232: 617 621 (May 24) 1945

13 Fashena G J and Walker J N Salicylate Intoxication Studies on the Effects of Sodium Salicylate on Prothrombin Time and Alkali Reserve Am. J Dis Child 68 369 375 (Dec.) 1944

exhibited decreases to between 40 and 45 volumes per cent This undesirable effect was largely eliminated by using Ringer's lactate solution as a diluent instead of saline solution

Ten Gm of acetylsalicylic acid in conjunction with 8 Gm of sodium bicarbonate daily did not alter the

TABLE 5.—*Effect of Daily Oral Administration of 12 Gm of Acetylsalicylic Acid Without Sodium Bicarbonate on Plasma Carbon Dioxide Combining Power*

| | Case A | Case B | Case C | Case D |
|---|---|---|---|---|
| | Previous Medication Sodium Salicylate 10 Gm Daily Intravenously 6 Days | Previous Medication Sodium Salicylate 10 Gm Daily Intravenously 7 Days | Previous Medication Sodium Salicylate 10 Gm Daily Intravenously 7 Days | Previous Medication Sodium Salicylate 10 Gm Daily Intravenously 6 Days Orally 8 Days with Soda |
| Days | CO Vol. % | CO₂ Vol % | CO Vol % | CO Vol % |
| 0 | 49 | 49 | 50 | 53 |
| 6 | 41 | 38 | 36 | |
| 10 | | | | 27 |

plasma carbon dioxide combining power of 35 patients significantly Twelve Gm in conjunction with 8 Gm of sodium bicarbonate caused a sharp decrease to 39, 41 and 43 volumes per cent in 3 of 35 patients Four patients received 12 Gm of acetylsalicylic acid daily without sodium bicarbonate Table 5 shows the rapid serious depletion of alkali reserve which occurred when alkali was omitted The plasma carbon dioxide combining power in each instance fell to between 27 and 41 volumes per cent

No measurements have been made concerning the relative role played by hyperventilation and the accumulation of fixed acids Urinary ketone bodies did not appear in any of the subjects Although mild hyperventilation was sometimes observed earlier severe grades of hyperpnea did not occur until a significant depletion of alkali reserve already existed Whatever the cause may be, the salient fact is that depletion of the alkali reserve can be eliminated by giving adequate quantities of alkali in conjunction with salicylates Therefore Ringer's lactate solution should be used as a diluent for intravenous salicylates, and a minimum of not less than 0 8 Gm of sodium bicarbonate should be given with each gram of salicylates orally

3 *Prothrombin*.—Following the demonstration of the quantitative degradation of dicumarol to 2 mols of

TABLE 6.—*Effect of Daily Administration of 10 Gm of Sodium Salicylate Intravenously on Plasma Prothrombin Clotting Time*

| Days of Therapy | Prothrombin Clotting Time, Percentage of Normal Control | | |
|---|---|---|---|
| | High | Low | Average |
| 0 | 112 | 81 | 96 |
| 3 | 100 | 51 | 74 |
| 6 | 95 | 60 | 78 |

salicylic acid, Link and his co-workers [14] demonstrated that salicylic acid produced hypoprothrombinemia in rats on a low vitamin K ration which was preventable by the addition of vitamin K Recent studies have shown that similar effects occur in human beings even in the absence of vitamin K deficiency [15] Fashena and Walker [15] observed that moderate as well as large doses of sodium salicylate produce hypoprothrombinemia beginning within twenty-four hours and reaching a peak on the second day but tending thereafter to improve spontaneously in spite of continued salicylate therapy Butt and his co-workers [16] found that the prothrombin lowering effect was not enhanced by increasing salicylate dosage from 10 Gm to a total of 12 Gm daily Shapiro [17] estimated that 1 mg of synthetic vitamin K counteracted the prothrombin reducing effect of 1 Gm of acetylsalicylic acid

Ten patients tested received intravenous salicylates for one week followed by oral therapy Ten others received oral therapy throughout the study The effect of intravenous salicylates on blood prothrombin is shown in table 6 The data presented in table 7 combine the intravenous and oral groups Both oral and intravenous salicylates frequently caused a prompt decline in blood prothrombin in the first week as reflected by an increase in prothrombin clotting time to a maximum of 51 per cent of normal Spontaneous improvement occurred thereafter even though 10 and 12 Gm daily quantities of salicylates were continued orally for as long as ten

TABLE 7.—*Effect of Daily Administration of Between 10 and 12 Gm of Acetylsalicylic Acid or Sodium Salicylate Over a Prolonged Period on Plasma Prothrombin Clotting Time*

| Number of Cases | Weeks of Therapy | Prothrombin Clotting Time Percentage of Normal Control | | |
|---|---|---|---|---|
| | | High | Low | Average |
| 20 | 0 | 112 | 81 | 96 |
| 20 | 1 | 100 | 51 | 83 |
| 20 | 2 | 100 | 70 | 87 |
| 20 | 3 | 100 | 69 | 83 |
| 11 | 4 | 100 | 68 | 81 |
| 8 | 5 | 100 | 70 | 87 |
| 4 | 6 | 90 | 75 | 90 |
| 2 | 7 | 86 | 83 | 84 |
| 2 | 8 | 89 | 80 | 84 |
| 2 | 9 | 83 | 70 | 81 |
| 1 | 10 | 90 | 90 | 90 |

weeks Since prothrombin must be reduced to one fifth of normal before hemorrhage occurs [18] an adequate margin of safety existed Furthermore, no hemorrhagic tendencies attributable to hypoprothrombinemia have occurred in over 160 patients who have received intensive salicylate therapy in this hospital Other observers have found that the fall is not great [19] Therefore, although salicylates may induce a moderate degree of hypoprothrombinemia a dangerous depletion sufficient to induce hemorrhage is unlikely

4 *Toxic Effects of Salicylates*.—Mild toxic reactions such as nausea, transient vomiting, deafness, tinnitus, vertigo and sweating are of no significance and need not be considered Serious reactions which interrupted

14 Stahlmann M A Huebner C F and Link K P Studies on Hemorrhagic Sweet Clover Disease V Identification and Synthesis of the Hemorrhagic Agent J Biol Chem **138** 513-527 (April) 1941 Link K P Overman R J Sullivan, W R Huebner, C F and Scheel L D Studies on Hemorrhagic Sweet Clover Disease XI *Hypoprothrombinemia in the Rat Induced by Salicylic Acid* J Biol Chem **147** 463 474 (Feb) 1943

15 Shapiro S Redish M H and Campbell H A Studies on Prothrombin IV The Prothrombinopenic Effect of Salicylate in Man Proc Soc Exper Biol & Med. **53** 251 254 (June) 1943 Meyer O O and Howard B Production of Hypoprothrombinemia and Hypocoagulability of the Blood with Salicylates ibid. **53** 234-237 (June) 1943 Shapiro [17]

16 Butt H R Leake W H Griffith G C Huntington R W and Montgomery H Studies in Rheumatic Fever I The Physiologic Effect of Sodium Salicylate on the Human Being with Particular Reference to the Prothrombin Level of the Blood and the Effect on Hepatic Parenchyma J A M A **128** 1195 1200 (Aug 25) 1945

17 Shapiro S Studies on Prothrombin VI The Effect of Synthetic Vitamin K on the Prothrombinopenia Induced by Salicylate in Man J A M A **125**: 546-548 (June 24) 1944

18 Quick, A J Salicylates and Hemorrhage J A M A **126** 1167 (Dec 30) 1944

19 Fashena and Walker [15] Butt Leake Griffith Huntington and Montgomery [16] Quick [18]

treatment schedules consisted of delirium, dyspnea, excessive vomiting, renal pain and skin eruptions These are presented in table 8

Delirium, usually referred to as acute salicylism, was the most serious reaction encountered and was observed in 17 per cent of the 35 cases in which intravenous therapy was administered It occurred on the second day in 2 cases, third day in 1, fourth day in 2 and fifth day in 1 A prodromal period of mental confusion lasting a few hours was followed abruptly by visual hallucinations of insects and animals, delusions of persecution, sleeplessness, varying degres of hyperpnea, purposeless movements and extreme mental and motor overactivity Symptoms subsided in each instance within forty-eight hours after salicylates were stopped One patient died of acute carditis with failure twenty-four hours after all traces of delirium had disappeared The others tolerated subsequent salicylates orally in 10 and 12 Gm daily quantities even though oral medication was instituted in each instance after only twenty-four hours of complete freedom from delirium Intravenous salicylates repeated later failed to precipitate further mental reactions Furthermore, among over 160 patients receiving intensive salicylate therapy no mental reactions were observed in any patient while on oral therapy or among those in whom intravenous therapy was instituted after the acute phase of their illness had subsided Therefore this serious reaction can be attributed to the

TABLE 8.—*Significant Toxic Reactions Observed in Patients Receiving Intensive Oral and Intravenous Salicylate Therapy*

| Toxic Reactions | Intravenous Salicylates | Oral Salicylates |
|---|---|---|
| Delirium acute salicylism | 17% | 0 |
| Accentuation of dyspnea of cardiac failure. | 6% | 3% |
| Severe dyspnea | 3% | 14% |
| Excessive vomiting | 3% | 0 |
| Renal pain | 3% | 0 |
| Skin eruption | 3% | 0 |

abrupt, rapid rise in blood salicylate levels associated with intravenous therapy and is most likely to occur in acutely ill patients who have not built up an antecedent tolerance to the drug

A mild acceleration of respiration attributed to direct stimulation of the respiratory center was frequently observed during intravenous therapy and less often with oral salicylates This acceleration in conjunction with already existing dyspnea of cardiac failure was sufficient in 3 cases to preclude temporarily further intravenous or oral salicylates It was avoided by using aminopyrine in 4 to 6 Gm quantities daily instead of salicylates until cardiac failure was alleviated

Severe dyspnea unrelated to cardiac failure or delirium was characterized by hyperpnea even on slight physical exertion A peculiar feature was the lack of sufficient breath to carry on meager conversation even when respirations were subdued during complete bed rest This suggested the type of difficulty experienced by apneic subjects following periods of hyperventilation Dyspnea of this character occurred in 1 patient who inadvertently received intravenous salicylates in distilled water instead of saline or Ringer's lactate solution and in 14 per cent of those on oral therapy Three of the latter (patients B, C and D, table 4) were receiving acetylsalicylic acid and one enteric coated sodium salicylate daily in 12 Gm quantities without additional sodium bicarbonate, and the other 3 the same dosage of acetyl salicylic acid in conjunction with 8 Gm of sodium bicarbonate Dyspnea in each instance was associated with a decreased plasma carbon dioxide combining power to between 27 and 43 volumes per cent Significant decreases in plasma carbon dioxide combining power did not occur in those on 10 Gm quantities of acetylsalicylic acid daily in conjunction with 8 Gm of sodium bicarbonate, and no instances of excessive dyspnea were observed in this group Therefore, this reaction is related to depletion of the alkali reserve and is preventable by giving adequate amounts of alkali in conjunction with salicylates It can be estimated that between 0 8 and 1 Gm of sodium bicarbonate for each gram of salicylates should be sufficient

The other reactions observed were of little significance and cleared up promptly after intravenous salicylates were stopped Subsequent oral therapy was well tolerated in each instance Leukocytes were frequently observed in the urine in oral and intravenous therapy, but no evidence of permanent renal damage was observed

## COMMENT

The clinical observations and data presented clearly indicate that the dosages required in applying Coburn's intensive salicylate regimen to young adults with acute rheumatic fever may induce physiologic and toxic reactions of serious proportions but that these reactions are preventable in most instances

Hypoprothrombinemia occurs frequently, reaching a maximum in the first week of salicylate administration but improving spontaneously thereafter even though large dosages are continued The effect is not great and this study, as well as the observations of others, indicates that blood prothrombin is not dangerously reduced Instances have been recorded in the literature of hemorrhages attributed to salicylate induced hypoprothrombinemia,[20] but a proved case has yet to be reported

Alkali reserve, as measured by plasma carbon dioxide combining power, is depleted unless adequate amounts of alkali are given in conjunction with salicylates In this study 0 8 Gm of sodium bicarbonate per gram of acetylsalicylic acid was adequate when 10 Gm of acetylsalicylic acid was administered orally daily, 0 66 Gm of sodium bicarbonate per gram of acetylsalicylic acid was not sufficient to prevent a significant fall in plasma carbon dioxide combining power when 12 Gm quantities were given Consequently it may be assumed that, when large dosages of salicylates are contemplated orally, between 0 8 and 1 Gm of sodium bicarbonate should be given with each gram of salicylate For the same reason intravenous salicylates should be administered in Ringer's lactate instead of saline solution Under no circumstances should alkali be omitted for the purpose of securing higher blood salicylate levels If these precautions are observed, significant alterations in acid base equilibrium will not occur and excessive dyspnea will be avoided

Severe delirium, "acute salicylism," is dependent on the abrupt rapid rise in blood salicylate levels associated with intravenous therapy and is most likely to occur in acutely ill patients who have not built up an antecedent tolerance to the drug It has not been observed in this series under conditions of oral therapy, although reports of such reactions after large quantities by mouth have appeared in the literature Since intravenous therapy is desirable in the more acute cases, it is not preventable in all instances Such patients must be

20 Ashworth C T and McKemie, J F Hemorrhagic Complications with Death Probably from Salicylate Therapy J A M A 126 806-810 (Nov 25) 1944

carefully observed for prodromal mental confusion so that medication can be promptly discontinued before severe delirium is precipitated

Serum salicylate levels of 25 mg per hundred cubic centimeters or higher have been found in this study to suppress rheumatic infection satisfactorily This minimum is exceeded by a satisfactory margin in young adults by 10 to 12 Gm quantities of acetylsalicylic acid or sodium salicylate daily in conjunction with 8 Gm of sodium salicylate

Pending further investigation, the following program has been adopted for the treatment of acute rheumatic fever in young adults at this hospital More severely infected patients with temperatures of over 102 F but without cardiac failure, receive intravenous therapy of 10 Gm daily in a liter of Ringer's lactate solution for four to seven days, followed by oral therapy A period of six hours is required for each injection Patients with cardiac failure are treated with 4 to 6 Gm of ammopyrine daily until failure has subsided and then switched to oral salicylates Other patients receive oral salicylates from the beginning in quantities of 10 Gm daily in patients weighing less than 125 pounds (57 Kg ) and 12 Gm daily in those exceeding 125 pounds Eight to 10 Gm of sodium bicarbonate is given daily in conjunction with oral therapy Refractory cases are promptly shifted to intravenous medication until objective acute manifestations are completely relieved Salicylate therapy is continued until the erythrocyte sedimentation rate has remained normal for two weeks

CONCLUSIONS

1 Hypoprothrombinemia occurs in the early phases of intensive oral and intravenous salicylate therapy, but the prothrombin deficiency improves spontaneously in spite of continued salicylate administration and does not approach a critical level likely to precipitate hemorrhage

2 Alkali reserve is depleted unless adequate amounts of alkali are administered in conjunction with salicylates For this reason Ringer's lactate solution rather than saline solution must be used as a diluent for intravenous salicylates, and between 0 8 and 1 Gm of sodium bicarbonate should be given with each gram of salicylates orally

3 Severe delirium occurred in 17 per cent of acutely ill patients receiving intravenous salicylate therapy who had not built up an antecedent tolerance to the drug It is related to the rapid rise in blood salicylate levels associated with intravenous therapy and was not observed on oral regimens

4 Severe grades of dyspnea, except in association with cardiac failure or delirium, are related to depletion of alkali reserve and are preventable by administering adequate quantities of alkali in conjunction with salicylates

5 Serum salicylate values averaging 32 mg per hundred cubic centimeters are secured with 10 Gm of acetylsalicylic acid daily orally in conjunction with 8 Gm of sodium bicarbonate and 37 and 38 mg per hundred cubic centimeters respectively with 12 Gm of acetylsalicylic acid and sodium salicylate

6 A minimum blood salicylate level of 25 mg per hundred cubic centimeters is required to suppress rheumatic infection in acute cases

7 A treatment program for acute rheumatic fever in young adults has been developed which satisfactorily suppresses rheumatic infection and reduces the incidence of physiologic and toxic reactions to a minimum

# Clinical Notes, Suggestions and New Instruments

## JAUNDICE CAUSED BY PERFORATION OF A DUODENAL ULCER

GILSON COLBY ENGEL M D
Assistant Professor of Surgery University of Pennsylvania Graduate School of Medicine Chief of Surgical Service B Lankenau Hospital
and
R GAYLE SPANN M D
Clinical Assistant Surgical Service B Lankenau Hospital
Philadelphia

It has been repeatedly observed that jaundice is a complication of peptic ulcer in remarkably few instances when the anatomy of the region is considered Boyd [1] states that long standing ulcers frequently adhere to or perforate into the pancreas, liver or the lesser omental sac and the structure becomes indurated but he does not mention jaundice as a complication Therefore even in these cases jaundice must be encountered less often than would be expected It is probably not realized just how rarely jaundice is definitely caused by ulcer until the literature on the subject is studied

It has also been stated that a search of the literature gives a false impression of the true incidence of the occurrence of jaundice with ulcer If this is true, then more cases of ulcer with jaundice should be reported so that this false impression may be corrected. The diagnostic problems which the cases present may then be studied and the plans of treatment evaluated Otherwise each case encountered will have to be handled as a new and unheard of condition.

Parks and Fitz [2] reviewed the American literature in 1939 and found 35 cases and added 1 of their own Levine and Gordon [3] added a case in 1942, which was the first case reported in which the ulcer perforated Their patient was known to have a duodenal ulcer He became acutely ill some two weeks prior to hospital admission and then developed jaundice The ulcer perforated on the sixth day after hospitalization while x-ray and other studies were being made The perforation was repaired and the jaundice gradually disappeared They stated that they were at a loss to explain the exact mechanism of the obstruction and its apparent alleviation by perforation of the ulcer It is thought that the following case may throw some light on the probable cause of the biliary obstruction in their case and the reason for its apparent release by the perforation of the ulcer

REPORT OF CASE

Mrs G S B aged 54 white a pharmacist, was admitted to Surgical Service B at the Lankenau Hospital on Jan. 25 1944 with the chief complaint of jaundice epigastric pain and vomiting There had been episodes of indigestion and burning epigastric pain relieved by alkalis for some years One month prior to admission there had been a rather sudden accentuation of the symptoms but she was able to keep working Shortly afterward she noticed her urine becoming darker, her stools lighter in color and her skin and mucous membranes yellow Her symptoms became steadily worse until she began vomiting occasionally a week prior to admission

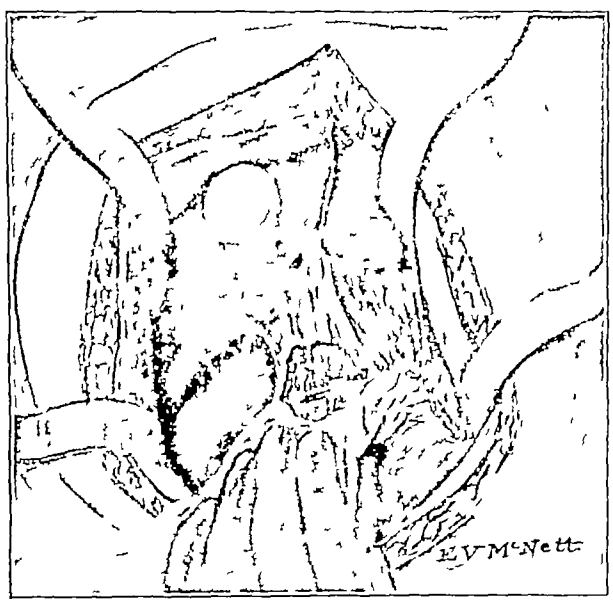
She was found to be rather jaundiced and dehydrated There was tenderness in the right upper quadrant and epigastrium No mass could be definitely outlined through a thick abdominal wall Peristalsis was normal Soon after admission her temperature was 101 F, pulse rate 100 and respiratory rate 22 The leukocyte count was 8 300 with a differential of neutrophils 73 per cent and lymphocytes 27 per cent icterus index 40 units van den Bergh qualitative direct, immediate quantitative 45

1 Boyd, William Surgical Pathology ed 5 Philadelphia W B Saunders Company 1942
2 Parks Harry and Fitz Reginald A Case of Duodenal Ulcer with Hemorrhage Complicated by Jaundice Rev Gastroenterol 6 179 186 (May June) 1939
3 Levine Samuel and Gordon G B Complete Biliary Obstruction Complicating Duodenal Ulcer Perforation of the Ulcer Followed by Immediate Release of the Obstruction Am J Digest Dis 9: 397 398 (Nov ) 1942

mg per hundred cubic centimeters, cephalin flocculation plus 3, prothrombin time 70 per cent A survey film of the abdomen was reported as negative for opaque calculi, masses or other pertinent findings As there was evidently an acute pathologic condition in the abdomen, further x-ray studies were thought to be unwise

A diagnosis of acute calculous cholecystitis with common duct obstruction was made, though it was remarked that she had an ulcer-like history It was decided to allow the acute process to subside and prepare the patient for operation with intravenous fluids, vitamin K and vitamins parenterally and blood transfusion On the ninth hospital day the temperature and pulse were normal, abdominal signs were lessened, prothrombin time was 80 per cent and the icterus index was 37 5 units The following day she was operated on

When the peritoneum was opened, adhesions of the omentum and duodenum were bound to the undersurface of the right lobe of the liver covering the gallbladder region These were freed from the liver, exposing a tensely distended gallbladder containing no stones and not appearing infected The duodenum was seen to be adherent to the right border of the gastrohepatic omentum which was thick and indurated When the adhesions




Retraction of the duodenum freeing the perforation from the right free border of the gastrohepatic omentum overlying the common duct. This perforation had kissed against the common duct causing inflammatory reaction with obstruction of the common duct

were freed it was found that a perforation of the first portion of the duodenum had kissed against the gastrohepatic omentum and had spilled little, if any, into the general abdominal cavity, as shown in the illustration The common duct was distended but not appreciably dilated. The pancreas was only slightly more tense than normal The perforation was repaired by suturing and oversewing an omental graft A cholecystostomy was done to insure relief of the jaundice The cholecystostomy drainage gradually lessened, and lipiodol injected into the tube on the twelfth postoperative day showed a nondilated common duct and the lipiodol readily entered the duodenum Jaundice gradually subsided Convalescence was complicated only by auricular fibrillation, which was controlled with digitalization

Six weeks postoperatively the icterus index was 11 units, cephalin flocculation plus 2 A cholecystogram showed a nonfunctioning gallbladder thought to be due to the cholecystostomy Barium meal and x ray revealed only the expected deformity of the duodenum due to repair of the ulcer The patient was discharged in good condition on March 15, 1944

On July 12 the patient was seen in the follow-up clinic. She reported that she was feeling well and working daily The icterus index was 3 units and cephalin flocculation 0

She was again seen on Jan 5, 1945 She was on an ambulatory ulcer regimen and did not have indigestion, jaundice or clay colored stools She was feeling well and working every day

In view of our experience with this case, may we suggest that the case of Levine and Gordon [3] probably had the following sequence of events Two weeks before admission there was a perforation of the ulcer against the lesser omentum which temporarily sealed it off, but owing to the inflammatory reaction associated with it the common duct was obstructed by edema and pressure While this patient was in the hospital the protected perforation must have broken loose, so that there was direct spill into the peritoneal cavity He was operated on at this stage and the perforation repaired Naturally, with the contacted inflammatory process relieved from the common duct the inflammatory reaction in the duct subsided and the jaundice disappeared

The records of the Lankenau Hospital for the past fifteen years were studied and of the 376 cases of proved duodenal ulcer there was 1 case of frank jaundice in which there were common duct stones, so that this case could be eliminated as an example of jaundice from ulcer One other patient was slightly jaundiced, with an icterus index of 12 units, and no cause at operation was found other than a duodenal ulcer Bernheim [4] found in 1924 that duodenal ulcer patients averaged an icterus index of 9 units, so others no doubt would have had elevated icterus indexes had they been checked but none had clinical jaundice

Levine and Gordon [3] mention that Friedenwald [5] reviewed 1,000 cases of duodenal ulcer, Emery and Monroe [6] 556, Hinton [7] 287, Rivers [8] 191 and Laird [9] 250 cases and none mentioned jaundice as a complication Add to these the present 376 cases reviewed and the total is brought to 2,650 cases with only 1 being mentioned as exhibiting a faint clinical jaundice and an icterus index of 12 units

We suggest that in the future any patient with an ulcer history and then an acute abdominal episode followed by developing jaundice be suspected of having a protected perforation or a duodenal ulcer with obstruction of the common bile duct The most common condition to be differentiated is acute calculous cholecystitis with choledocholithiasis This differentiation should be made as quickly as possible because if the pathologic condition is a protected perforatio of an ulcer it should be repaired immediately before generalized spill occurs, whereas, if it is an acute inflammatory lesion of the gallbladder with stones in the common duct it is better to wait, if possible, until the acute inflammation subsides before the common duct is explored The Graham test is not reliable in such a case because of the decreased liver function, and the various liver function tests are of little assistance as both conditions give an obstructive type of jaundice with evidence of hepatocellular damage superimposed as it progresses

A survey film should be made of the abdomen If gallstones are demonstrable, of course, biliary disease is almost certain to be the whole picture During the study of these cases it was noted that, though on admission peptic ulcer and gallbladder cases were frequently mistaken for each other, the two conditions seldom existed concurrently If no stones are seen, the film is of no assistance Then, with the patient ready for immediate operation, one should proceed with x-ray study of the duodenum with barium and as little manipulation as possible If the duodenal deformity of ulcer is demonstrated, immediate operation should be performed If no ulcer is

4 Bernheim A R Icterus Index (a Quantitative Estimation of Bilirubinemia) Aid in Diagnosis and Prognosis J A M A **82** 291 295 (Jan 26) 1924

5 Friedenwald J A Clinical Study of a Thousand Cases of Ulcer of the Stomach and Duodenum Tr A Am Physicians **27** 280 296 1912

6 Emery E S Jr and Monroe R T A Study of 556 Cases of Peptic Ulcer Arch Int Med **43**: 846-873 (June) 1929

7 Hinton J W Incidence of Peptic Ulcer and Its Complications Am J Surg **20**: 102 106 (April) 1933

8 Rivers A B A Clinical Study of Duodenitis Gastritis and Gastrojejunitis Ann Int Med **4**: 1265 1281 (April) 1931

9 Laird E G The Coincidence of Cholecystitis and Peptic Ulcer New England J Med **213** 764 767 (Oct 17) 1935

demonstrated, the case should be treated as an acute inflammatory gallbladder until the optimum time for operation

Since considering the mechanism of the production of the jaundice in our case and the review of Levine and Gordon's[3] case in which the ulcer was merely repaired, we suggest that these cases be treated by repair of the ulcer with suture and oversewing of an omental graft without drainage of the biliary tract The induration around the common duct apparently subsides promptly once the ulcer is repaired, with relief of the biliary obstruction and jaundice

COMMENT

Clinical jaundice is such a rare complication of duodenal ulcer that it is not mentioned in most writing about ulcer complications However, this being about the thirty eighth case reported of this complication is proof that it is a complication. It is thought that this is the first case to be reported in the American literature of jaundice being caused by perforation of the duodenal ulcer One is struck, though, with the similarity of this case and the one reported by Levine and Gordon[3] There is the distinct possibility that the pathology and mechanism were the same in the 2 cases

In a case of jaundice with no demonstrable stones and an 'ulcer history" it will be well to suspect a protected perforation of a duodenal ulcer Every effort to make a rapid differential diagnosis should be made, as more prompt operation is indicated in the case of perforated ulcer Probably a survey film of the abdomen and x-ray study of the duodenum will be of the most assistance.

CONCLUSIONS

1 Jaundice is a definite but relatively rare complication of peptic ulcer

2. Jaundice may be caused by a perforating ulcer kissing against the biliary tracts

3 In 376 cases of peptic ulcer reviewed, less than 1 per cent were complicated with jaundice

255 South Seventeenth Street, Philadelphia 3

## Council on Industrial Health

### INDUSTRIAL HEALTH CONFERENCE

A one day Regional Industrial Health Conference will be held in Denver at the Shirley-Savoy Hotel on June 4 under the sponsorship of the Council on Industrial Health of the American Medical Association The program will be directed by men of national and state note and will be called to order at 10 a. m Participating agencies will include besides the Council, the Chamber of Commerce of the United States of America, the U S Public Health Service Division of Industrial Hygiene, the National Association of Manufacturers the Office of Vocational Rehabilitation, Federal Security Agency, the Veterans Administration and the state medical societies of Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, South Dakota Utah and Wyoming

The morning session will be opened by Mr Howard Strong, secretary Health Advisory Council Chamber of Commerce of the United States, Washington D C He will address the meeting on 'What Industry Expects of Medicine." Dr Victor Heiser, consultant Committee on Industrial Health National Association of Manufacturers New York will speak on the "Practical Benefits of Industrial Health Service ' The days program will include among other features two panel discussions The one in the morning is entitled Better Industrial Health Service in the States' and the one in the afternoon Rehabilitation and Reemployment Both of the Veteran and of the Disabled Civilian." The program will be closed with the showing of the new General Motors film 'The Doctor in Industry "

Because of the importance of the meeting it is urged that physicians industrialists and community leaders of the Rocky Mountain area attend this conference.

## Council on Pharmacy and Chemistry

### REVISION OF THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY

Forty-one years ago when the Council was established, it adopted a decalogue of Rules for the Acceptance of Proprietary Articles which has stood practically unchanged for these decades, with such adaptations of interpretation and application as were made advisable by changing conditions—changes in therapy in the character of drugs and in the attitude of manufacturers The Federal Food, Drug and Cosmetic Act has made into legal requirements conditions which were formerly controlled only by the Council rules and some of these rules have thereby become superfluous In view of this added protection, the Council feels that it is desirable to revise or rescind certain rules which have become more of a hindrance than a help in its endeavor to provide informed guidance in the use of drugs

One of these relates to the controversial subject of "protected" names The Council has accepted only one proprietary name for any article with the hope of checking the confusion that arises when a drug masquerades under many "aliases" It must be acknowledged that the hope has not been fulfilled. Manufacturers have continued to multiply names, and the chief result has been to remove such articles from control by the Council It has therefore been decided to withdraw this rule and to admit multiple names—with the important provision that the manufacturer give equal prominence to the common 'unprotected name that is or will be provided for example, 'atabrine" would be promoted as "atabrine, brand of quinacrine" If physicians will use the common name (quinacrine, in this example) in prescribing writing and talking of the substance, they will avoid multiplicity of names In withdrawing the rule, the Council does not wish to encourage the multiplication, it bows to reality

The Council also broadens its attitude toward "advertising to the public,' permitting such advertising when it is judged that its dangers are less than its benefits This is not a new departure it has been permitted, for instance, for the prophylactic external use of disinfectants Again, the additional protection of the Food and Drug Administration makes it possible to extend the classes of articles which may be promoted provided the promotion is carefully supervised.

The Council believes that the time is ripe for a thorough revision of its rules and has adopted the following seven principles, with explanatory comments, in the belief that this revision will increase the service that the Council may render

### OFFICIAL RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY

INTRODUCTION

The Council on Pharmacy and Chemistry was created in 1905 as a standing committee appointed by the Board of Trustees of the American Medical Association

*Activities of the Council*—The Council publishes annually a book designated New and Nonofficial Remedies (N N R.), which contains a description of proprietary preparations and articles which have been examined and accepted by the Council for inclusion in that publication The book provides statements on actions, uses, dosage, tests and standards of the preparations and articles The book also contains certain official preparations and other articles, including drug substances for manufacturing use for which there are not official standards, which the Council is of the opinion should be included for the information of the medical profession

The activities of the Council also include the preparation of special treatises, articles, status reports and books designed for the practitioner and the medical student, the giving of grants-in aid for therapeutic research, the securing of therapeutic trial of promising new preparations and the encouragement of basic research on fundamental therapeutic problems

*Acceptance of Articles for N N R*—The principles and policies of the Council concerning the acceptance of a preparation or article for inclusion in New and Nonofficial Remedies are briefly expressed in the following rules

RULES GOVERNING ADMISSION OF PROPRIETARY ARTICLES TO THE BOOK *NEW AND NONOFFICIAL REMEDIES*

*Rule 1*—COMPOSITION—The quantitative composition of preparations and articles submitted to the Council or considered by the Council for inclusion in New and Nonofficial Remedies must be made known and may be published.

*Rule 2*—IDENTIFICATION—Suitable procedures and criteria for determining the composition or standardization of the submitted preparation or article must be furnished

*Rule 3*—ADVERTISING TO THE PUBLIC.—Preparations and articles promoted to the public for use in the treatment of disease will not be accepted except as specified in the following explanatory comments

*Rule 4*—THERAPEUTIC CLAIMS—When an article is accepted, therapeutic representations by the manufacturers or their agents must be confined to those given in N N R or accepted by the Council between revisions of N N R

*Rule 5*—PROTECTED NAMES—Proprietary names for medicinal articles will be accepted if the Council deems the use of such exclusive names not to be harmful to health and if the proprietary names are not given greater prominence in labeling and other promotional activities than the official names or the nonproprietary names adopted by the Council

*Rule 6*—PATENTS AND TRADEMARKS—If a preparation or product is patented as to process or product or both, the number of such patent or patents must be furnished to the Council If the name of an article is registered or the label copyrighted, the registration (trademark) name and number and copies of the protected label must be furnished to the Council.

*Rule 7*—UNSCIENTIFIC AND USELESS ARTICLES—A preparation or an article will not be accepted if in the opinion of the Council it will not be in the best interests of the medical profession and the public.

EXPLANATORY COMMENTS ON THE RULES

*Substances Described in New and Nonofficial Remedies*—In the book will be described proprietary pharmaceutic and drug substances if they have originality or other important qualities which, in the judgment of the Council, entitle them to such place, official preparations concerning which the Council deems the medical profession not yet fully informed, or any other article the inclusion of which is believed to give useful information to the physician.

*Definition of "Proprietary Article"*—A medicinal article is considered 'proprietary' if it is protected against free competition as to name product, composition or process of manufacture, by secrecy, patent, copyright or any other means

*Previous Noncompliance*—The Council judges an article by the facts in evidence at the time of its admission. Previous noncompliance with the rules (short of intentional fraud) does not prevent at a later date the favorable consideration of an article which is in accord with existing rules

*Reconsideration*—Infringements of the rules after acceptance of an article for New and Nonofficial Remedies, or the discovery that the Council's information was incorrect, will cause the acceptance to be reconsidered and may be followed by the omission of the article and publication of the reasons for such omission.

*Acceptance Not an Indorsement*—The admission of an article does not imply a recommendation for its use. Acceptance simply means that the Council has found no conflict with its rules

*Seal of Acceptance*—For articles which are accepted for inclusion in New and Nonofficial Remedies the Council permits the use of its official seal of acceptance on the packages of an article and in the advertising for it with the following stipulations 1 If the seal is used in price lists and catalogues which also feature unaccepted articles, it must be used for accepted articles in such manner that there can be no implication that the seal applies to the unaccepted articles 2. The following statement in reference to the significance of the seal may be used in connection with the seal "The 'accepted' seal denotes that [name of article] has been accepted for New and Nonofficial Remedies by the Council on Pharmacy and Chemistry of the American Medical Association." Further statements in regard to the seal must be submitted to the Council and be found acceptable before they may be used. 3 The size of the seal on the package shall not be greater than one inch in height or diameter, and in advertising it shall be in proportion to the dimensions of the advertisement so as to afford ready recognition, but undue size, giving greater prominence to the seal than to other important features of the advertisement or detracting from the dignity of the seal in the opinion of the Council, will not be permitted. 4 When for any reason the acceptance of an article is rescinded, the seal must not appear on new labels or in new advertising for such article, and old labels and advertising which feature the seal must not be in circulation, in evidence or before the public longer than six months subsequent to notification of the revocation.

*Duration of Acceptance*—Unless otherwise determined at the time of acceptance, articles admitted to New and Nonofficial Remedies will be retained for a period of three years, provided that during that period they comply with the rules and regulations which were in force at the time of their acceptance. Evidence indicating that the compliance with the rules no longer exists, for instance, with regard to unwarranted therapeutic claims, will be considered the basis for reconsidering the acceptance before the end of a period of three years

At the end of this period, all articles will be reexamined for compliance with existing rules Particular weight will be given to the question whether claims for the therapeutic value of the preparation are sustained by recent statements in the literature and by the general esteem in which the preparation is held by clinical consultants of the Council The reacceptance of articles after such reexamination shall be for three years unless a shorter period is specified

Any amendments to the rules, by specific requirements or by interpretation, which may be made after the acceptance of an article shall not apply to such article until the period of acceptance has elapsed At the end of this period the article, if it is not eligible under the amended rules, will be omitted.

*U S P and N F Articles*—No product which has been official for more than twenty years, except preparations licensable under the Serums, Virus and Vaccine Act, will ordinarily be considered for inclusion or retention in New and Nonofficial Remedies All preparations which are licensable under the Serums, Virus and Vaccine Act, including arsenicals for the treatment of syphilis, are eligible for consideration for inclusion or retention in New and Nonofficial Remedies, regardless of their official status.

*Mineral Waters*—The Council has declared artificial mineral waters to be nonessential modifications of natural waters, that natural mineral waters are only one feature prescribed by spas and health resorts and that mineral waters are not eligible for consideration for acceptance as individual products, since there is no convincing evidence to show that the many therapeutic claims which are made for these preparations when bottled for individual use are valid

*Diagnostic Reagents*—Reagents and other drug preparations which are not used in or on the human body are not considered for inclusion in N N R At the request of the distributor the Council may determine the status of such products individually

EXPLANATORY COMMENTS

Rule 1—COMPOSITION—*The quantitative composition of preparations and articles submitted to the Council or considered by the Council for inclusion in New and Nonofficial Remedies must be made known and may be published*

*Secrecy is Out of Place in Medicine*—Intelligent prescribing requires that the physician have access to full information as

to the composition of what he prescribes An article cannot be accepted unless this information is furnished fully and truthfully Information that is not available for publication at the discretion of the Council is of no service and will not be accepted

*Statement of Composition*—In the case of a *definite chemical substance or mixture*, a descriptive name satisfactory to the Council must appear on the label and in the advertising

*Vehicles and Preservatives*—The general character of the vehicle and the identity of preservatives or of any other substance, whether added or present as an impurity, must be stated if these can under any circumstances affect the therapeutic action of the article This as a rule does not mean the publication of flavoring materials or the details of the working formula

In the case of preparations for parenteral injection the identity and amount of preservatives must be declared in the labeling, preferably on the individual container label but, when that is impracticable, on the carton label or individual package insert, in the event that no preservative is present the absence must be declared The term "preservative is intended to include all substances used for the purpose of preserving the identity, strength, quality or purity of a preparation Thus, not only bactericidal or bacteriostatic agents are required to be declared in the labeling but other chemicals, such as stabilizers, antioxidants and buffers

Preparations containing 1 per cent or more of benzyl alcohol must have this ingredient included as part of the name as benzyl alcohol in such amounts acts as a local anesthetic and would constitute a potent therapeutic agent, for example, solution sodium morrhuate 5% with benzyl alcohol 2%

The Council requires that chlorobutanol be included in the title of those preparations which contain more than 0 5 per cent of chlorobutanol unless the manufacturer can show evidence that the presence of this amount does not have therapeutic as well as antiseptic effect

*Nonofficial Constituents*—Nonofficial constituents of proprietary mixtures must be presented by the manufacturer in the regular way and must be acted on by the Council before the preparations containing them can be accepted

Constituents that are not concerned in the pharmacologic action of the preparation need not be submitted in detail, but their nature and quantity must be disclosed to the Council so that it may be judged that they are inert. The Council may require that they be declared on the label or package by such designations as will make their nature or purpose apparent.

*Deliberate Misrepresentation*—When it appears that a manufacturer has made a deliberately false statement concerning a product, he is asked to furnish an explanation and if this is not satisfactory the product will not be accepted even if the false statement is subsequently corrected or omitted

*Testimonials*—The foregoing paragraph applies not only to statements made to the Council but also to statements furnished to physicians by the manufacturer or his agents even when these statements are in the form of testimonials

*Inspection of Factories*—The Council does not routinely accept invitations to inspect factories, its concern is with the finished products If such action seems indicated, a representative may visit the factory or principal place of business and manufacture to obtain first hand information concerning the nature of the manufacturing establishment, the facilities and controls available and the nature of the laboratory and experimental facilities operating in conjunction with the plant, and for authenticating representations concerning scientific personnel and investigative projects

Rule 2—IDENTIFICATION—*Suitable procedures and criteria for determining the composition or standardization of the submitted preparation or article must be furnished*

The manufacturers of a drug should possess and supply this information, which is necessary to control the quality of an article. For *chemical compounds* this should include tests for identity, amount and purity In case of *mixtures*, methods for determining the presence and amounts of the *potent ingredients* may suffice. If the tests have been described in standard journals or other works of reference, these may be cited. The phrase *"physiologically standardized"* or "assayed" is misleading, unless the standard and method are published in sufficient detail to permit of their control by independent investigators

Rule 3—ADVERTISING TO THE PUBLIC.—*Preparations and articles promoted to the public for use in the treatment of disease will not be accepted except as specified in the following explanatory comments*

*Lay Advertising*—Indiscriminate self medication by the public involves grave dangers, such as misdirected and inadequate treatment, failure to recognize serious disease until it is too late for definitive treatment and the spread of infectious diseases when hidden from a responsible physician All these are involved in the advertising of drugs to the public, with the further dangers of suggesting by descriptions of symptoms to the minds of the people that they are suffering from diseases described the dangers of the unconscious and innocent formation of a drug habit and the dangers of starting allergic reactions

*Drugs Which May Be Promoted to the Public*—These dangers do not apply in equal degree to all articles, and there are instances in which more good than harm is likely to result from advertisements conveying truthful information to the public, if they do not mislead by undue emphasis or suggestion The proper promotion of such articles will not preclude their admission to New and Nonofficial Remedies, but, in view of the potential dangers to the public, such cases must be carefully weighed and will be confined to the following groups (*a*) disinfectants, germicides and antiseptics, provided they are promoted only as prophylactic applications to superficial cuts and abrasions of the skin, (*b*) laxatives when promoted in such a manner as is not likely to lead to their abuse, (*c*) antiserums and fractions thereof vaccines and diagnostic reagents derived from infectious agents, (*d*) other preparations and articles which in the opinion of the Council could be safely used by the public for the relief of symptoms (such as antacids and analgesics) Each group will have to carry adequate and acceptable labeling statements such as "for the relief of minor aches and pains" for analgesics, and "for the treatment of occasional constipation" for laxatives

*Unacceptable Advertising to the Public*—Aside from these specified groups, promotion of articles to the public for the treatment of disease precludes the admission to New and Nonofficial Remedies "Advertising to the public" includes all promotion of the article in newspapers, magazines, placards or circulars, as it may reach the patient, radio, films or any other devices This also includes label and labeling of drugs

This rule imposes no restriction on the legitimate methods of bringing a remedy to the attention of the profession, such as advertising in journals, labeling, circulars and other printed matter distributed solely to physicians, dentists, pharmacists and veterinarians, provided such promotion does not invite or encourage use by unqualified persons

Advertising the name of a firm as being a reliable one is permissible in any advertising medium.

*Naming Diseases on Label and Labeling*—The naming of diseases and therapeutic indications in the labeling may be necessary for proper instruction in the use of articles sold directly to the public and is therefore permissible in the case of the preparations which are accepted for promotion to the public.

*Permanently Affixed Names*—If a prescribed article is dispensed in its original container, any permanently affixed device that identifies the article to the consumer constitutes advertising to the public. This includes bottles which have the name of the article blown into the glass, and other devices by which the name or initials or other distinctive mark of the article is permanently stamped on the container, on the article itself, or

is on the stoppers or seals. Readily removable labels are not objectionable nor is the permanent affixing of the firm's initials or name to the trade package if such initials or name is not suggestive of the article.

*Use of Accepted Articles for Advertising Unaccepted Articles.*—The Council does not countenance the use of an accepted article for advertising other articles which have not been accepted by the Council. The Council therefore objects to the mailing of circulars for accepted and unaccepted articles in one envelop if there is reason to believe that the method of presentation may mislead the reader and if it is not made clear beyond doubt, for instance by the initials N. N. R., which of the products have been accepted by the Council and which have not been accepted. This clause does not apply to advertising material circulated exclusively to dealers.

When, in the opinion of the Council, a firm secures the acceptance of one or more articles and employs the acceptance in a way that promotes the exploitation of articles that are opposed to the principles of the rules of the Council, this may be considered as evidence of bad faith which may cancel the acceptance of all preparations of that firm.

*Acceptance of Article Offered Under Another Name.*—The Council will not accept an article or continue the acceptance of an article if the same article or an essentially similar one is marketed in the United States by the same firm under another name which has not been recognized.

*Advertisements in Foreign Countries.*—The Council may take into consideration any statements made regarding an article or any method of advertising employed by the manufacturer or his authorized agents or representatives, whether in this country or abroad. No objection will be raised to the use of a statement such as "This substance is accepted by the Council on Pharmacy and Chemistry of the American Medical Association under the name of ____" when such a statement is used in the promotion of a Council accepted preparation sold outside the United States under another name, provided the firm makes no misleading claims and meets the other rules of the Council.

The Council does not regard as within its scope the acceptance of articles marketed solely outside the United States.

*Films.*—The Council holds that the term "advertising" includes "advertising literature," films and similar devices for informing the public or profession.

Rule 4.—Therapeutic Claims.—*When an article is accepted therapeutic representations by the manufacturers or their agents must be confined to those given in N. N. R. or otherwise accepted by the Council.*

*Unwarranted Therapeutic Claims.*—Manufacturers or their agents are held responsible for all statements made or quoted in any of their advertising concerning the therapeutic properties of their products. These must be compatible with demonstrable facts.

*New Claims.*—Claims that are not in harmony with already accepted facts or supported by acceptable evidence cannot be admitted. Therapeutic claims made subsequent to the acceptance of an article must be submitted to the Council for review if such claims exceed, or substantially modify, those made at the time of acceptance.

*Claims for Nontoxicity.*—Claims for nontoxicity are admitted only when they do not conflict with known facts. Physicians are cautioned that a claim of lack of toxicity means only that toxic effects have not as yet been recognized with the doses that have been studied. Apparently justified beliefs concerning this point are often ultimately reversed by extended experience. The same may be said regarding claims that drugs are nonirritating.

*Clinical Evidence.*—To be acceptable the clinical evidence must offer objective data with such citation of authority as will enable the Council to confirm the facts and establish the scientific value of the conclusions. The amount and character of the evidence which is required depend on the inherent probability of the claims; no evidence is needed for a self-evident claim, very strong evidence is needed when the claim is contrary to the accepted data of science. The acceptability of evidence is determined mainly by its quality. Multiplication of inaccurate observations does not render them accurate. The evidence must be furnished in sufficient detail to permit judgment as to the care with which it was gathered and the legitimacy of the deductions. Comparative trials facilitate and are often necessary for such judgment. Observations that are not described with sufficient detail to permit verification are subject to suspicion. The credibility of the data and the justification of the deductions are influenced by the reputation and experience of the investigators as to disinterestedness, technical ability and critical judgment. Anonymous communications and observations gathered without adequate facilities are usually worthless as evidence.

In passing on advertising material, the Council endeavors to indicate the type of claims which are acceptable and the nature of objectionable statements. It is not a function of the Council to edit advertising copy word for word, but rather to indicate the general type of revision required in any given piece of advertising copy. The Council holds the firm responsible for compliance with the specifications of the Council's objections and expects the spirit and intent of such objections to be observed in the remainder of the copy not specifically criticized.

*Advertising Copy.*—Advertising copy which has been accepted by the Council may be used in whole or in part in later advertising without further submission for examination, provided this does not exceed the scope, content and purpose of the original material and provided there have not been any developments which would invalidate the original material. In doubtful cases the Council considers these questions with the advice and cooperation of its clinical consultants. Therapeutic claims that do not exceed the statements in the currently accepted advertising will not be challenged as a rule, but if the Council finds reason to doubt the validity of any description in New and Nonofficial Remedies it may require the manufacturer to submit further evidence if he desires to continue such claims.

As new pieces of advertising copy are prepared they should be made available for Council examination or Council files. Since the claims of the manufacturer are judged largely by their advertising, noncompliance of the manufacturers with the Council's request for copies of the current advertising may be sufficient ground for the rejection of an article.

*References to Medical Literature.*—References to medical literature in advertising for an accepted product should be accompanied by the name of the investigator and year of publication or by full reference to the publication to which reference is made.

*Use of Physician's Signature.*—The use of the personal signature of a physician or the facsimile of such signature on the label or in advertising of products tends to create an exaggerated or misleading impression of therapeutic value, through the implication of personal supervision, and articles so labeled or advertised are therefore not acceptable.

Rule 5.—Protected Names.—*Proprietary names for medicinal articles will be accepted if the Council deems the use of such exclusive names not to be harmful to health and if the proprietary names are not given greater prominence in labeling and other promotional activities than the official names or the new proprietary names adopted by the Council.*

*Advantage of Nonproprietary Names.*—The Council believes that medical science is promoted by the use of a single name for each drug, based on scientific principles and freely available to all. This would avoid much needless tax on memory with its attendant confusion and errors.

*Rights to Protected Names.*—On the other hand the Council recognizes that the discoverer of a new remedy has a legal right to a restricted name and that the manufacturer who undertakes the expense of its practical development has a right

to some protection and may not feel justified in undertaking the risk if this right is denied

The Council has therefore conceded acceptance of a proprietary name to the discoverer or to the firm which first introduced the article. Experience has shown, however, that this restriction to one proprietary name tends to undue prolongation of the monopoly and that it prevents the control of the Council over competing brands which could be made acceptable except that they employ competing proprietary names The Council therefore deems it advisable to accept several proprietary names for the same article, provided there are no reasons which would render this especially objectionable and harmful and provided the proprietary name is not given more emphasis in the advertising and labeling than the nonproprietary name provided by the Council or the U S P or N F This means that accepted drugs should always be identified by adding the nonproprietary or official name when the proprietary name is used, as, for example, "Luminal, brand of phenobarbital," and Benzedrine, brand of amphetamine"

Physicians can protect themselves against much confusion by using the official names in speaking or writing of these drugs

*Objectionable Names*—Names which are misleading or which suggest diseases, pathologic conditions or therapeutic indications will not be recognized (the provision against therapeutically suggestive names does not apply to serums, vaccines and antitoxins) In the case of pharmaceutic preparations or mixtures the name must be so framed as to indicate clearly the most potent ingredients Coined names for salts will not be accepted unless such names indicate the components of the salt, coined names for new substances marketed as pharmaceutic preparations will not be accepted unless such names indicate definitely the type or dosage form of the article.

*Proprietary Names for Unoriginal Articles*—Proprietary names will not be recognized for articles which are included in the U S. Pharmacopeia or National Formulary unless the name was in public use before the drug was admitted to these books

In the marketing of unoriginal articles the legitimate interests of the producer are sufficiently served by identifying such products by appending the name or initials of the manufacturer or agent or by the use of a general brand mark No objection will be made by the Council to the use of such brand marks, provided that in no case shall such mark be used solely as a designation for an individual article. Names, initials or brand marks of manufacturers or agents when used to denote proprietorship shall not be of such character as to cause any misunderstanding or confusion as to their significance

*Attitude on Mixtures*—The Council endorses the principle that prescriptions should be written on the basis of the therapeutic effects of the individual ingredients For this reason there are included in N N R. only those mixtures that present some real advantage

*Pharmaceutic Preparations and Mixtures*—A proprietary name may be accepted for pharmaceutic mixtures on the ground of originality and if it is a distinct improvement over available preparations This is exceptional, for pharmaceutic preparations rarely involve sufficient originality and it is important that their names should remind the prescriber of their potent ingredients The Council recognizes, however, that the development of the practice of pharmacy has been along lines which make it undesirable at times to prepare complicated ointments and suppositories and that there is a tendency for such preparations to be manufactured ready-made by the manufacturers for prescription by physicians

The Council may also recognize coined names for pharmaceutic preparations or mixtures that were in actual use before the establishment of the Council and that have been used continuously since that time, and names for mixtures that were named under the reasonably justified bona fide belief that they were chemical compounds, provided such coined names are not otherwise objectionable.

*Coining of Name*—The Council recommends that trade names be coined so as to indicate the potent element or constituent

*Naming Salts*—Difficulty frequently arises from the application of coined names to salts. For example, a firm introduces the hydrochloride of a synthetic base under the name "Artificialine ' Subsequently the firm decides to introduce the lactate of the same base If this is called "Artificialine lactate" the name "Artificialine" will now mean the base instead of the hydrochloride which is being marketed under that name. In order to avoid this confusion the Council holds that coined names for salts will not be accepted unless such names indicate the components of such salts, thus "Artificialine hydrochloride", the name "Artificialine," unqualified, is acceptable only for the base

A similar difficulty may arise when a product is marketed first only as a pharmaceutic preparation to which the manufacturer wishes to apply a short coined name, for example, an elixir of a new hypnotic under the name 'Aliphal" If later the manufacturer elects to market the substance also in powder form, an entirely new name would become necessary and this would cause confusion both to the profession and to the trade The Council therefore holds that coined names for new substances marketed as pharmaceutic preparations will not be accepted unless such names indicate the type or dosage form of the preparation, thus "Elixir of Aliphal," 'Aliphal Powder," not 'Aliphal" unqualified

For declaration of benzyl alcohol or chlorobutanol in the name of a product, see comments under Rule 1

*Use of Numerals and Letters*—Since the use of numeral or alphabetical designations in connection with drug names tends to take the emphasis away from the name and to displace the name, thus leading to confusion, the Council does not accept the name of a drug in which the numeral or letter is an integral part of the name except in special cases in which the use of a numeral or letter seems desirable, for instance, because further improvement of the product is anticipated, in which case the Council may grant a special exemption from the rule. Under this rule the use of numerals or letters in connection with the name of a product will not be permitted on labels or in advertising unless the numeral or letter is clearly separated from and subordinated to the name by type and if feasible by position This rule shall not apply to price lists and catalogues

*Biologic Products*—A biologic product intended for use as a diagnostic reagent, vaccine or antibacterial or antitoxic serum should be designated by a name which indicates its biologic nature, e. g tuberculin rabies vaccine, diphtheria toxoid, diphtheria antitoxin A proprietary name will be recognized for inclusion in N N R only if it clearly indicates the nature of the product.

Rule 6—PATENTS AND TRADEMARKS—*If a preparation or product is patented as to process or product or both the number of such patent or patents must be furnished to the Council If the name of an article is registered or the label copyrighted, the registration (trademark) name and number and copies of the protected label must be furnished to the Council*

This information is essential to determining the legal status of the article. If it is registered in a foreign country under a different name, this information should also be supplied so as to identify the article in the foreign literature.

Rule 7—UNSCIENTIFIC AND USELESS ARTICLES—*A preparation or an article will not be accepted if in the opinion of the Council it will not be in the best interests of the medical profession and the public*

Useless drugging is apt to be harmful This precludes the acceptance of articles which have no definite therapeutic value, of compounds or mixtures with an excessive number of active ingredients or with ingredients that are of no probable assistance to each other, and of articles which involve dangers of toxic effects disproportionate to their therapeutic value.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - Chicago 10, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY, MAY 18, 1946

## THROMBOSIS AND EMBOLISM

The term thromboembolic syndrome has been used increasingly to emphasize the direct association often existing between the formation of thrombi in the deep veins of the legs and pulmonary embolism Thrombosis in the veins of the legs is believed to be responsible for approximately 95 per cent of the cases of pulmonary embolism

Allen [1] points out that the peak incidence of thrombosis and embolism occurs in the winter months (about one third of all cases) and the lowest incidence during the summer Fewer cases of this type are reported in New Orleans than in Boston, it is suggested that they are milder and more amenable to treatment by sympathetic block in the former city Age is important In Allen's clinic only 5 7 per cent of the patients with thrombosis and embolism were under 30 years of age and 12 per cent were between 30 and 40, leaving over 80 per cent above the age of 40

Allen says that there are two definite methods of preventing fatal embolism available at this time One is the use of anticoagulant drugs, such as heparin and Dicumarol (3,3'-methylene-bis-[4-hydroxycoumarin]), which are often effective if properly used The second method is prophylactic interruption of the femoral vein Up to Oct 1, 1945, 816 patients at the Massachusetts General Hospital had received the latter procedure In nearly one half (47 3 per cent) this technic was employed because of the presence of definite signs and symptoms indicating thrombosis in the leg veins Signs of infarction in the lungs was present in 34 4 per cent, and in 18 3 per cent prophylactic interruptions were carried out because of age or the presence of an acute disorder which would indicate a high degree of probability of the development of thrombosis during treatment Although the operations have been performed almost entirely by the resident staff, fatalities have not occurred and only one death from a massive embolus has developed following femoral vein interruption This, incidentally, came from the profundi femoris vein eight days after the superficial femoral vein had been ligated

Some patients received heparin or Dicumarol therapy following femoral vein interruption with the hope of diminishing the extension of thrombosis in other veins and thus preventing or lessening further infarcts Of 101 patients in one group who received Dicumarol postoperatively, three instances of thromboembolic phenomena occurred As is well known, however, both heparin and Dicumarol have numerous contraindications and must be administered with great care. Prophylactic bilateral superficial femoral vein interruption, however, is, according to Allen, a safe and harmless procedure and prevents postoperative thrombosis and embolism This, he says, is particularly suitable for the older patients Dicumarol in small doses is useful in selected patients as a preventive against thrombosis and embolism, especially in conjunction with femoral vein interruption When Dicumarol is used, it is imperative for the safety of the patient to carry out careful laboratory observation on the plasma prothrombin time both preoperatively and after the administration of this substance

Elsewhere in this issue (page 196) appears another thoughtful discussion of the subject Bauer [2] emphasizes especially the importance of early diagnosis of thrombosis in the deep veins of the leg The signs of such thrombosis commonly mentioned in the textbooks are not enough to allow as early diagnosis as is desirable if the best results are to be achieved Every inexplicable rise of the pulse and temperature curves, he says, as well as symptoms from the lungs, such as even slight pain in one side of the chest, must arouse suspicion of the presence of a thrombosis Examination of the lower part of the patient's leg should then follow If pronounced swelling, cyanosis and tenderness along the back of the calf are found, diagnosis is easy, but the thrombosis must be considered advanced, tenderness over a certain segment to deep palpation applied to the back of the calf is the most constant early sign and is considered a probable indication of the presence of thrombosis Phlebography is extremely important as an aid in diagnosis and should, he believes, constitute a routine method at all hospitals in cases of suspected early thrombosis

Once diagnosis has been made, especially at an early stage, Bauer prefers heparinization This consists in intensive heparin treatment together with active forceful movements of the legs beginning at once Patients subjected to this treatment are required to leave the bed one day before the administration of heparin is discontinued

1 Allen Arthur W Thrombosis and Embolism Bull New York Acad. Med 22 169 (April) 1946

2 Bauer Gunnar Heparin Therapy in Acute Deep Venous Thrombosis this issue p 196

The evidence presented by Bauer may not be enough to convince every student of the thromboembolic syndrome that this is the treatment of choice Such studies, however, reflect an increasingly active interest in this frequent cause of sudden death and disability Early and drastic improvement in the methods of prevention and management of the thromboembolic syndrome are foreshadowed by studies such as those cited

## HYPERPYREXIA IN INFANCY AND CHILDHOOD

In his clinical study of fever in infancy and childhood up to 12 years Åkerren [1] analyzed 232 cases of various acute conditions in which the temperature reached 105 8 F at least once The death rate of the whole group was 56 per cent In 121 cases of acute fever in which a definite specific illness was not demonstrated the death rate was 97 per cent The tendency to high fever was especially apparent in the infants under the age of 2 years, in certain cases hyperpyrexia alone seemed to be the cause of death Other symptoms besides the fever included disturbed consciousness, convulsions, coma, hurried breathing, weak and rapid pulse, paleness—a clinical picture which Åkerren called the hyperpyretic syndrome, a term previously used in French writings In the treatment of this condition reduction of the temperature is the first step In the prevention of hyperpyrexia everything that tends to increase the temperature of the body—excessive warmth of clothing, overheated rooms and similar factors—must be avoided in the handling of infants and children with fever

Under the term "le malin syndrome," the malignant syndrome, Hutinel [2] and other French pediatric writers have included the grave weakness and the general functional disturbances in many etiologically distinct acute infectious diseases, particularly in children This syndrome was one of the main topics discussed at the last French pediatric congress before the war In a second article on the hyperpyretic syndrome Åkerren [3] states that Marquezy and Ladet found hyperemia, hemorrhages and lesions of ganglion cells in the sympathetic system and in the brain of children who died in the course of "the malignant syndrome" In the lungs, liver, kidneys and other organs a hyperemia was found seemingly due to dilatation and stasis of the capillary and precapillary vessels Now Åkerren is strongly impressed with the similarity of the clinical manifestations and the lesions in the syndrome to those of shock as described by Moon [4] and others, with the exception that the syndrome frequently is associated in nurslings and young children with hyperpyrexia In heat stroke, however, in which the lesions are like those of traumatic shock, hyperpyrexia does develop The observer concludes again that hyperpyrexia may have a direct causal effect in the syndrome He has observed surprisingly rapid recovery in serious cases of what he called the hyperpyretic syndrome and now calls the hyperpyretic form of "malignant syndrome," on energetic reduction of the temperature by artificial means Reports by French surgeons are cited on the value of cooling the body in operations on hyperpyretic infants

As this matter now stands, the malignant syndrome of the French—a less confusing term is needed—appears to be a shocklike condition with a hyperpyretic form The benefit of antipyretic treatment suggests that hyperpyrexia may be the primary factor in this form of the syndrome *In febrile states of nurslings and young children the greatest care should be taken to control the hyperpyrexia*

1 Åkerren Y On Hyperpyretic Conditions in Infancy and Childhood Acta pediat **31** 1, 1943
2 Hutinel V Le syndrome malin dans les maladies de l enfance Paris Masson & Cie 1927
3 Åkerrén Y Om patogenesen av de hyperpyretiska formerne av det maligna syndromet Nord. med **25**: 608 (March) 1945
4 Moon V H Shock Philadelphia Lea & Febiger 1942

## NEW RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY

The Council on Pharmacy and Chemistry has recently made a thorough study of its rules for the consideration of preparations for inclusion in New and Nonofficial Remedies The results of this study may be found on pages 215 to 219 of this issue of THE JOURNAL

There have been many changes in therapy since the Council was organized in 1905 At that time secrecy and flamboyant exploitation were the order of the day With the honorable exception of a few manufacturers or sponsors of remedies who were sincerely desirous of fully and honestly informing the medical profession, commercial drug interests evidenced no desire to set forth exactly the true status of many widely advertised remedies The need for an organization such as the Council was recognized by every one interested in progress Many favorable comments were received from drug houses when they were informed of the organization of the Council Typical of these comments was one from an eastern firm, stating in part " it is the most important step taken in recent years in this country, as it holds out at least a ray of hope to the manufacturers who are trying to conduct an honest and ethical business "

Since 1905 drug therapy has undergone remarkable improvement Physicians have learned to appraise drugs with a more critical eye, drug and pharmaceutical houses have added to their staffs informed and well known scientists, new and remarkably effective drugs with specific actions have been developed and, of great importance, the Food and Drug Administration under the Federal Food, Drug and Cosmetic Act has exerted a highly salutary influence on the marketing of drugs Thus the Council feels that it can now revise or rescind certain rules so that it may encourage to the best of its ability continuous progress in rational therapeutics

This is one of the reasons why the Council is extending its facilities to aid in the investigation of new drugs through its Therapeutic Trials Committee

The new rules of the Council now number seven instead of the former eleven Prominent in the revisions are changes in the comments covering proprietary names and advertising to the public, all of which reflect the willingness of the Council to meet changing conditions and to continue its leadership When the history of this body appears in the special publications to be sponsored by the American Medical Association at the time of its centennial celebration, the contributions of this "medical watchdog' will become a matter of proud record All who have participated in its activities have reason to look back with satisfaction and forward to the continued support of the medical and allied professions

## Current Comment

### THE PROBLEM OF CHRONIC ALCOHOLISM

The Research Council on Problems of Alcohol says in a recent publication [1] that 50,000,000 persons in the United States use alcoholic beverages, of whom approximately 6 per cent become excessive drinkers, and of this number 25 per cent become chronic alcoholic addicts This makes a total of 1 5 per cent of all drinkers, or some 750,000 who become alcoholic addicts In addition to the 750,000 chronic alcoholic addicts there are about 2,250,000 other kinds of excessive drinkers There are about 13 500 persons in the United States with an alcoholic psychosis The cost of caring for alcoholic addicts in the mental hospitals of the United States, as of 1940, is approximately $13,000,000 a year The cost of maintaining drunken persons in jails is about $25,000,000 a year The cost to society of crime associated with habitual excessive drinking is estimated to be over $175,000,000 a year The council stresses that ignorance regarding the problem of alcoholism and lack of funds hinder the development of remedial measures Annual appropriations and contributions to official and voluntary agencies for work with alcoholic addicts total about $500,000, compared with $130,000,000 to $160,000,000 for tuberculosis and $16,000,000 to $19,000,000 for infantile paralysis In Sweden before the war there were ten state hospitals devoted exclusively to the treatment of alcoholism, in Switzerland seventy dispensaries where an alcoholic addict could go for free advice and where institutional care could be arranged, and in the Netherlands there is a consultation bureau in each of the larger cities In the United States municipal, state and federal governments have made no such facilities available In most communities the only public institution willing to accept an alcoholic addict is the jail In some large cities the municipal hospital will accept alcoholic addicts only for sobering up treatment In many of these hospitals, as well as in many jails, conditions are crowded and insanitary The estimated amount spent by the people of the United States for alcoholic beverages in 1944 was over $7,000,000,000 The estimated amount paid for radio, newspaper and magazine advertising by national advertisers in the liquor industry in 1940 was over $27,920,000 The council calls attention to the fact that in the absence of an intelligent remedial program a satisfactory solution of the problem is not possible Millions have been spent for prohibition, millions for repeal, millions for prohibition again, millions to induce people to drink, millions to stop them drinking The Research Council proposes greatly expanded research on the nature and treatment of alcoholism, the personality of the alcoholic addict and related subjects It also recommends the development of more adequate hospital facilities and increased education, together with industrial and legal controls Reports on the council's research will be available to doctors, scientists and other interested persons The Research Council on Problems of Alcohol is one of five national agencies dealing with the problem of alcoholism The other four include Alcoholics Anonymous with over 20,000 members in 600 or more local groups, the Section on Alcohol Studies of the Laboratory of Applied Physiology at Yale University, which operates two clinics and has held three summer schools on the problems of alcohol, the Quarterly Journal of Studies in Alcohol, the National Committee on Education for Alcoholism with headquarters in the New York, which employs a national lecturer who has been active in promoting local committees, and the National Committee on Alcohol Hygiene of Baltimore, which provides speakers and publishes a bimonthly periodical

1 *The Scientific Approach to the Problem of Chronic Alcoholism* Research Council on Problems of Alcohol 60 East 42d Street New York 17

### ARE AMERICAN FAMILIES GROWING LARGER?

More than three million babies were born in 1945, reflecting the increase in the birth rate of the United States between 1933 and 1943 of 30 per cent According to the calculations by Burch [1] this does not mean that the average American family is growing larger The principal explanation for the increase appears to be the rise in the marriage rate and the increase of one and two child families This is deduced from the analysis of the increase in the first, second, third and fourth or higher births in the family Thus, during the war years 1941 to 1943 the birth rate for all women in the reproductive age increased 22 per cent, first births increased 21 per cent second births 31 per cent, third births 27 per cent, fourth births 19 5 per cent and fifth births 11 5 per cent Sixth and seventh births increased 3 per cent, but births of eight or over decreased 3 per cent The conclusion is that the increase in the birth rate is due almost entirely to the increase of one and two child families rather than to enlargement of existing families The trend has implications for many aspects of American society, including the provision of medical care

1 Burch Guy I Is the American Family Growing Larger? Population Bull 2 21 (April) 1946

# MEDICINE AND THE WAR

## ARMY

### BRIGADIER GENERAL MALCOLM C GROW APPOINTED AIR SURGEON

Brig Gen Malcolm C Grow was recently appointed Air Surgeon of the Army Air Forces, replacing Major Gen David N W Grant, now retired General Grow was responsible for the establishment of the Aero Medical Laboratory the Eighth Force Personal Equipment Office, the preparation of AAF Air-Sea Rescue Ditching instructions and the 'flak suit' and helmet for air crews

### ARMY MEDICAL DEPARTMENT PRAISED FOR PSYCHIATRY CONTRIBUTIONS

Dr Arthur H Ruggles chairman of the Committee of Neuropsychiatric Civilian Consultants to the Secretary of War, recently commended the Army Medical Department for its "outstanding contribution to the advancement of psychiatry in World War II" Dr Ruggles, medical director of Butler Hospital, Providence, R I, attributed the 'extremely low percentage of the major mental disorders' in World War II to the Army's 'efficient and effective methods of early treatment of the less severe nervous disorders"

### EXHIBIT ON PHYSICAL THERAPY AND RECONDITIONING EXERCISES

A joint exhibit illustrating the physical therapy and physical reconditioning exercise programs conducted by the Army Medical Department was recently presented by the Physical Reconditioning and Physical Therapy Branches, Office of the Surgeon General, at the national convention of the American Association for Health Physical Education and Recreation. The exhibit included charts posters and photographs illustrating the physical reconditioning and therapy procedures and remedial and developmental exercise apparatus

### KENNEDY GENERAL HOSPITAL CITED

The Meritorious Service Unit Plaque was recently awarded to Kennedy General Hospital, Memphis, Tenn for "superior performance of duty in the performance of exceptionally difficult tasks during the period from Jan 1 1943 to Jan 1, 1946' During those three years the hospital cared for more than 45,000 patients

### ARMY AWARDS AND COMMENDATIONS

#### Colonel William J Bleckwenn

The Legion of Merit and the Oak Leaf Cluster were recently awarded to Col William J Bleckwenn, Madison Wis, "for exceptionally meritorious conduct in the performance of outstanding services in the Southwest Pacific Area from March 4, 1942 to Oct 15, 1943" Colonel Bleckwenn, according to the citation "commanding a medical regiment, planned and established two United States army hospitals in Northern Territory, Australia where extensive air operations were being carried out by the United States Army Air Forces Providing vitally needed hospital facilities in an area from which evacuation was difficult he was instrumental in saving the lives of many wounded officers and men. In January 1943 at an advance base in New Guinea he employed his own troops for labor and, utilizing salvaged materials at hand, constructed a model 1 000 bed general hospital Responsible for all medical installations throughout New Guinea, Colonel Bleckwenn established the first neuropsychiatric service in that region and was responsible for the rehabilitation of many patients, who returned to their units without further hospitalization From June to November 1943 he directed preparations for the medical support of military operations along the north coast of New Guinea By his outstanding professional skill resourcefulness and organizing ability, Colonel Bleckwenn made a noteworthy contribution to the support of military operations in Australia and New Guinea"

The citation accompanying the Oak Leaf Cluster stated that 'Col William J Bleckwenn, rendered distinguished service as consultant in neuropsychiatry Sixth Service Command, from July 1944 to November 1945 With a background of rich experience in the actual handling of nervous and mental casualties in the combat area, he displayed unusual foresight and understanding in organizing the program of treatment for mentally disabled returnees" Dr Bleckwenn graduated from Columbia University College of Physicians and Surgeons, New York, in 1920 and entered the service April 18 1941

#### Lieutenant Colonel Johnson F Hammond

The Legion of Merit was recently awarded to Lieut. Col Johnson F Hammond editor of the *Bulletin of the United States Army Medical Department* for his work in developing "this journal into an invaluable means of relaying the latest authoritative medical developments to medical officers all over the world His achievements signally contributed to the welfare of the sick and wounded in World War II Dr Hammond graduated from Rush Medical College, Chicago, in 1910 and from the Army Medical School Washington D C, in 1911 He was commissioned in the Regular Army Medical Corps in 1912 He served until 1920, when he was retired for physical disabilities In 1922 he joined the staff of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and was assistant editor of THE JOURNAL at the time he was recalled to active service in August 1943

#### Major Richard L Etter

The Bronze Star was recently awarded to Major Richard L Etter, formerly of Houston Texas 'for meritorious achievement in connection with military operations against the enemy in Germany from April 2 to May 9, 1945 Directing the operations of the clearing station of an infantry division" stated the citation 'Captain Etter rendered outstanding service throughout this combat period During the crossing of the Sieg River when exceptionally heavy casualties taxed the facilities of the clearing station to capacity Captain Etter worked night and day to provide the best possible care for all the wounded With his station seriously understaffed and frequently on the move in order to keep contact with attacking elements it was only by tireless efforts that he was able to furnish timely medical and surgical care for the troops Captain Etter's fine service as an officer and a surgeon assisted materially in maintaining combat morale and reflects great credit on himself and the armed forces" Dr Etter graduated from George Washington University School of Medicine in 1943 and entered the service Dec 28, 1943

#### Major Allan B Crunden Jr

The Legion of Merit was recently awarded to Major Allan B Crunden Jr Montclair N J, chief of the plans branch, Office of the Air Surgeon, for his work as a staff officer and medical instructor at the AAF School of Applied Tactics from January 1943 to March 1945 According to the citation, Major Crunden 'conceived and expedited the preparation of reference manuals as well as the development of various standard instructional publications to meet the training needs of personal equipment officers throughout the Army Air Forces In successfully establishing this efficient and effective training program he performed an outstanding service which reflects great credit on himself and the armed forces of the United States" Dr Crunden graduated from Temple University School of Medicine, Philadelphia, in 1938 and entered the service June 23, 1942

# MEDICAL OFFICERS RELEASED BY THE NAVY

## NAVAL RESERVE MEDICAL OFFICERS RECOMMENDED FOR RELEASE FROM ACTIVE DUTY

### Alabama

| | |
|---|---|
| Barclift, William C Jr | Birmingham |
| Grimes, James T | Enterprise |

### California

| | |
|---|---|
| Birss, James W | Santa Barbara |
| Bonar, Barnet E | Upland |
| Canton, Alfred J | San Diego |
| Carter, Martin G | Los Angeles |
| Cook, Robert D | Berkeley |
| Garrett, Garland F | Los Angeles |
| Hand, Harold E | San Francisco |
| Herscher, Herbert L | Los Angeles |
| Horton, Hammond S | Los Angeles |
| Jacobs, Alvin H | San Francisco |
| Jensen, Carl P | Los Angeles |
| Keig, William C | San Francisco |
| Lane, Stuart F | Los Angeles |
| Lapp, Harry D | Almeda |
| Laviolette, Donald J | Oakland |
| Little, Paul F | Pasadena |
| Ogden, Walter R | Riverside |
| Pohlman, Max E. | Los Angeles |
| Reed, Ralph R | Los Angeles |
| Swanson, Karl F | San Diego |
| Whitsell Leon J | San Francisco |
| Witten Paul | San Fernando |
| Zink, Wiley C | Tulare |

### Colorado

| | |
|---|---|
| Wagner, Albert A G | Boulder |

### Connecticut

| | |
|---|---|
| Ayres Payson B | Cos Cob |
| Cashman Justin L | New Haven |
| Chaucer, Norton G | New Haven |
| Hall William E | Meriden |
| McKeon James J | Hamden |
| Papa, John S | Bristol |
| Peck, John L Jr | New Haven |
| Raymer, John G | Norwichtown |
| Sanderson, Roy V | Winsted |

### Delaware

| | |
|---|---|
| Smith, Arthur B R | Newark |

### District of Columbia

| | |
|---|---|
| Bell, Julius W | Washington |
| Lewis, Charles N | Washington |

### Florida

| | |
|---|---|
| Jones Arthur D | St Petersburg |
| Kerman, Herbert D | West Palm Beach |
| Lovejoy, John F | Jacksonville |

### Georgia

| | |
|---|---|
| Adams, Alfred N | Atlanta |
| Dorough, Warren S | Atlanta |
| Estep, John H | Atlanta |
| Moore, Herman K | Macon |
| Revell, Walter J | Louisville |

### Illinois

| | |
|---|---|
| Bremner, James N | Evanston |
| Brown, Meyer | Chicago |
| Freeman, John J | Chicago |
| Gubler John A | Chicago |
| Jaffe Henry L | Chicago |
| O Neil, George J | Bloomington |
| Pernokis, Evans W | Chicago |
| Sarnoff Herbert S | Chicago |
| Sittler, William W | Chicago |
| Smith, Everett J | Chicago |
| Spiegel Manuel | Chicago |
| Trumpe, William D | Champaign |
| Winted, John F | Evanston |

### Iowa

| | |
|---|---|
| Blair, Fred L | Fonda |
| Bond Thomas A | Des Moines |
| Lekwa Alfred H | Story City |
| Pender John W | Dubuque |
| Steenrod, Emerson J | Iowa Falls |

### Kansas

| | |
|---|---|
| Blake, Henry S | Topeka |
| Husband, Myron W | Manhattan |

### Louisiana

| | |
|---|---|
| Dodd, Nevin W | New Orleans |
| Harris, Edwin B | Shreveport |
| Provine, Henry S | Tallulah |
| St. Amant, Chester P Jr | New Orleans |

### Maine

| | |
|---|---|
| Crofoot, Michael | Northeast Harbor |
| Garcelon, Gerald G | Kennebunk |

### Maryland

| | |
|---|---|
| Cornbrooks, Ernest I | Baltimore |
| Ewald August L Jr | Baltimore |
| Lilienthal, Joseph L Jr | Baltimore |

### Massachusetts

| | |
|---|---|
| Bissell, George D Jr | Melrose |
| Brown, Thornton | Milton |
| Butler, Robert W | Methuen |
| Currier, George E | Sudbury |
| Factor, Joseph | Belmont |
| Garlepy, Alonzo J | Barre |
| Hennessey, James A | Brookline |
| McNamara, Francis J | Melrose |
| Marcellino, Samuel E | Milton |
| Mikaloms, Joseph P | Dorchester |
| Morrison, Herbert S | Brookline |
| Nigro, Henry | Revere |
| Nowak, Stanley J G | Belmont |
| Palmer, Edward J | Cambridge |
| Putnam Lawrence A | Holyoke |
| Varnum Joseph B | Lowell |
| Wall Conrad | Worcester |
| Woodruff Lorande M | Boston |
| Yafa Saul | Lowell |

### Michigan

| | |
|---|---|
| Arehart Burke W | Detroit |
| Burhans Robert A | East Lansing |
| Dunn Lewis E. | Detroit |
| MacDonell James A | Lowell |
| Morris, Ivor H Jr | Flint |
| Nagle John W | Grosse Ile |
| Phelps Everett L | Hastings |
| Roth Theodore I | Detroit |
| Walkowiak, Robert G | Detroit |

### Minnesota

| | |
|---|---|
| Bray Philip N | Duluth |
| Christensen Clarence H | Duluth |
| Goltz Neill F | St Paul |
| Graves, Waldo N | Duluth |
| Harri, Edward J | Ely |
| Joyce, George L | Rochester |
| Louisell, Charles T | Minneapolis |
| Thysell, Desmond M | Minneapolis |

### Mississippi

| | |
|---|---|
| Lewis John T | Tylertown |
| Ross Thomas G | Jackson |

### Missouri

| | |
|---|---|
| Jones, Theodore R | Kansas City |
| Lovejoy, Uel C | Kansas City |
| Newberg, Waldo L | Kansas City |
| Saferstein Theodore H | St Joseph |
| Smith, Robert M | St Louis |

### Montana

| | |
|---|---|
| Callan, Terrance D | Anaconda |

### Nebraska

| | |
|---|---|
| Lewis, Raymond G | Omaha |
| Manganaro, Frank I | Omaha |
| Panzer, Edward J C | Omaha |

### Nevada

| | |
|---|---|
| Lombardi, Louis E | Reno |

### New Jersey

| | |
|---|---|
| Bensel, Arlington Jr | East Orange |
| Bolton, Alexander A Jr | Newark |
| Dunn, John S | Salem |
| Nimaroff, Meyer | Irvington |
| Panigrosso, Louis R | Perth Amboy |
| Rothschild, Daniel L | Maplewood |
| Schwarzwald, Irving | West New York |
| Sutherland, William W | Ridgewood |

### New Mexico

| | |
|---|---|
| Fishback, Charles F | Albuquerque |
| Grigg Percy C | Rochester |
| Markham, Allen M Jr | Albuquerque |

### New York

| | |
|---|---|
| Agrest, Francis A | Brooklyn |
| Armstrong, William G | Troy |
| Bean, Richard B | Buffalo |
| Bender, Morris B | New York |
| Hurwitt, Elliott S | New York |
| Irwin, Leslie | New York |
| Jackson, Sidney C | Forest Hill, L. I |
| Kaplan, Abraham | Mt Vernon |
| Nichols, Joseph E | Brooklyn |
| Ramsay, James A | Yonkers |
| Ransom, Charles L | Syracuse |
| Rear, Vernon T | Syracuse |
| Ryan, Edward P | New York |
| Sawicki, Joseph J | Ozone Park, L. I |
| Tumolo Mauro A | Brooklyn |
| Witchell Ira S | New York |
| Zucker, Seymour | New York |

### North Carolina

| | |
|---|---|
| Covington, James M Jr | Wadesboro |
| Dula, Frederick M | Lenoir |
| MacKinney Loren G | Chapel Hill |
| Palmgren, Einar A Jr | Charlotte |
| Ruffin David W | Pink Hill |
| Stringfield, Thomas Jr | Waynesville |
| Weaver, Andrew J | Mebane |
| Wright, James R | Raleigh |

### Oklahoma

| | |
|---|---|
| Coppedge, Orville N | Bristow |
| Spottswood, Maurice D | Tulsa |

### Rhode Island

| | |
|---|---|
| Baute, Joseph A | East Greenwich |
| Einhorn, William L | Newport |
| Fletcher, Henry B | Providence |
| Hanley, Francis E | East Providence |
| Helfrich John W | Westerly |
| Lee Frederick M | Newport |
| Pearson, Rudolph W | Edgewood |
| Sheehan John J Jr | Providence |
| Thompson Ernest D | Providence |
| Williams, Harold W | Providence |

### South Carolina

| | |
|---|---|
| Bailey, Pearce | Charleston |
| Floyd Lome C Jr | Olanta |
| Ford, Blanchard F Jr | Bennettsville |
| Holman James M | Florence |
| Hunt, Samuel P | Denmark |
| Lide Charles M | Columbia |
| O Cain, Raymond K | Charleston |
| Whitaker, Andrew B | Camden |

### Utah

| | |
|---|---|
| Anderson, Rees H | Salt Lake City |
| Argyle, Emery M | Tremonton |
| Moreton, John R | Salt Lake City |
| Rothwell, Robert S | Salt Lake City |
| Wood, Eugene | Salt Lake City |

### Vermont

| | |
|---|---|
| Agnew, Clifford C | Brattleboro |
| Angell, Wilmer W | Randolph |
| McSweeney, Roland E. | Brattleboro |
| Morris, Richard W J | Poultney |
| Reynolds, Ernest V | Barre |

# ORGANIZATION SECTION

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*.—ED.)

*(Continued from page 167)*

United States Senate, Committee on Education and Labor

APRIL 16, 1946

AFTERNOON SESSION

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray Pepper, Tunnell Smith and Donnell

SENATOR MURRAY This morning there was some question raised with reference to the question as to whether or not the bill the pending bill, had any provision for preventive medicine, and I wish to call attention at this time to section 213 of the bill on page 63 which provides as follows

Section 213 For the purpose of encouraging and aiding the advancement and dissemination of knowledge and skill in providing benefits under this Act and in preventing illness disability and premature death etc

Again over on page 65, subdivision (b) of section 214 provides as follows

(b) The term general medical benefit means services furnished by a legally qualified physician or by a group of such physicians including all necessary services such as can be furnished by a physician engaged in the general or family practice of medicine at the office home hospital or elsewhere including preventive diagnostic and therapeutic treatment and care and periodic physical examination

I believe there is reference also to preventive medicine in some other parts All through title I, in the grants to states you will find references to preventive medicine which it stresses

SENATOR DONNELL Yes, sir

SENATOR MURRAY The first witness this afternoon is Dr Lowell S Goin Before we call on Dr Goin I wish to have inserted into the record a number of the statements which have been received from medical societies around the country, and I have been requested to have these put in the record

I would like to insert into the record at this point the statement that has been filed by the State Medical Association of Texas

SENATOR MURRAY The statement of the State Medical Association of Texas refers to a schedule of benefits provided by the Blue Cross Plan in Texas and a copy of this document will be filed with the committee for the information of the committee

(The pamphlet 'Blue Cross Comprehensive Service for the Whole Family Dallas, Texas,' is filed for the information of the committee)

SENATOR MURRAY There will also be inserted into the record at this point a statement from the New Mexico Medical Society, a statement from the Academy of Medicine of Cleveland and a statement from Dr Franz Goldmann associate clinical professor of the Yale University School of Medicine

SENATOR MURRAY I would also like to insert into the record at this point statements from Dr R. C Kash of Lebanon, Tenn and Edwin L Page of Concord, N H

### Statement of Dr Lowell S Goin of Los Angeles

DR. GOIN I am Lowell S Goin of Los Angeles I am a practicing physician, and I happen to be president of the California Physicians Service, which is a voluntary health care plan of California, and I am also president of the College of Radiology and the Radiological Society of North America I feel a great sympathy for the objectives which are hoped to be attained by the enactment of this bill, and I admire the humanitarianism of those who work so hard for their attainment There is not the slightest doubt that the sudden and unpredictable imposition of heavy costs for medical care is frequently catastrophic The physicians of America are well aware of this and, individually and collectively, have devoted much time and energy to an attempt to solve the problem They believe that a solution is becoming apparent and that, given reasonable time, will be reached They believe that the solution will be a better one than that currently proposed and that more medical care, and much better medical care, will be available to the American people if voluntary plans are allowed to evolve than if compulsory health insurance becomes law If it be argued that no voluntary plan completely meets the need, I reply that that is true, but that evolution is not a rapid process and that, in a field in which there is little or no experience, haste must be made slowly That this is likewise true in government controlled compulsory health insurance plans is shown by German and British experience Title II of S 1606 (for example) contains seventeen sections, but the German insurance law had (before the war) grown to more than 3,300 sections—a certain indication of the complexity of the problem and of the impossibility of composing a neat and effective solution

The American Medical Association, speaking (I am confident) for the overwhelming majority of American physicians, opposes this legislation on five grounds

1 The existence of a need for it has been established more by emotional statements than by logic and documented facts

2 Even if the need were soundly established there is no experience to indicate that compulsory health insurance would benefit the public health, although there is some reason to believe that it would lower the health standards

3 The costs are totally unpredictable, and no one has even a fair idea of what such a program would cost

4 Medical care is not the sole factor involved in good health, and there are many things that could properly be done to benefit the public health before we embark on a program such as is proposed

5 Voluntary health plans are more in keeping with the American tradition and will result in far better care being given to our people

I should like now to discuss each of these five points in turn

1 The social planner maintains that the state of health of the American public is deplorable and that medical neglect is a commonplace occurrence. The reason, they say, is the interposition of a financial barrier between the sick man and the doctor and argue that to remove this barrier will solve our health problem Last fall the President of the United States in a message to Congress pointed with horror to the shocking figures of Selective Service rejections as an indication of the dire need for the enactment of compulsory health insurance. Is it of no significance that our mortality and morbidity rates are among the lowest in the world? Is it an accident that the United States now leads the world in medical education? Is our constantly increasing expectancy of life a reflection of our deplorable state of health? Do you know that the American death rate for diphtheria is about one-half that of Great Britain or prewar Germany? Diphtheria incidentally, is an excellent indicator, since it is one of the few diseases for which we have specific preventive and curative measures, and since, there being no secrets involved, the German and British physicians know as well how to treat it as do Americans

So much has been made of the Selective Service rejection figures, the 5 000 000 4-F's that they deserve a moment of special attention Senator Pepper's interim report analyzes the 4,217,000 rejectees and breaks them down into groups

444 800 were rejected as "manifestly disqualified" These include the armless and the legless, the totally blind, the totally deaf, the deaf mutes, and so on. What medical care could have made this group whole? How shall the amputated leg be restored, and who knows how to cure optic disease? The modern concept is that mental disease is largely a constitutional inborn inability to cope with reality What has medical care to do with it? 582,100 were rejected for mental deficiency That is to say, they simply lacked the intelligence to become soldiers or sailors or, indeed, useful citizens of any sort. They are the idiots, the imbeciles and the low grade morons Even a very slight knowledge of eugenics will persuade any one that this group does not constitute a medical care problem. Together, these three groups reach a total of 1,727,600, or more than one third of the rejectees If they are now excluded, there remain 2,426,500, a little less than one half the famous 5,000,000 320,000 of these were rejected for musculoskeletal defects

SENATOR DONNELL Of the total number, you mean?

DR. GOIN That is the congenitally short leg, the club foot, the withered arm, the congenitally dislocated hip, the absence of a half vertebra and the consequent crooked back. How, I ask, would medical care have restored these unfortunates to usefulness? 280,000 were rejected for syphilis Treatment for syphilis is offered freely everywhere. As a matter of fact our statute books are simply loaded about syphilis prevention I doubt that there is a community in which a syphilitic person may not receive treatment from a department of public health One wonders how compulsory health insurance would have eliminated this group 220,000 were rejected for hernia, probably for hernias so severe that the Army was unwilling to attempt repair I mean by that that likely these were bad hernias because I did think the army repaired some. Hernia is the result of a congenital defect in the inguinal or femoral canal, presumably due to a defect in the germ plasm. If such a defect exists, its bearer is likely to have a hernia, and medical care has nothing whatever to do with the occurrence of hernia. 160,000 were rejected for "eyes," by which I suppose is meant defective vision Now it is true that some forms of blindness (ophthalmia neonatorum, for example) may be prevented by adequate medical care, and I think every state has a law requiring the instillation of silver into the eyes of the newborn, and it is my belief that opthalmia neonatorum is practically an extinct disease, but I think it fair to assume that this group of 160,000 did not include the blind but those with visual errors too great to permit good or even fair vision. If one is born with an eyeball too long or too short or one that is not symmetrical, then one will have a refractive error and one will either wear glasses or not see very well, and medical care again has nothing at all to do with it These groups total about 1,000,000, and the rejections which might be due to a lack of medical care are thus reduced to about 1 500,000, or about one third of the shocking figure of 5,000,000 Although it is quite problematic whether any program of medical care would have altered substantially this figure, we many rest on it, confident that the figures fall a good bit short of establishing an urgent need for the enactment of compulsory health insurance.

2 Even if we had had thoroughly established the need for some better plan for medical care, it would be proper to inquire whether a proposed plan offered some reasonable probability of improving public health Since compulsory health insurance has existed in various parts of the world for fairly long periods, it should be possible to examine the experience in those areas and, by analogy, establish the probable effect of our plans on our own health I think it quite interesting to note that compulsory health insurance has been in effect in San Francisco for some years as regards the municipal employees The insured are served by the same physicians and in the same hospitals as are noninsured persons In spite of the fact that no financial barrier exists between an insured person and a physician, the incidence of ruptured appendix is higher among the insured than among the uninsured In this instance, at least, the removal of the financial barrier, so abhorred of the social planner, did not seem to benefit the insured public The morbidity and mortality rates are higher in nearly all insurance countries than in our own May I quote to you from Dr Nathan Sinai's book "The War of Health Insurance" Remember that he is a most able and ardent advocate of compulsory Health Insurance He says that, 'Contrary to all predictions, the most startling thing about the vital statistics of insurance countries is the steady and fairly rapid rate of increase in the number of days the average person is sick annually and the continuously increasing duration of such sickness Various studies in the United States [he says] seem to show that the average recorded sickness per individual is from seven to nine days per year It is nearly twice that amount among the insured population of Great Britain and Germany and has practically doubled in both countries since the installation of insurance."

SENATOR DONNELL Might I ask a question? What is the approximate date of Dr Sinai's book, if you know?

DR. GOIN I would say roughly 1943 or 1944, maybe it is 1942 This seems to me a rather sound argument against compulsory health insurance, although Dr Sinai probably did not intend it thus To clinch the matter, he adds "It seems to be a safe conclusion that insurance has certainly not reduced the amount of sickness" This puzzles me a little, since I have naively assumed that the intent was to reduce the amount of sickness and to improve health I believe that the evidence in hand warrants the flat statement that compulsory health insurance will not benefit the public health

3 When compulsory health insurance was proposed in California a year ago last January, no one appeared with any sound idea as to its cost The guesses varied between $20 per person per year and $80 per person per year Most thought that $40 was a fair figure I think it significant that costs are nowhere discussed in the present bill, the Surgeon General of the Public Health Service being given a blank check. At $40 per person per year the program would cost 4,000 million dollars, and no one really knows whether this amount would suffice Experience elsewhere indicates that there is needed at least one employe (not including those actually delivering medical service) for each hundred insured persons (Crownhard, J G Sickness Insurance in Europe, 1938, p 25) On this basis we would need to increase the government payroll by about 1.5 million employees And yet, to pay this vast army, to pay the doctors, to pay for hospitalization and for the other benefits offered, no sums are named, no appropriations are made and no limits are set. This is a rich country, but no wealth is unlimited.

4 A sort of current custom is to use the terms "medical care" and "health" as if they were interchangeable—as though one were a synonym of the other As a matter of fact, medical care is only a small part of the health problem—not even the most important part Health consists largely in not being sick, medical care consists largely in an attempt to cure or alleviate disease. Nearly all—perhaps all—of the health legislation which has been proposed from time to time has been written by social planners, seldom, if ever, in consultation with physicians Consequently nearly all of it contains much wishful thinking and not too much reality Too much confidence is placed in preventive medicine, too much earnest belief that periodic health examinations will prevent disease, and all the legislation evidences a complete failure to understand that preventive medicine simply has not yet attained the goals wished for To cite a few of the problems How shall heart disease (except that due to rheumatic fever) be prevented? What sort of health examination will be efficient in its control? How shall we prevent, or even recognize, early brain tumors? Shall every one with a headache have encephalographic or ventriculographic studies? Shall we do gastrointestinal x ray studies on every one with indigestion and, if so, where shall we obtain the skilled personnel? How are bone tumors prevented, and what periodic examination makes one aware of the pneumonia of next week? Medical care is, and will for a long time continue to be, the care of the sick, and this I repeat is only a fraction of the health problem. Some other fractions to which government might well turn its attention are sanitation, hygiene, health education, adequate diet, good housing adequate clothing, working conditions and "patent medicine control And there are many others If government is sincerely interested in the health of the citizen why should it not suppress "patent medicine" advertising? Why should it not regulate the cults and require that all who wish to practice the healing arts pass the same tests? Why should it not control radio publicity of nostrums, vitamins and the like? This current legislation is attacking only a small segment of the health problem, and even if it were to accomplish all that its proponents claim it still would not solve our health problems

5 Voluntary health plans will, if given the opportunity do the job, and do it better than government controlled plans can do These plans, which already include a very large number of persons, are in accord with our traditional emphasis on personal responsibility, prudence, foresight and thrift They have an American dignity which is lacking in the regimentation of compulsory health insurance They can be and are more

economically administered they can and do give better medical care, and they will be and are supported by thousands of physicians who are bitterly and unalterably opposed to government controlled medicine In California we have made a good start. Our California Physicians Service offers medical care at modest costs A quarter of a million of our people have availed themselves of it, and appear to be quite satisfied with it The Farm Security Administration had a medical care program for the rural indigent California Physicians Service took it over and gave better medical care for less money and to the satisfaction of those giving and receiving the care California Physicians Service has just signed a contract with the State Grange providing medical care for nearly 100,000 farm people. These activities, which are duplicated in most of our states are indications of how voluntary plans can meet the challenge—how they are meeting it, and how they will continue to do so with a steady and healthy growth if they are not crushed by the monster of bureaucratic control

SENATOR MURRAY Doctor, is it not true that most of the objections that are made to the compulsory system with reference to the relationship between physician and patient apply equally to the voluntary systems? DR GOIN Senator, I am really familiar only with the California voluntary system and in that instance I will answer "No it is not true '

SENATOR MURRAY Will you explain the California system again briefly? DR. GOIN That is a voluntary health care plan in which people are enrolled as beneficiary members and are served by doctors who are professional members The doctors are paid on what is called a unit basis that is to say that the funds received in a given month are pooled and after the necessary administrative expense and a reserve for unforeseen contingencies such as an unexpected epidemic next month are set aside the remaining money is divided equally among the doctors on the basis of what service they have rendered The minimum amount of medical service is presumed to be a visit to the doctor in his office one office call That is known as one unit. The fee schedule is then in multiples of that unit. There is no one that intervenes at all between the doctor and his patient There are practically no regulations none that I know of that concern the practice of medicine

SENATOR MURRAY Does your system give full coverage to the people that belong to it? DR. GOIN Not quite Senator

SENATOR MURRAY What do they cover? DR. GOIN We have three types of contract that we offer We offer the so-called catastrophic coverage in which the insured is covered for hospitalization and surgery including fractures and dislocations

SENATOR MURRAY That is only in cases of a catastrophe? DR GOIN It is a case requiring any sort of surgery plus fractures and dislocations which are considered to be surgery they are specifically included. Then we have the same contract with the so-called medical rider, in which the patient receives medical care if he is hospitalized and then we offer a third contract known as the two visit deductible' in which the patient, the subscriber, is fully covered except that he must pay for the first two visits to the doctor However if the first two visits lead to hospitalization and surgery he is not obliged to pay for them The purpose of the two visit deductible is to prevent the insured from imposing on the professional member

SENATOR MURRAY All three of the systems would not cover all the service that is proposed under the pending bill DR GOIN All except the first two visits to the doctor, Senator

SENATOR MURRAY You do not provide for maternity care do you? DR. GOIN Yes sir after ten months The subscriber must be a subscriber for ten months before she is eligible, but thereafter she is completely eligible.

SENATOR MURRAY Do you provide dental care? DR. GOIN No sir

SENATOR MURRAY And no nursing care? DR. GOIN The ordinary floor nursing in the hospital no home nursing

SENATOR MURRAY And no eye care? DR. GOIN What do you mean by that?

SENATOR MURRAY Medical treatment of the eyes DR. GOIN We do not prescribe glasses but any eye disease is just as amenable to treatment as any other disease

SENATOR MURRAY You take the position that the compulsory system would result in a deterioration of the medical service of the medical profession in the country? DR. GOIN I am persuaded of it

SENATOR MURRAY Is it not true that at one time the American medical profession considered favorably compulsory—

DR GOIN That is true I think we are all entitled to one mistake

SENATOR MURRAY That was a serious mistake made by very excellent men DR GOIN That is right but since that time we have developed a good deal of experience.

SENATOR MURRAY But for a long time you were also opposed to a voluntary system DR GOIN I could not say that is true I think the American Medical Association did not regard voluntary care plans with much favor for some time, largely because there had been no experience developed and no one knew how to do these things or whether they could be done I think the doctors are rather complete realists We face conditions as they are If we have an incurable patient, for example, we do not hope to cure the patient we hope to make him as comfortable as possible until death intervenes They thus learn to be realistic To want to do something and to do it are not synonymous terms and I think for a long time we doubted whether there was enough experience in the world to justify any type of health insurance I think slowly it is developing that there is an increasing amount of experience which does justify it and therefore we have reversed our attitude and we now support these matters

SENATOR MURRAY Without some system of insurance, or some means of making modern medical care available to a large section of the people of this country they would go without adequate care DR GOIN No I could not agree to that, sir

SENATOR MURRAY You do not accept that at all? DR. GOIN No I do not.

SENATOR MURRAY You think that the American people can get all the medical care they need? DR. GOIN I heard Senator Pepper this morning describe the lack of medical care in his home state Of course, I have no way to know what occurs in Senator Pepper's home state. But I can say this that I have been in the practice of medicine for thirty-four years and that during that time I have never refused any person any medical care that I thought I was competent to give, nor do I know any of my fellows that have done so Now perhaps there are people who have done otherwise

SENATOR MURRAY You think that the present system then of having the medical profession wherever they find patients coming to them that are unable to pay, that they should accept those patients and care for them? DR. GOIN I certainly do I think it is not only their duty I think it is their privilege to do so

SENATOR MURRAY And you think that that would be the result in this country if we did not have any compulsory system? DR. GOIN No sir I do not wish to be misunderstood I do not argue for the maintenance of the status quo I think we must find some better way to distribute medical care. I am not yet sure what that better way is My preference for the moment is for voluntary health care plans but I think it is also true that one need not be sure of the right answer to know when the wrong answer is wrong

SENATOR MURRAY Of course there are a great many members of the profession and even members of the American Medical Association who disagree with you in these views DR GOIN Well a great many in that a few thousand are a great many But I think 95 per cent of the physicians of America would agree with my views

SENATOR MURRAY I have here a release just issued by the Committee for the Nation's Health which I will ask to have inserted in the record

I will read it

DISTINGUISHED PHYSICIANS SUPPORT HEALTH BILL

A distinguished group of physicians all members of the American Medical Association in a telegram to Dr Channing Frothingham chairman of the Committee for the Nation s Health took sharp exception to the AMA stand on the Wagner Murray Dingell national health bill now under consideration by the Senate Committee on Education and Labor

We believe from available experience the telegram reads that voluntary health insurance plans will be too costly to give satisfactory medical services for the urgent needs of the American people.

Therefore, we favor a National Health Program financed by compulsory insurance and delivered by decentralized administration with utilization also of voluntary medical care plans meeting approved standards.

Free choice of physician by patient and complete professional freedom for the doctors must be insisted on.

The list of physicians signing the telegram includes doctors in private practice throughout the United States, medical school teachers research scientists clinicians Among the group is a winner of the Nobel prize Dr George R Minot of Boston Dr Thomas Addis of San Francisco well known medical professor at Stanford University Medical School

Dr George W McCoy of New Orleans nationally known for his work on the control of infectious diseases Dr Edward A Park of Baltimore, professor of pediatrics Johns Hopkins University The list of signers follows

Channing Frothingham M D Boston
Harold Aaron M D New York
Thomas Addis, M D San Francisco
B T Beasley M D Atlanta
Walter Bauer M D Boston
Herrman L Blumgart M D, Boston
George I Blumstein M D Philadelphia
Ernst P Boas M D New York
Byron D Bowen M D Buffalo
Walter P Bowers M D Clinton Mass.
Allan M Butler M D, Boston
George Cannon M D, New York
Robert A Clark M D Pittsburgh
Joseph Dalven M D Brooklyn
Francis P Denny M D Brookline Mass
Robert L DeNormandie M D Boston
Edward T Ducey M D Muskegon Mich
Lewis A Eldridge Jr, M D, Great Neck N Y
Jacob Fine M D Boston
Charles A Flood M D New York
James L Gamble M D, Boston
Edwin T Gildea M D St Louis
Franz Goldmann M D Hamden Conn
Emmett Holt Jr M D New York
Thomas S Harvey, M D Edgewood Md
Henry C Knowlton M D Bangor Maine
Edward B Krumbhaar M D, Philadelphia
William S Ladd M D New York
John V Lawrence M D St Louis
P J Lipsett M D Oakland Calif
John S Lockwood M D New Haven Conn
T D W Lukens M D Philadelphia
Harry Mackler M D Elizabeth, N J
Leo Mayer, M D, New York
George W McCoy, M D, New Orleans
Hugh McCulloch M D St Louis
Irvine McQuarrie M D Minneapolis
James H Means M D Boston
T Grier Miller, M D, Philadelphia
George R Minot M D, Boston
Robert B Osgood M D, Boston
Edwards A Park M D Baltimore
John P Peters, M D New Haven, Conn
Richard M Peters M D St Louis
Max Pinner M D Berkeley Calif
Edwin F Price Jr M D, St Louis
Lieut Comdr Robert W Quinn M D, Dublin Ga
H B Richardson M D New York
Elmer Richman M D St Louis
G Canby Robinson M D, Baltimore
George Saslow M D St Louis
J Walter Schirmer M D Needham Mass
Kathryn L Schultz M D Baltimore
Benjamin Segal M D New York
David Seegal, M D New York
Elmer I Sevringhaus M D Nutley N J
Dudley C Smith M D Charlottesville Va
Rebecca Solomon M D, Meriden Conn
Oliver H Stansfield M D Worcester Mass
Joseph Stokes Jr, M D Philadelphia
Richard T Thompson M D Denver
Borden S Veeder M D St Louis
L C Newton Wayland M D Santa Barbara Calif
Myron Wegman M D New York
William C Williams M D Rutherford N J
Edward L Young M D Boston

So there are a great many doctors around the country that are giving study to this problem and are of the opinion that a compulsory health system would be advisable in this country DR GOIN Senator, might I remark that it is not at all established that these men have given study to this problem? Perhaps they are well wishers who would like to see good done to humanity It, I think, would be very interesting to know how many of the telegrams Dr Frothingham sent out did not get affirmative answers I spent Sunday with a man in New York who is a professor of pediatrics at Columbia who refused to send such a telegram His name is not there I do not think it is a very large number compared to the number of doctors, and if it please the committee I could within ten days get a similar telegram signed by one thousand names for each name on there.

SENATOR MURRAY I am not disputing that I am merely pointing out that these men who are on that list are men of prominent standing and distinction in the country DR GOIN That is true.

SENATOR MURRAY And that they are giving study to the problem and are of the opinion that a compulsory health system is advisable DR GOIN That is right. Some of them have devoted their lives to getting a compulsory health system activity Peters, Addis and Butler, for instance, devoted almost their entire lives to getting such a system I presume they are sincere.

SENATOR MURRAY When did these doctors commence to promote such a program? DR. GOIN I know Addis, to my personal knowledge, has been advocating it for sixteen years

SENATOR MURRAY And the American Medical Association generally opposes it? DR. GOIN That is right

SENATOR MURRAY I notice that in this report of "Medical Care for the American People," which was issued in 1932, a committee on the costs of medical care, that the American Medical group at that time was opposed to the voluntary system That is true, is it not? DR GOIN I could not say, but I would not be at all surprised, because as I said before at that time we had no body of facts on which to proceed on a voluntary health care plan, and they had to be worked out piecemeal, slowly, painfully and frequently expensively

SENATOR MURRAY I had reference here to the minority report at that time signed by— DR GOIN The signers of the minority report do not represent the American Medical Association It represents eight doctors, members of this committee.

SENATOR MURRAY The members who were on that committee at that time? DR GOIN Well, they were just doctors who were on the committee I do not know if they are even members of the American Medical Association They were certainly not there in that capacity

SENATOR MURRAY They consist of A C Christie, George T Tollansbee, M L Harris, Kirby S Cowlett, Arthur C Morton, N B Van Etten, Robert Wilson, Alphonse M Schwitalla and Olin West DR GOIN Schwitalla, for instance, is a Jesuit priest, not a doctor at all

SENATOR MURRAY He is a professor at St. Louis University DR GOIN He is dean of the St Louis Medical University and is a priest, not a physician

SENATOR MURRAY I understand that He is a student of these problems DR GOIN But not a member of the American Medical Association

SENATOR DONNELL If I may interrupt, I call attention to page 151 of the volume from which the chairman is reading at which Dr Schwitalla is described as "A M Schwitalla, Ph D" I think the other gentlemen are mentioned as "M D" but he is referred to as "Ph D"

SENATOR MURRAY After this meeting of the committee that was set up at that time, these medical men who signed this report opposed the voluntary system and advocated the compulsory system Is that right? DR GOIN I could not answer I do not know I am not familiar with it

SENATOR MURRAY I will read it

DR GOIN I think it would be of little significance since it is nearly sixteen years since the report was written A great many things have happened

SENATOR MURRAY —

The Committee on the Costs of Medical Care has been in existence for five years and during that time has collected at considerable expense a great body of data Among these data are extensive comments on insurance medicine as it has developed and is now working out in various countries in Europe and also in this country In 1931 Simons and Sinai conducted a study of health insurance for the American Dental Association which the majority report of the committee summarizes on page 99 One of the statements in their summary is as follows Every attempt to apply the principles of voluntary insurance on a large scale has proved to be only a longer or shorter bridge to a compulsory system Every so-called voluntary system is successful in just about the proportion that it contains compulsory features Nothing has been made clearer than the fact that voluntary health insurance schemes have everywhere failed In Europe they have been replaced by compulsory systems which are now under trial Even in Denmark, where the system is nominally voluntary there are indirect but very effective means of compulsion

I understand that this report was submitted to the House of Delegates of the American Medical Association and that the House of Delegates approved this in 1933 Is that true? DR GOIN I could not say I was not a member of the House of Delegates at that time But I repeat that I think it has but little significance, since times have changed a great deal in the ensuing years That report was probably written about 1930

SENATOR DONNELL In 1931

DR GOIN In 1931 perhaps I think we are in a considerably different situation I should like to answer an objection that they raise, however, that the voluntary health insurance, all these plans, have always heretofore failed I think that is true too, but they must have been speaking of voluntary health insurance plans in Europe since we had none in this country at that time

I might call your attention to the fact that attempts at democracy also did fail in Europe, and had we been guided by their failures we would not have had a republic in this country, that no country, until we did so, wrote a truly democratic constitution such as we live under, that voluntary health insurance plans might have well been nourished by the rugged fertile democratic soil of America, whereas they would be like the wheat that was sown among the rocks in the parable, in Europe, where they have a working class they would almost

consider indigent, where they have a social economic culture derived from the feudal period, where conditions are so much different that I do not think there is any valid comparison I should think that if we could cover 71,000,000 people in America with life insurance on a voluntary basis, without any compulsion whatever, persuading these people to buy the insurance because they believe they need it, I see no reason to believe we could not cover 71,000,000 people with a voluntary insurance

SENATOR MURRAY We have been trying for a long while to spread health insurance in this country, but we have not succeeded. DR. GOIN Not very long, Senator

SENATOR MURRAY Do you think it would be possible in any length of time to get a complete coverage in the country under a voluntary system? DR GOIN I think the voluntary systems, if they were not handicapped by the fact that they are largely under the management of doctors and state medical societies having at their disposal extremely limited funds and having not much business experience, and being totally unable to afford the publicity that they should have, and the sales campaign that they should have, if we were freed from those restrictions, I think we could sell an enormous amount of voluntary health insurance in a short time

SENATOR MURRAY But these voluntary health systems do not give the people joining them full medical coverage. DR GOIN No, nor does the compulsory health insurance, although the bill says that it will But the fact is that it takes time to develop these things, Senator Murray, and one cannot just dash in and turn everything at first crack

SENATOR MURRAY What medical care or service do you mean to say that is not covered by the pending bill? DR. GOIN It is all covered by the bill But most of us have seen how it is actually applied and we are not too impressed

SENATOR MURRAY You mean to imply that it would never be carried out? DR. GOIN Well, it would be carried out in compliance with the letter of the law, but it would not be any good Twenty-five people walking through my office and saying they have a cough and having prescription 271 handed to them by me is not medical care in my mind

SENATOR MURRAY How would it be better under a voluntary system? DR. GOIN You do not have any interference, any regulations The doctor treats his patient as he sees fit If the patient does not like him, he goes somewhere else. Under our voluntary health plan in California any patient may select me if he likes, but if he does not like me there is nothing to compel him to come to me. He can go to my neighbor Hence he is likely to find the medical care he wants Nobody tells me what I must do to these patients

SENATOR MURRAY Under this bill nobody tells the doctor what he must do DR. GOIN Oh Senator, I could not quite agree with that.

SENATOR MURRAY That is what I consider your personal construction of the language. But it is not susceptible of that construction in my judgment The bill properly construed does not interfere or attempt to supervise the doctor in any respect. In fact, it specifically undertakes to point out that it does not interfere with the doctor or with the relations of the patient and doctor

(*Dr Goin gave some demonstrative cases from military practice*)

SENATOR MURRAY Do you not think the doctors in this country and the various clinics and laboratories, operated under a group practice system, do you not think they give excellent service to the American people? DR. GOIN I think it varies a good deal between various clinics, but in general I would think yes

SENATOR MURRAY The system of group practice in this country has to a large extent supplanted the former practice of individual doctors DR. GOIN I would not say so I think the individual doctors are by far in the majority

SENATOR MURRAY But the group practice system is growing in this country, and it is tending to— DR. GOIN Yes, sir

SENATOR MURRAY It is the modern method of medical care now recognized as the most efficient Is not that true DR. GOIN I would say it is an excellent way to practice.

SENATOR MURRAY Isn't it much better than the old system of a single practitioner attempting to take care of a patient? DR. GOIN I do not think a single practitioner does attempt to take care of a patient except in the most trifling incident. I do not think he has any hesitance to summon consultation He does not secure the approval of the administrative officer of the district either, but he does in this bill

SENATOR MURRAY How does that affect the service that he would render, even if he did contact the administrative officer? DR. GOIN Senator, I think the minute you interpose an administrative officer between the sick man and the consultant you begin to complicate the system

SENATOR MURRAY We have this system right here in the Senate of the United States I go to an administrative officer, Dr Calver, and he sends me out to the Naval Hospital I go out there and I am checked up by doctors that I never saw before and never heard of before They tell me what is the matter and recommend treatment DR. GOIN Would it be unfair for me to point out that you are a distinguished Senator from the United States and not a fellow who works down at the docks

SENATOR MURRAY If it is good enough for a distinguished Senator, it might be good enough for a person who works down on the docks DR GOIN That is true, but the reverse is not necessarily true

SENATOR MURRAY It seems to me that the system is good because it is effective and because it is the modern way of handling the sick DR GOIN Senator I cannot believe that you would compare the service that a Senator gets in a government hospital with the service that an ordinary plain day laborer might expect to get at the hands of panel doctors subject to the administrative officer's directives I cannot believe that

SENATOR MURRAY You mean to imply then that an ordinary person walking into one of these voluntary systems would not get complete and excellent care? DR GOIN Voluntary system?

SENATOR MURRAY Yes DR GOIN If he did not, he would go elsewhere.

SENATOR MURRAY You think it is only a United States Senator going through the Naval Hospital that can get the finest kind of care? Is that the idea? DR. GOIN No, sir What I say is that you probably get attention far surpassing that which might be expected to be received by an ordinary panel patient who is a laborer who goes to the panel doctor who is subject to the directive of the medical administrative officer of the district. I think there is no comparison whatever between the two situations and I think you will admit it

SENATOR MURRAY I do not understand the medical officer in the district having anything to do with the situation after the relationship of patient and doctor is made under this bill DR GOIN Section 205, paragraph (a) Senator, establishes it It says that the patient may have a specialist if his attending doctor requests it if it is approved by the administrative medical officer of the district.

SENATOR MURRAY What is wrong with that? DR GOIN I think a good deal is wrong with it I do not wish a medical administrative officer intervening between me and my desire to have a consultant if I am not satisfied with your medical attention

SENATOR MURRAY Line 15 page 46 is as follows

(d) The services of a specialist or consultant shall ordinarily be available only upon the advice of the general or family practitioner or of a specialist or consultant attending the individual The services of specialists and consultants shall also be available when requested by an individual entitled to specialist and consultant services as benefits and approved by a medical administrative officer appointed by the Surgeon General.

Isn't that a reasonable regulation? DR GOIN I would not think so sir

SENATOR MURRAY You would not? DR GOIN No Under voluntary health care plans he could have the service of a specialist on his own demand If he was sick and not satisfied with any doctor and wanted a specialist, I would feel I was entitled to get it on demand

SENATOR MURRAY It says The services of a specialist or consultant shall ordinarily be available only upon the general or family practitioner or of a specialist or consultant attending the individual' DR. GOIN But if the family practitioner does not think you need a specialist, the patient cannot have one In line 21 until the medical officer approved of it.' That, I think, is unwarranted interference between the doctor and patient

SENATOR MURRAY The various voluntary plans that have been called to my attention are all plans that do not give full medical care and hospital service. They all have some qualifications which prevent a person from getting the advantage of full modern medical care, and nine times out of ten they would be compelled to pay for the services that they would find themselves in need of DR GOIN Senator I can speak with authority only for the California physicians, in which, as I told you, I am president of the board of trustees, but speaking authoritatively for that service I would say that is not the case.

SENATOR MURRAY I merely wish to point out that the plans we have examined—voluntary plans—all have qualifications and exceptions which vary in the various sections of the country Your plan is a complete plan, affording complete medical care and hospitalization DR GOIN It is not quite a complete plan As I told you, we have three different types of contracts The best the most complete one, excludes the first two visits to the doctor We have thus far found it necessary to do so for this reason, that John Jones drinks a lot of gin on Saturday night and wakes up feeling pretty bad on Sunday morning If he has to pay to see the doctor he takes an aspirin and wishes he had not taken the gin Otherwise he sees the doctor, and that breaks the plan. Therefore we have been obliged to impose these two visits I do not think anybody would avoid a doctor if he had to pay two calls to the doctor, possibly not to exceed $10 anywhere, and not to exceed $5 or $6 in most places

SENATOR MURRAY On the other hand there are a great many people in this country, working people, employed in the various industries, and in mining and so forth, who have families and who are compelled to live on a modest income, and in such cases as that, even without having overindulged themselves, and without any cause on their own part, they become sick and oftentimes they neglect going to a doctor because they hesitate to incur the cost of such a visit We find that in the testimony we have received here continually for several years DR GOIN I would be inclined to agree with that, but I would also like to add that these same people have commonly spent much more than the cost of one or two visits to the doctor on "patent medicines," strange and irrational cults and advice from incompetent persons which has led to the expenditure of money Education is a part of this problem

SENATOR MURRAY That is right And that is exactly what this bill is seeking to avoid, the people who sell these 'patent medicines" are contributing to the funds for the purpose of opposing this very program DR GOIN Possibly so I do not know about it.

SENATOR MURRAY I know about it, and in the drugstores throughout the country where you go in and buy this patent medicine," they slip in a little bit of propaganda into the package warning you against this bill that is pending here in the Senate of the United States DR GOIN I am very glad to hear that I am much encouraged

SENATOR MURRAY You would like to encourage that DR GOIN Yes

SENATOR MURRAY You would like to continue the system in this country, then of the sale of 'patent medicine," and quack remedies DR GOIN No, sir I would like to continue the encouragement of the opposition of this piece of legislation

SENATOR MURRAY You are perfectly willing to contribute to any methods that would defeat this bill DR GOIN Perhaps not any I do not believe it has been shown that the 'patent medicine' interests are tied in to opposition of this bill Perhaps it is I am not aware of it But I certainly endorse the distribution of the propaganda by the druggists

SENATOR MURRAY Are you familiar with the National Physicians Committee of Chicago? DR. GOIN Not particularly

SENATOR MURRAY *You have heard of it? DR. GOIN Yes,* I have even contributed to it

SENATOR MURRAY You have And they have sent out a lot of false and malicious propaganda in the country against this bill, calling it political medicine and socialized medicine. Is that true? DR GOIN I think we would have to define our terms, Senator Your "false and malicious" might be different from mine

SENATOR MURRAY When they totally misrepresent the provisions of the bill do you think that is malicious? DR GOIN I have not seen it done

SENATOR MURRAY I have seen it. They circulated their propaganda and it has been distributed all over the United States DR GOIN As Dr Sensenich said this morning if it is propaganda you do not agree with the purpose of it It is only missionary work if you do

SENATOR MURRAY You think this propaganda should not be objected to? DR GOIN I do not object to it

SENATOR MURRAY You are perfectly satisfied with the propaganda issued by the Physicians Committee of Chicago DR. GOIN All that I have seen has satisfied me

SENATOR MURRAY Of course there are a lot of people that feel that way about it DR GOIN I dare say

SENATOR MURRAY I must admit that you are within your rights in wanting to support that kind of a procedure to prevent legislation of this kind. DR GOIN I think so

SENATOR MURRAY I have here a note to the effect that the British Medical Association has made a statement approving the medical plan, the medical health insurance system they have in Great Britain, and are making proposals now for the extension of its service They say in their statement "Despite its defects, this service has been an undoubted success" That is the statement issued by the General Medical Service of the nation, April 1938, by the British Medical Association

SENATOR DONAHEY What is the date of that, Senator? SENATOR MURRAY April 1938

DR GOIN My understanding is that they are bitterly opposing the extension of the National Medical Service plan now proposed

SENATOR MURRAY The information that I am receiving is that they are in favor of it. DR. GOIN I saw an article in *Time* of just one or two weeks ago, perhaps, in which all the evils and dangers were pointed out at great length, and the British quoted, perhaps, unfairly I think it is important to notice what is back of that in Great Britain, which is very obviously for the benefit of public health, as it repeals compulsory vaccination I think that is a most remarkable point of sincerity The enactment of the British service to hospitalize also contains a provision that abolished vaccination

SENATOR DONAHEY Dr Goin, Senator Murray offered into the record a release issued today at the head of which is the expression, or statement, Committee For the Nation's Health, 402 Sixth Street N.W., Washington, D C" That statement sets forth a copy of, or excerpts from, I am not certain which, a telegram from certain gentlemen addressed to Dr Frothingham Had you ever seen that telegram before? DR GOIN Yes Dr Frothingham sent out a telegram last Wednesday or Thursday, I think it was, to a selected group of people asking them to sign this telegram The way I happened to see it was that a friend of mine received it and asked me my advice

SENATOR DONAHEY And the language of the telegram was set forth in the request, was it not? DR. GOIN No, it was not Just a telegram endorsing this legislation

SENATOR DONAHEY Did the telegram which you say mention specifically S 1606? DR GOIN Yes, sir

SENATOR DONAHEY I note with interest the fact that the quotation from this telegram which was offered into evidence this afternoon does not mention S 1606 at all It reads as follows

> We believe from available experience [the telegram reads] that voluntary health insurance plans will be too costly to give satisfactory medical services for the urgent needs of the American people
>
> Therefore we favor a national health program financed by compulsory insurance and delivered by decentralized administration with utilization also of voluntary medical care plans meeting approved standards.
>
> Free choice of physician by patient and complete professional freedom for the doctors must be insisted on

I call your attention, Doctor, to several facts about that telegram which I think are of considerable interest. In the first place, as indicated there is no mention whatsoever of this particular bill, S 1606 You observed that as I read it. DR. GOIN Yes

SENATOR DONAHEY In addition to that, I want to ask you about this I am unable to determine whether this telegram is intended as an endorsement impliedly, without mentioning it, of this bill, or whether it is a very careful attempt to express an opinion favorably for the general idea of compulsory insurance, but with certain safeguards which the signers of the telegram specifically wanted to have incorporated before they would approve it.

I call your attention to this, and I want to ask you your opinion on it

It says, as I have indicated, "Therefore, we favor a national health program financed by compulsory insurance and delivered by decentralized administration with utilization also of voluntary medical care plans meeting approved standards"

I will ask you to state, Doctor, from your study of S 1606, whether you consider the plan set forth in S 1606 as a "decentralized administration' of compulsory insurance? DR. GOIN No sir, highly centralized

SENATOR DONAHEY Highly centralized into the Surgeon General and the Social Security Board, here in Washington DR GOIN That is correct

SENATOR DONAHEY An advisory council composed of people from various parts of the United States, but as the name implies only an advisory council Is that right? DR GOIN I do not think an advisory council needs to be considered much

SENATOR DONAHEY In other words, the council may render valuable advice, but, after all, the ultimate decision as indicated in S 1606, rests in some instances in the Surgeon General, in other instances in the federal Social Security administrator the head of the entire system That is right, is it not? DR GOIN Yes

SENATOR DONNELL So you would not regard this bill, S 1606, as conforming to this requirement of this telegram, that the program be delivered by decentralized administration DR GOIN No I would not

SENATOR DONNELL It also, I think, gives quite an implied compliment to the voluntary medical care plans which have been instituted It states after the language "we favor a national health program financed by compulsory insurance and delivered by decentralized administration' it states 'with utilization also of voluntary medical care plans meeting approved standards" Would you understand that to mean, Doctor, the plans adopted by voluntary associations such as the California and other associations over the country? DR. GOIN I would not understand it at all I do not see what is meant by that.

SENATOR DONNELL It is susceptible of the construction however, that they are referring back—the signers of this telegram—to some voluntary medical care plans that somebody has previously instituted DR GOIN It could be So-called friendly societies were incorporated in the British plan

SENATOR DONNELL The point I am making is that there is in this telegram first, no specific approval of S 1606 second a qualification as I read it that the program should be delivered by decentralized administration, which you do not think is created by S 1606 DR. GOIN No I do not.

SENATOR DONNELL And in the third place, that the telegram distinctly refers to a favoring utilization of voluntary medical care plans Now, in the next plan I observe this which I want to ask you about The telegram said 'free choice of physician by patient and complete professional freedom for the doctors must be insisted on" Do you think, Doctor, that under S 1606 free choice of physician by patient exists? DR GOIN No, sir

SENATOR DONNELL Do you think that complete professional freedom for the doctors is assured? DR GOIN No, sir

SENATOR DONNELL For instance, the right of the Surgeon General to designate who shall be considered as specialists under the terms of section 205 and the right of the Surgeon General to designate who shall be considered consultants that is a restriction, is it not, on the absolute freedom of physicians? DR GOIN Certainly

SENATOR DONNELL So the telegram, as I have indicated therefore, has these various features which I think should be added in the record as supplementing the language of the telegram Now further, about this telegram Who is Dr Frothingham? DR GOIN Superintendent of the Massachusetts General Hospital in Boston

SENATOR DONNELL Of the Massachusetts General Hospital in Boston? DR GOIN Yes

SENATOR DONNELL Has Dr Frothingham been active, do you know, along the lines of compulsory insurance for some time? DR GOIN It is my impression that he has, but I speak under correction I am not too positive.

SENATOR DONNELL Do you know of the meeting that was held at the Carleton Hotel in Washington D C., April 1 1946 either for the organization of or by the Committee for the Nation's Health? DR. GOIN No I do not

SENATOR DONNELL Did you ever hear of the Committee for the Nation's Health before the present time? DR GOIN Never

SENATOR DONNELL Do you know whether it is a long established committee or a recently established committee? DR GOIN I do not know but I would assume if it were of long existence I would know about it, and I do not.

SENATOR DONNELL Do you know a man by the name of Michael M Davis? DR GOIN By reputation

SENATOR DONNELL Do you know whether or not he had anything to do with the preparation of this telegram? DR GOIN No I do not.

SENATOR DONNELL Do you know Dr Ernest Boas? DR GOIN Not personally but by name

SENATOR DONNELL I note he is one of the signers of the telegram and I note from tomorrow's schedule that the doctor is to appear here under the designation of Chairman, Physician's Forum Inc. That is an organization as I understand from previous testimony consisting of about 2 000 doctors Is that correct? DR. GOIN No I do not know I know it is a group of physicians in favor of compulsory health insurance and many leftist trends

SENATOR DONNELL You know it to be a small organization? DR. GOIN Yes sir

SENATOR DONNELL It is not at all the size of the American Medical Association, is it? DR. GOIN No Goodness no

SENATOR DONNELL Doctor I should like to ask you also whether you know of an organization with offices at the same address at which appears the Committee for the Nation's Health entitled "Committee on Research and Medical Economics" DR GOIN Never heard of it.

SENATOR DONNELL Did you ever hear of Fred Stein? DR GOIN No

SENATOR DONNELL Or Paul Kellogg? DR. GOIN No

SENATOR DONNELL Do you know whether Dr Frothingham is a member of such a committee as that? DR GOIN No

SENATOR DONNELL Then I will not pursue that inquiry further, save to say Mr Chairman that I propose a little later on to present certain evidence with respect to the meeting at the Carleton Hotel on April 1, 1946 Now Dr Goin, in your testimony, near the outset of it, you referred to the occasion of the complexity of the problem, and you illustrated that by the fact that while title II of S 1606, that is to say the compulsory insurance portion of the bill, contains seventeen sections the German insurance law had before the war grown to more than 3 300 sections DR GOIN That is right

SENATOR DONNELL Now just as indicative Doctor of the fact first, that it is not solely because of the prolificacy of the German language that it has grown to that extent. DR. GOIN I think the same thing is true in Great Britain.

SENATOR DONNELL Now, I hand you this book and ask you if you can estimate the weight of this book by taking it in your hand DR. GOIN A couple of pounds, I guess

SENATOR DONNELL Will you look in there and tell us the number of pages and the title of that book? DR. GOIN It has 1,281 printed pages and two or three numbered ones for notes

SENATOR DONNELL What is the title of it? DR GOIN The National Health Insurance Act of 1936 to 1938 with Explanatory Notes Cases Decisions of the Minister of Health and Statutory Rules and Orders"

SENATOR DONNELL By whom issued? DR GOIN By Henry Lesser, Bachelor of Laws London, Gray's Inn, Barrister at Law with a Foreword by Elliot, M D M P Minister of Health, and published by the Africa House Kingsway London, 1939

SENATOR DONNELL Mr Chairman I would say it is reassuring to say that lawyers had to assist in getting out this book. At any rate, this book is entitled 'The Law of National Health Insurance' and the frontispiece has indicated what it is as to its contents DR. GOIN Yes

SENATOR DONNELL I hand you another book which consists of some 360 pages, exclusive of the index, and ask you to state what that book is DR. GOIN I know about this book

SENATOR DONNELL What is this book? DR. GOIN This is the British Panel Doctor's Bible." He has to look at this before he can tell what is the matter with the patient or what to do with him

SENATOR DONNELL By whom is that issued? DR. GOIN Medical Insurance Practice' by R. W Harris and Leonard Shoeten Sack" and it seems to have been written by R W Harris and Leonard Shoeten Sack, both lawyers No the first one is an assistant administrator of health and the second one a barrister This is the fourth edition of 1937 It is issued by the British Medical Association It is addressed to the general practitioner"

SENATOR DONNELL That is the one you referred to in your testimony Now, let me read a little bit of the language here as indicative of the type of instruction that is given here. You say this is the Bible' DR GOIN That is what we call it

SENATOR DONNELL For instance, I call attention to page 173 This is headed '(3) Where the insured person asks for treatment as the private patient'

> The acceptance of a fee from an insured person not on your list who specifically asks for treatment as a private patient does not ask for breach of your terms of service but it is usually to be deprecated It may cause you considerable inconvenience if he afterwards denies that he made such request and applies for repayment as explained above. No doubt the nature of the dispute would be narrowed if you took a statement from him in writing before giving him treatment but even so you are not free from the possibility of the patient making troublesome with unfounded allegations later

Doctor is there anything about taking such statements by patients before you even endanger yourself of the possible risk of false allegations under our practice today? DR. GOIN Not thus far I would take it that that is the illustration of what is meant by the often repeated freedom of the physician' under the compulsory health insurance.

SENATOR DONNELL Doctor under the volume which the chairman read entitled Medical Care for the American People"

and issued in 1932, being the final report of the Committee on the Costs of Medical Care, together with a minority report, you will recall that the chairman read from the Minority Report certain references to the summary made by Messrs Simons and Sinai in 1931 Now I call your attention to what the chairman read, but what might be inadvertently overlooked, that the report which Messrs Simons and Sinai made was at the instance of the American Dental Association Did you observe that? DR. GOIN Yes

SENATOR DONNELL *Now, Doctor, let me ask you, it is* entirely possible, I am not sure about this, I have no doubt that the chairman is of the opinion that it is true, and it may be, that this report of Messrs Simons and Sinai was adopted by the American Medical Association Do you know if it was? DR. GOIN No, I do not know

SENATOR DONNELL Now, the findings in the report are set forth on pages 99 and following I will read a few words 'A M Simons and Nathan Simons conducted in 1931 a study of the professional and economic problems of health insurance for the American Dental Association Their principal findings were' and then, No 5, "Every attempt to apply the principles of voluntary insurance on a large scale has proved to be only a longer or shorter bridge to a compulsory system Every so called voluntary system is successful in just about the proportion that it contains compulsory features" That is the language to which the chairman referred this afternoon I understood you to say, Doctor, earlier in your testimony that you are not arguing for the maintenance of the status quo DR. GOIN That is right.

SENATOR DONNELL And you agree there may have been mistakes made in the past. DR GOIN That is right

SENATOR DONNELL And mistakes in the future? DR GOIN Almost certainly

SENATOR DONNELL But that the American Medical Association am I correct in this understanding of your testimony, in your judgment, whether you have given it or not, am I correct in your view that the American Medical Association is making an honest and conscientious and diligent effort to solve the health *problems of the nation at this time?* DR. GOIN *There is no* doubt that that is true.

SENATOR DONNELL Would you concur with the view of any one who testified as did one witness yesterday, that the opposition to S 1606, at least as far as it refers to the American Medical Association, which was not mentioned by the witness, would you concur in the view however as applied to the American Medical Association that its opposition to S 1606 is inspired by dishonest motives? DR. GOIN I cannot understand what dishonest motives there would be to inspire it

SENATOR DONNELL Do you think it is inspired by any dishonest motives? DR. GOIN I certainly do not

SENATOR DONNELL Doctor, you have practiced medicine a good many years DR GOIN Yes, I have

SENATOR DONNELL Leaving aside the considerations of professional modesty, what has been your general observation of the type and character of the members of the medical profession as an entirety, as to whether they are honorable, upright generous and charitable men? DR GOIN I would say that the medical profession, like the legal profession and the clergy, and any other profession has always some rascals within it, but by and large I would think that the character of the men engaged in the practice of medicine is rather of a superiority

SENATOR DONNELL You think that the American Medical Association is representative of the highest ideals and of the highest membership of the medical profession in this country? DR. GOIN I do not think there is the slightest doubt of it

SENATOR DONNELL It composes about what percentage of the actual practicing membership of the profession in this country? DR. GOIN *That is a difficult thing to answer, but* I would guess five sixths about 170 000 doctors and about 120,000 members of the Association. It is generally estimated that from 20 000 to 25 000 doctors do not practice either because of prolonged bad health other occupations or because they have retired or other reasons

SENATOR DONNELL At one point in your testimony when your attention was called by the chairman to the fact that certain gentlemen it may have been the signers of this telegram, possibly others I do not recall did not agree with you, I think you said that as to that portion of your testimony you thought 95 per cent of the doctors would agree with you Is that a correct statement? DR. GOIN I do think so

SENATOR DONNELL And generally speaking Doctor, without going down into the minutiae of your testimony generally speaking as to the principles of your testimony here today is it your judgment that the great majority of the medical profession of this country would concur with the views you have expressed? DR GOIN I am absolutely certain of it. Last February, that is, February 1945, I debated with a doctor who was in favor of compulsory health insurance then pending in California I made the statement in debate that I thought that 90 per cent of the doctors of California would oppose this measure Without the slightest hesitation he said "I will make it 95 per cent," and he was the opponent

SENATOR DONNELL Doctor, you were referring to the costs *of this compulsory insurance, and I understood* your statement to be that it was impossible to determine what it is I want to call to your attention in that connection however, one fact that appeared to me was somewhat significant, and that is that you point out that experience elsewhere indicates that there is needed at least, one employee, not including those actually delivering medical service, for each hundred insured persons Is that correct? DR GOIN That is taken from a citation.

SENATOR DONNELL From Crownhart on "Sickness in Europe' That is a publication of 1938 DR GOIN Yes

SENATOR DONNELL You pointed out that on this basis it would need to increase the government payroll by about one and a half million employees DR. GOIN Yes

SENATOR DONNELL My recollection, Mr Chairman is that our esteemed colleague Mr Byrd has pointed out that there are 3 160,000 governmental employees at this time So that your judgment is, I take it, from what you state here, that, assuming the facts set forth by Mr Crownhart to be correct, the number of government employees would have to be increased by something over a third of what are now employed by the government DR GOIN That would seem to be the case.

SENATOR DONNELL Those, I understand from your statement do not include the doctors DR GOIN That is right.

SENATOR DONNELL What would these one million and a half people be? DR. GOIN They are the clerks and the administrative officers It is just thousands of employees it takes to administer such a complex thing all over the United States

SENATOR DONNELL You would have to have an employee in practically every city of any size in the United States, would you not? DR. GOIN If I remember correctly, and I probably do not, in prewar Germany the sickness insurance, not including accident insurance, which was administered by a separate institute, had a national institute, thirteen regional institutes and something like thirty-three thousand local offices, each of which obviously has to have at least one employee. In Berlin the main institute is an enormous building comparable to our buildings here in Washington. It must be staffed with thousands of employees

SENATOR DONNELL Roughly speaking are you able to give us an estimate of what grade of salary this million and a half people other than doctors, would receive? Is $2 000 a year too high for the average? DR GOIN I doubt if it is high enough.

SENATOR DONNELL Say we take $2,000 a year That would be three billion dollars a year just for the employees, other than doctors DR GOIN That is right.

SENATOR DONNELL Do you have any ideas as to how many doctors would be engaged in this plan? Are you able to estimate at all? DR. GOIN I hope a very small number, but I could not say

SENATOR DONNELL But if the plan became effective and reasonable opportunity was given for its success, undoubtedly there would be many thousands of doctors in it, would there not? DR GOIN I think it would take 150,000 doctors, or more, a good deal more to administer it

SENATOR DONNELL Do you think that it would take nearly all the time of nearly all of those men to administer their duties under this act? DR GOIN Goodness I should think so

SENATOR DONNELL What would you be able to estimate the average amount that those men would have to receive per person in order to compensate them adequately for their services? DR. GOIN There is a deep secret It was in California too when we had a long series of conferences with officers of the C I O, who insisted that they loved the medical profession and wanted to do well with them and thought they did not do well, ought to make more money and have more leisure for vacations, graduate study, research, if they guaranteed this bill But when we came down to brass tacks Mr Minsky, their research expert, thought $5 000 would be ample for any doctor Of course in England they only get about $2 per person per year, for insured persons

SENATOR DONNELL Would your judgment be that $5 000 is certainly not too high? It would be if anything considerably too low to compensate for the average professionally equipped man who has put in his time studying for a profession of that type and importance DR GOIN I would think so, although,

of course they get lower salaries than that in the Army and Navy and Public Health Service

SENATOR DONNELL Would you think $5 000 a year on the average, would be a fair estimate as to what they would have to have in order to live in reasonable respectability and commensurate with their position in life? DR GOIN I should guess so, because out of this $5 000 they have to maintain their office, assistance, telephone, automobile and supplies

SENATOR DONNELL That would look low to me but I take that figure as a very low figure That figure would be $750 000 000 a year for the doctors Now I should not be a bit surprised if it would be a good bit more than that would you? DR. GOIN No

SENATOR DONNELL If we take $750 000 000 a year and then take for the clerical employees and others that you have mentioned the one million and a half three billion dollars you get up to three billion seven hundred and fifty million dollars as the cost of operation of this system Now with that in mind Doctor— DR GOIN May I say that nearly all the experts think that much too low?

SENATOR DONNELL What do most of the experts think it would be? DR GOIN They think from four to four and a quarter billion dollars for the first year and the actuarial opinion is that the cost will not begin to level for at least fifty years, and it is very likely to reach ten or twelve billion dollars

*(Senator Donnell brought out through questions to Dr Goin the great costs of the measure and the difficulties of administration)*

SENATOR MURRAY Then is not this bill a safeguard? Under this bill the advisory committee of the local community assists in preparing the list of those who would be qualified as specialists and then you have the official recognition of this specialist, and the patient does not have to guess about it at all DR GOIN I do not want my penetrating ulcer to wait until somebody decides whether the fellow in the community is a surgeon or not I would rather have my abdomen opened and fixed before I die.

SENATOR MURRAY Of course you can find fault with any bill It seems to me that we are taking up a little bit too much time quibbling over these points involved in this legislation I do not think it serves any purpose that is of any benefit to us at all I do not think it accomplishes anything It seems to me that you have already stated clearly enough your opposition to the legislation You have stated your reasons why you are against it and I do not think that it is necessary to prolong the examination along this point Of course I am not going to stop you I am merely suggesting this to you

SENATOR DONNELL I appreciate the suggestion of the chairman I shall be as brief as I can I differ with the chairman as to the importance of this I regard this as extremely important

SENATOR MURRAY You are submitting leading questions to a witness who is biased in your favor and everybody knows of course, before he took the stand that he is utterly and unalterably opposed to this legislation We know that It seems to me that you have covered the whole situation with the testimony that you have already in the record

SENATOR DONNELL I will make it as brief as I can within what I think are reasonable limits Dr Goin in the situation to which I referred to which you referred in your testimony about the man who needs a consultant or a specialist under the present prevailing system in this country the individual patient or his family has the right at any rate, to determine whether or not he shall get the services if obtainable of a given doctor DR. GOIN Certainly

SENATOR DONNELL Whereas under the plan set forth in S 1606 it would be determined by the Surgeon General through his local representative down in the particular community as to whether or not the given doctor is qualified to act as a consultant or specialist DR. GOIN Well the sick person can have a consultant on recommendation of his general practitioner too

SENATOR DONNELL But no one can be paid as a specialist or consultant under the terms of subdivision (c) of section 205 unless he has been designated by the Surgeon General That is correct is it not? DR GOIN Yes

SENATOR DONNELL I want to make one or two other points quite briefly One of them is the point that I think is the point that easily arises in one's mind and that is the possibility of political situations arising That is to say suppose that there be an administration here in Washington that has a great army of employees 33 000 like they have in Great Britain or 66 000 or 75,000 or whatever it may be or 1 500 000 as this estimate is in your testimony Those 1 500,000 people are scattered all over the United States carrying on these very important functions There certainly would be the opportunity would there not Doctor for favoritism and political administration to enter into the determination by the local representative of the Surgeon General in Las Vegas N M for illustration, as to whether John Smith is or is not a specialist or consultant. That opportunity would exist is that right? DR. GOIN Humanity is pretty weak Senator

SENATOR DONNELL Yes and the political danger is one that should be borne in mind DR GOIN Yes I think it is a very great danger

SENATOR DONNELL I want to express this and I think it is highly important Some one handed this to me Not only do the costs include these 150 000 physicians et cetera but this plan involves hospitalization nursing dentistry possibly other benefits I do not recall if there are others or not So that the figures of 4¼ billion would certainly seem to be very conservative and perhaps billions of dollars under the actual cost Am I correct in your judgment on that? DR GOIN I honestly believe that they are very conservative

SENATOR DONNELL Now Doctor, there is one other question In regard to the point that you mentioned about the voluntary societies having the right to require that the first two visits of the doctor should be paid for at the expense of the patient DR GOIN That is provided in this bill too

SENATOR DONNELL I was going to call attention to the fact that section 210(a) not only gives the Surgeon General the right after consultation with the advisory council and with the approval of the administrator to determine whether or not a fee should be paid with respect to the first or second visit but it reads this way

Sec 210(a) The Surgeon General may after consultation with the advisory council and with the approval of the administrator determine for any calendar year or part thereof that every individual entitled to general medical general dental or home nursing benefit may be required by the physician dentist or nurse furnishing such benefit to pay a fee with respect to the first service or with respect to each service in a period of sickness or course of treatment

As I understand it, Doctor, that gives the authority to the Surgeon General, after the consultation indicated and with the approval of the administrator of the Social Security System to say to a given individual that he will have to pay for all the services rendered to him DR. GOIN There is no question about it at all in the language of the act.

SENATOR DONNELL So that what we have understood was a compulsory insurance system under which all of us would get this equality of opportunity if the Surgeon General decides against it would be resolved into a situation where we would have to pay even though we paid our taxes Is that correct? DR GOIN That is right

SENATOR MURRAY I might call attention there that in the bill, in section 210(a) you will find commencing on line 12 the following language

Such determination shall be made only after good and sufficient evidence indicates that such determination is necessary and desirable to prevent or reduce abuses of entitlement to any such benefit and shall fix the maximum size of such fee at an amount estimated to be sufficient to prevent or reduce abuses and not such as to interpose a substantial financial restraint against proper and needed receipt of medical dental or home nursing benefit.

Of course it is very proper that such provision should be in there, just for the very same reason that the doctor explained a few moments ago why they have the provision requiring payment for the first visit which may be waived if it is found that the person is really entitled to some real hospital care DR GOIN It is waived as a matter of fact No option about it.

SENATOR MURRAY So that this provision if we do have compulsory health service is a wise precaution is it not? DR GOIN Yes but it somewhat lessens the comparative spread of benefits between compulsory and voluntary health insurance plans because the proponents of compulsory health insurance complain steadily about this two visit deductible thing saying it was not complete coverage You yourself said so

SENATOR MURRAY This has nothing to do with avoiding complete coverage This has to do with the regulation which prevents people who may imagine that they want medical care and service when they do not need it at all DR GOIN That I pointed out to you Senator is exactly the reason we have in the voluntary plan not to limit people but to protect the entire plan I think it is definitely necessary in both plans

SENATOR DONNELL I think Senator it should have been mentioned. I am sorry I omitted mentioning it Dr Goin may I ask you just one final question and that is reason 2 that

you mentioned for which the American Medical Association opposed this legislation, that even if the need was soundly established there is no experience to indicate that compulsory health insurance would benefit the public health, although there is some reason to believe that it would lower the health standards Just what do you mean by health standards"? DR. GOIN I think it is fairly well shown that under compulsory health insurance people are sick oftener and longer

SENATOR DONNELL What is the reason for that incidence between the existence of health insurance and these various results? DR GOIN I think that the increasing incidence of sickness is largely due to malingering I think it is interesting to note that in Rhode Island, where they have cash benefits for sickness, the incidence of sickness rises in the summer coincident with the opening of the race track and not in the winter when one would expect to have the colds and pneumonia and so forth It is also interesting to note that in 1923 in Germany, the value of the German money fell to practically nothing I was there and saw it happen And that because it was not worth while to get sick and get the few marks involved the days of sickness as measured by inability to work fell off to one hundred million that year

SENATOR MURRAY Well, Doctor you recognize that there is a difference of opinion among the profession with reference to whether a compulsory system of insurance or a voluntary system of insurance would be the proper system to accept in this country? DR GOIN I do recognize it, with a qualification

SENATOR MURRAY Yes

SENATOR DONNELL Pardon me Were you going to state the qualification? DR GOIN I should like to.

SENATOR MURRAY Yes Go ahead DR GOIN That those who favor compulsory health insurance are very largely people who do not and never have practiced medicine Very largely they are teachers, research workers and so forth

SENATOR MURRAY We had Dr Allan Butler on the witness stand the other day He practices medicine. DR GOIN I do not think so Senator, if you will excuse me I think he is a full time professor

SENATOR MURRAY He testified that he practiced medicine not only in the daytime but in the night time. DR. GOIN Maybe we have got a different definition

SENATOR MURRAY He says he goes to the hospitals and has patients to take care of and apparently is an active practitioner DR GOIN There is no doubt about it but he does not gain his livelihood that way

SENATOR MURRAY Maybe the most of it DR GOIN I think most of it is from the salary at Harvard

SENATOR MURRAY Anyway, he is an outstanding physician and highly qualified? DR GOIN He is an outstanding doctor, there is no question about that.

SENATOR MURRAY Senator Donnell asked him some questions about the opposition to this legislation, and Dr Butler said

> I think the major part of the publicity that is given the medical profession and the lay public reflects a selfish interest in maintaining the interests of doctors who are practicing medicine as they practice it today
>
> SENATOR DONNELL You mean the financial interest?
>
> DR BUTLER Yes sir
>
> SENATOR DONNELL Yet doctor I observe that your conclusion is at page 7 quoting Such legislation as you are considering is imperative if physicians and hospitals are not to suffer financial embarrassment
>
> DR BUTLER That is correct
>
> SENATOR DONNELL In other words as I take it your view is and if I am wrong please correct me your view is that legislation, such as S 1606 will prove advantageous to the medical profession second, that in the absence of such legislation of this type financial embarrassment by the medical profession will generally ensue? Is that correct?
>
> DR BUTLER That is correct
>
> SENATOR DONNELL But in your judgment the medical profession is actuated by what you think are motives of self interest they evidently feel the other way and think that the present situation will prove financially more advantageous than the new system that is correct is it not?
>
> DR BUTLER That is correct and not contradicted.
>
> SENATOR DONNELL Doctor may I ask you this Is it a fact that regardless of the statistics of the number in the Association or out of it, is it not your observation that taken by and large, there is not any more generous whole souled, upright and charitable segment of our citizens than the medical profession as a general proposition? Is that not true?
>
> DR BUTLER That is true Senator but it is equally true that in matters that affect changing the pattern of medical care the bureaucracy that runs the A M A does not permit free discussion
>
> SENATOR DONNELL But the members of the organization have their House of Delegates which meets periodically?
>
> DR BUTLER Yes
>
> SENATOR DONNELL And has it within its power to express the sentiments of the Association any way that the House may want to present that is correct, is it not?
>
> DR BUTLER With the limitation that the boys in power who hold the offices, dominate the committee can to a very considerable extent guide the expression of opinion in the annual meetings and suppress action or opinions that they do not approve of

So apparently there are some men in the profession who do think that there is some basis for feeling that the opposition of the American Medical Association in this matter is somewhat biased DR GOIN Could I make a reply? SENATOR MURRAY Yes DR. GOIN Having all respect for Dr. Butler's very high professional standing, and although I would have the greatest and most admiration for his professional opinion, I think that his statement is sheer nonsense

SENATOR MURRAY Will you tell me, Doctor how the members of the House of Delegates are elected? DR GOIN Yes, because I know it and I do not think Dr Butler did

SENATOR MURRAY Very well DR. GOIN The members of the House of Delegates are elected, as near as may be one half each year by the component state societies My state society in California has a house of delegates Those members are elected by the county medical association and representation is based on population, just as the House of Representatives is here. That body elects delegates to the American Medical Association again on the basis of medical population. Our state has 8 No state has less than 1, regardless of its size Half of these are elected each year, and they are elected for a two year term I am a delegate for the state of California. If the California Medical Association does not like the way I conduct myself it is very easy for it to discharge me As a matter of fact, it discharged all the delegates a year ago put them out of office. I think it is one of the most democratic bodies I have ever seen. It is constituted almost exactly as Congress is. You cannot elect people to serve for a day or two it would be silly As far as the bureaucracy that has control I have not yet come in contact with it. No one has ever told me what I should say or think. I have violently and zealously opposed the American Medical Association on the floor of its House of Delegates Nothing happened to me. I think it is sheer nonsense to say a bureaucracy controls the opinion. Opinions are made by the House of Delegates with perfectly free and open discussion Some one read testimony this morning that these committees are appointed for years There is no such thing They are appointed each session by the Speaker

SENATOR MURRAY As a general rule, the men who appear in the House of Delegates are elected each time they come up for election? DR GOIN I think they change constantly

SENATOR MURRAY Well, if a reputable physician from my state is elected to the House of Delegates he is not displaced? DR GOIN He is apt to be elected two or three times

SENATOR MURRAY I have often met them on trains, traveling to a meeting DR. GOIN That is true of Congress, is it not?

SENATOR MURRAY Men who came to the House of Delegates annually for years DR GOIN I think that is to the advantage of the nation and the American Medical Association.

SENATOR MURRAY I am not criticizing it at all but, as Dr Butler points out, naturally they are conservative. Naturally they are inclined to not be in favor of radical changes in the plan of medical care in this country DR. GOIN Well, I think most of us like most mature Americans are not in favor of radical changes Not just medical care. Change should evolve slowly

SENATOR MURRAY That is true but of course our country has radically changed in the last forty years Forty years ago we were largely an agricultural country, but in the last thirty or forty years we have developed huge industries in certain sections of the country where masses of people are congregated, and sometimes earnings are low and health conditions bad, and they find it difficult to get adequate medical care under the existing system And that is the reason why agitation has developed in the country for some change, and it seems to me that every change which has ever been made in the history of this country for the benefit and welfare of the common people has been met with charges that it is communistic or socialistic or dangerous, and yet when it is enacted the people come to accept it and would not permit anybody even to threaten to change it. That has happened on almost every beneficial measure enacted in our history When it is proposed originally it creates consternation on the part of those who have certain vested interests or feel that they have certain vested rights and they are fearful of the change, and yet they themselves come to recognize it later on as entirely satisfactory DR. GOIN I think that is true but I think it is also true that

during the last thirty years there were a great many radical changes not enacted to our benefit. Not all proposed changes have been enacted into law

SENATOR MURRAY I do not know what radical changes were proposed that were not enacted I cannot think of any that were proposed that failed to be enacted eventually For instance, they had to fight here for ten years to get the Tennessee Valley Authority because vested interests opposed it We had to fight many, many years for an income tax system in the United States That was regarded at one time with great fear and consternation by people in this country and finally we got it Now no one would dare to suggest that it be done away with And the same way with workmen's compensation I remember when I first went west to the mining camps at Butte, Mont, where we have deep mines and accidents occur almost daily Sometimes 100 people are injured or killed or maimed They had no system to take care of those men except by lawsuits, and the lawyers usually exacted 50 per cent of the recovery We have enacted now compensation laws in the country which were bitterly opposed by the medical societies Mr William Green was here yesterday and told the story of the enactment of the workmens compensation laws in the state of Ohio which were bitterly opposed by the medical profession in that state He was a senator in the state of Ohio at the time that legislation was passed They claimed that it was socialistic and very vicious legislation Now it is accepted and is entirely satisfactory to every one

SENATOR DONNELL Mr Chairman may I say one further thing before the doctor leaves the stand Doctor do you consider from your observation and experience that it is practicable for the American Medical Association to develop a satisfactory voluntary nonprofit prepayment insurance plan? DR GOIN Not the American Medical Association but its component state associations I think can and will do so

SENATOR DONNELL You are familiar with the movement that is in process? DR GOIN Yes

SENATOR DONNELL The organization of the corporation recently? DR GOIN Yes

SENATOR DONNELL The matters discussed here by the witness this morning? DR GOIN Yes, I am

SENATOR DONNELL And you regard it as possible for the state associations to work it out? DR. GOIN I do

SENATOR DONNELL Do you think it will be? DR. GOIN I do.

*(Dr Sensenich introduced into the record statements by Joe Howard M D and Mr Say Ketchum)*

### Statement of Victor Johnson, Ph.D , M D , Secretary, Council on Medical Education and Hospitals of the American Medical Association

DR. JOHNSON Unlike my two predecessors I do not practice medicine. My professional career has been in teaching, in medical education and in research My official position in the American Medical Association is that of executive officer, or Secretary, of the Council on Medical Education and Hospitals This council consists of seven national leaders in medical education and hospital matters under the distinguished chairmanship of Dr Ray Lyman Wilbur of California The work of the Council (and earlier, the Committee) on Medical Education and Hospitals in the past century is generally conceded to be a major factor in the high standards of medical and hospital care now obtaining in this country since the quality of a physicians services can be no better than the quality of his education as an undergraduate in medical school and after graduation in a hospital internship or residency After the turn of the century there were increased efforts to improve medical education in this country Some of the medical schools were still operated primarily for the financial profit of the faculty and provided exceedingly inferior instruction. At the instigation of the Council the Carnegie Foundation conducted a survey of medical schools, under the direction of Abraham Flexner and with the collaboration of Council representatives The findings in this survey constituting the classic publication generally known as the 'Flexner Report ' resulted in the closing of a number of the medical schools of the country these were schools scarcely deserving the name producing graduates entirely unqualified to treat the sick. This effect of the Flexner Report is astonishing, since the report carried no legal or governmental authority but produced results entirely through its influence on public opinion

Through the ensuing years to the present time the recommendations of the Council on Medical Education and Hospitals still derive their effectiveness not from legal authority but from public opinion lay and professional which recognizes the objectivity of the conclusions of the Council in its efforts to improve medical education and as a consequence the quality of medical care In carrying out this work the Council, with the approval of the House of Delegates of the American Medical Association, has established standards of education for medical schools and for hospitals offering internship and residency training to medical school graduates, as well as standards for schools in technical fields related to medicine, such as physical therapy, medical record libraries, x-ray, occupational therapy and clinical laboratory work

Annually the Council publishes three special numbers of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION dealing with statistics problems and information on Medical Education, Hospital Care and Medical Licensure, as well as revised lists of medical schools hospitals and other institutions adhering to the high educational standards which have been established These publications are for the guidance of prospective individual students physicians, hospitals, various government agencies and the public.

In my prepared statement I describe a number of publications by the Council which are employed by prospective medical students government agencies and the public and if the committee wishes I can leave for any possible reference it wishes to make to this material these publications for the files of the committee

This work of the Council has been a major factor in warranting the following recently expressed judgments by experts that medical education in this country is unexcelled anywhere in the world and that the low death rate of our armed forces from disease and wounds was due primarily not to plasma penicillin or sulfonamide drugs but to the high quality of the medical education of our medical officers

SENATOR MURRAY I should like to ask you there Doctor, if it is true that the general practitioner of medicine in the United States is a graduate of a recognized college and medical school DR JOHNSON The vast majority of them are

SENATOR MURRAY Very few men are allowed to practice medicine in the United States nowadays who are not really qualified to practice? DR. JOHNSON In two states of the union Illinois and Massachusetts graduates of so-called unapproved medical schools have eligibility for license. It has recently been changed in Massachusetts

SENATOR MURRAY But it still exists in Illinois? DR JOHNSON Illinois yes The school does not adhere to the standards and the graduates are eligible.

SENATOR MURRAY Was that due to a shortage of physicians? DR. JOHNSON That school has been in existence for a number of years certainly since long before the war, so that the war shortage had nothing to do with it.

SENATOR MURRAY But the reason for permitting them to be licensed was the fact that the shortage of physicians made it necessary to undertake to get more doctors licensed to carry on medical practice? DR. JOHNSON I cannot say with certainty what the exact origin of that medical school was, but I do not believe it was a matter of any acute deficiency

SENATOR MURRAY But generally the doctors that are practicing medicine in the United States are qualified? DR JOHNSON Yes generally they are graduates of approved medical schools

SENATOR MURRAY Very well

DR. JOHNSON The legislative measure under consideration deals only briefly in a direct way with medical education and research directly which are inseparable in any sound program. Section 213 provides for 'Grants-In-Aid for Medical Education (and) Research The desirability of such aid has been recognized by the House of Delegates and by the Council on Medical Education and Hospitals of the American Medical Association These bodies have endorsed such federal support provided it is organized and administered soundly as is the case in certain of the proposals now before Congress There are several bills calling for the establishment of a National Science Foundation to administer funds and programs for research and scholarships in the sciences including medicine The administrative arrangements provided by certain of these bills (the Magnuson bill S 1285 and the Kilgore Magnuson bill S 1850) are sounder by far than that of S 1606 and promise greater success in achieving the desired ends than is the case with the measure under consideration The Kilgore-Magnuson bill wisely limits the authority of the director appointed by the President, and places considerable authority in the hands of the members of the foundation who are to be scientists of repute, functioning not simply as advisers to the administrator but possessing the authority to initiate positive action in some instances and to veto the decisions of the administrator in other cases In contrast to this arrangement under S 1606 the Surgeon General of the Public Health Service

required to seek only the advice of the National Advisory Medical Policy Council, which advice he is free to follow or not, as he chooses

Safeguards for the preservation of independence of research workers and institutions are provided in the Kilgore Magnuson bill in a manner which promises effectiveness Such safeguards, which are indispensable for productive research, are almost entirely lacking in the research section of S 1606

In the Kilgore-Magnuson bill the scholarship program is carefully worked out in considerable detail In the bill under consideration virtually no organized program is set forth in the scholarship field

In any program for the extension and improvement of medical care, hospitals occupy a key position, because modern medicine cannot be practiced except with the diagnostic, therapeutic and other facilities which hospitals provide for the use of physicians The Council on Medical Education and Hospitals has long been interested in the number, distribution and quality of hospitals in general Besides the assistance it renders, on request, to hospitals operating educational programs for medical school graduates at the internship and residency levels, the Council also serves hospitals in general in efforts to improve the quality of hospital services This it does by establishing standards of hospital care (as set forth in one of the documents I will submit for your records), providing free consultation services to such hospitals as request them in their efforts to achieve these standards and maintaining a list of "Registered Hospitals" revised annually, which meet these standards

I then quote certain figures which we need not go into unless you wish to know them concerning the number of hospitals, admissions to them, and the bed capacity in the United States

At present about 78 per cent of the bed capacity of this country is in hospitals operated by some government unit, federal, state, county or municipal However, these hospitals, about half of which are for nervous and mental cases, account for only 40 8 per cent of the total hospital admissions Non-governmental hospitals provide only 22 per cent of the hospital beds of the country, but they account for nearly 60 per cent of the patient admissions

Over the years, the increase in hospital beds in this country has been phenomenal, independent of the great wartime increase in the federal hospital bed capacity of the armed forces and the Veterans Administration Hospital beds have multiplied far more rapidly than has the population Hospital beds have tripled in number from 1909 to 1940 The population did not double during those years During that time hospital beds were provided more than one and one-half times as rapidly as the population has grown

The percentage occupancy of hospital beds in the various states displays a phenomenon difficult to interpret If the states are arranged in the order of increasing number of hospital beds per thousand of population we find that this order is also approximately that of increasing percentage of beds occupied in general hospitals That is, the states with the fewest beds per thousand of the population use those beds least, those with most beds use them most For example three states having less than 2 beds per thousand people (in 1940) had an average bed occupancy of 62 per cent sixteen states having 3 to 4 beds per thousand people occupied over 70 per cent of them, while in the District of Columbia with 10 beds per thousand people the occupancy was still higher

Several factors may be involved Perhaps the people in states unable to provide adequate hospital facilities are financially unable to take full advantage of these facilities Perhaps the quality of these hospitals and the means of transportation to them are inferior to those in states with more hospitals However there is probably also the factor of lack of education of the public to the use of such health facilities as do exist This factor must be considered in any program for the improvement of the people's health To be successful, such a program must educate the people to know the health facilities and stimulate their use

There has been much discussion of inadequate distribution of hospital beds especially in rural or economically ill favored areas or states Frequently this inadequacy is expressed in terms of the large number of counties in this country possessing no hospital Such figures present an entirely erroneous picture, since the natural unit is not the county but the trade area, and distance of people's homes from a hospital is more important than artificial boundary lines In 1938 an extensive study by the Council on Medical Education and Hospitals of the American Medical Association revealed that over 98 per cent of the population of the United States lived within 30 miles of a hospital, a distance of rapidly shrinking significance with modern roads and transportation The accompanying map on the next page shows in white all areas within 30 miles of a hospital and in black all areas not within 30 miles of a hospital

In determining these shaded areas such special institutions as mental, maternal, tuberculosis and other restricted hospitals were not considered and hospitals under construction were excluded The shaded areas are almost entirely limited to sparsely settled areas

This distribution picture would be somewhat improved by the hospital construction since that time and considerably improved in the years immediately ahead, since vast programs of hospital construction are contemplated It has been estimated that existing registered hospitals will spend about a billion dollars for expansion, improvement and replacement. The volume of construction of entirely new nongovernmental hospitals is not known but will probably be tremendous

It is recognized that the mere existence of a general hospital within 30 miles does not indicate that hospital facilities are adequate in that area The bed capacity may be inadequate for the population of the area, and the hospital plant and equipment may be inferior and obsolete Recognizing this, the American Medical Association has lent strong support to the Hill-Burton Hospital Survey and Construction Act in actions by its Board of Trustees and House of Delegates and in testimony before two committees of the Congress

In drafting and revising the Hill-Burton bill expert professional advice was sought from a number of qualified organizations An important provision of this measure, which has passed the Senate, is that surveys of existing hospital facilities shall be conducted by the states, and comprehensive plans developed relieving deficiencies in areas needing hospitals and able to maintain them, before federal aid to states for hospital construction will be provided This is an approach to the problem of extending and improving medical care in accordance with the scientific method which should be employed not only in solving medical problems of the cause and control of disease but also in our efforts to evolve programs for providing a high quality of medical and hospital care to all people of this country who need and desire it

SENATOR MURRAY Thank you, Doctor Do you care to ask any questions Senator?

SENATOR DONNELL I do not think so, Mr Chairman

SENATOR MURRAY Thank you, Doctor

### Statement of Dr Walter V Kennedy, President, Indiana Mutual Medical Care, Inc

DR KENNEDY This will be a short and practical expression from personal observations of government control of medicine in England and Germany I have seen the workings in practically all the other continental countries, but because those were the outstanding plans of those two types my remarks are based on those alone

SENATOR MURRAY Do you intend to describe those plans in detail Doctor?

DR KENNEDY I do not, sir I speak from the observations resulting from seeing them It is quite short.

Observation of standards of medical care in continental Europe and the British Isles excluding Russia and Spain between 1904 and 1939, while on nearly yearly visits, is the basis for a definite impression and a considered opinion as to the changes which have occurred since adoption by these countries of some form of direct governmental participation in medical practice The sources of information covered every level of the plans Through the assistance and courtesy of the American diplomatic corps, interviews were had with cabinet ministers with executive and administrative chiefs of health services, with controlling heads of hospitals, with hospital medical personnel, with medical practitioners of the higher ranks and with general practitioners who largely attended to the medical care of the general public and with members of the public in the various economic strata The inquiries were not at the direction of or at the expense of any one else or to establish any preconceived opinion

As trends appeared to develop it became more interesting to verify them and the scope of the inquiries was widened, so that more complete information might be obtained It is desirable to note here that the trends following the introduction of such plans have a close similarity and it has been interesting to observe how sequences might be predicted

It has been noted that the introduction of every plan has been coincident with political needs In no instance to my knowledge have such plans been a considered conclusion of a widely expressed public demand or at the suggestion of the medical profession who ought to be most conversant with need of such plans

All the plans have had an imposing façade of humanitarianism though the ultimate results to the intended beneficiaries have lacked much of the expressed hopes of the originators the actual beneficiencies apparently being in augmented political

power and prestige of the proposers If such plans have value, the social and economic conditions of Europe would appear to offer every likelihood of success

The standards of living in all but the high income classes everywhere in Europe has been low, low to a degree inconceivable to those accustomed to our American standards It might fairly be said that the mass of European population lived on standards equivalent to our near indigent class, which to us represents a relatively small layer And while the near indigent of the European population represents the largest single economic class, they have small opportunity and little inclination to rise economically The American near indigent has every opportunity and because of the American habit of initiative and self dependency, much inclination to rise and this European ingrained acceptance and resignation to the status quo lends itself readily to regimentation and particularly to acceptance of paternalism which always inhibits initiative and progress

The actual living conditions of great masses of Europeans, housing clothing, food, sanitation and amusement have been incredibly bad, and if free or nearly free medical care made available by government was the sole or even principal requirement for solution of the health problem these European medical plans ought have produced greater results than have been apparent. On the contrary, the immediate prewar reports indicated a rising loss by days per year by illness though the trend in the United States without governmental medical plans has been downward

The medical profession believes in good medical care but it also clearly recognizes that without proper sanitation satisfactory housing, adequate food sufficient clothing and reasonable recreation, medical care, no matter how freely available cannot achieve its goals of the highest attainable public health And the notable achievements in betterment of the health of our country now with the highest standards of any land, were accomplished by the American medical profession on its own initiative with its tested and proved methods quite without governmental aid or direction

The question then arises as to relative efficiency of our methods over those of Europe If medical care freely supplied by the government is the method of Europe and yet our progress is decidedly better there seems to be fault in the plan or incompetence in personnel No one will claim that lower standards of medical training are the rule in the European countries Their graduates, who are not participants in medical service plans are recognized in the scientific world as being as competent as our leading men.

Then is it possible that constant participation in the plans lowers efficiency? Long and continued observations have firmly fixed in my own mind that this is true As corroborative evidence let the end result of such service be stated In the original German system the ostensible object was providing medical care for the near indigent at governmental expense No one of ordinary humanity then or now would object It may here be stated that it is even yet as it has been for centuries the privilege as well as the duty of a physician to care for the indigent without expectation of recompense

After the German profession unworthily accepted this plan in succession the higher economic layers demanded under political pressure similar grants from the government. The end after years of gradual encroachment was the inclusion of the entire populations Originally the physicians fee was a reduced one, paid by government with a slight contribution by the public in sickness tax The amount required to supplement the contribution became so onerous to the government that its share became inadequate. Economies were imperative Administrative personnel were political factors and could not have reduced pay The physicians began having reduced partial settlements In time the absurdity of paying 75 per cent and promising 25 per cent was apparent. Then 75 per cent of the original became the standard Later other reductions came Since by this time practically all the population was enrolled in the plan physicians except a tiny number of university professors had no other clientele

The basic necessities of life require a minimum income To attain that minimum the only answer was a greater number of patients There being but twenty-four hours in the day the time allotted to any one was shortened The standard of individual care was dropped There was no other solution In the years prior to the last war Germany became infested with pseudopractitioners of bizarre cults The public health index dropped sharply There were insufficient medical men even for their armed forces with the natural result of decreased military efficiency In this case the lower standards were inducted by the economic faults of the plan.

The English about 1911 as a purely political coup adopted a medical care plan associated with a group of collateral measures Here it was a capitation plan Beginning with income limits around $500, an annual fee of some $225 was paid physicians for full medical coverage of the members of the covered group Patients were assigned to panels of about 1,000 persons At succeeding times and after much conflict, the annual capitation fees were raised to $2 50 and then to $2 75, but also the income limits were increased so that in 1937 over 20 million of their 45 million were included, and, true to form, the current proposal is to include the entire population, to take over all hospitals and their endowments and to make government employees of all physicians who apply

Since there are a very limited number of people able or willing to pay for services outside the plan physicians must lose their individuality and govern their professional relations by prescribed rules, a condition completely destructive of the fundamental need of the use of the untrammeled judgment of the physician for the peculiar and special needs of the individual But for these past years the bulk of the English general practitioners have been compelled by economic need to belong to the government medical plan The plan simply gave the patient license to demand unlimited care domiciliary or office, substituting quantity for quality

There is a fundamental human inclination to demand everything they are entitled to whether really needed or not The result is again overcrowding, superficial examinations erroneous snap diagnosis unnecessary and incorrect treatment, lack of personal interest and from continually repeated habit a lowered standard of medical care which is frankly admitted by many And what is more ominous for the future, the press of over work robs the physician of his required study reading and thought, so that instead of improving efficiency by experience there is a constant deterioration of his ability and what is of basic importance a growing disinclination to be concerned with his patient s welfare

SENATOR MURRAY Doctor might I interrupt you there Those objections could they be urged also against voluntary systems as well as compulsory systems? DR. KENNEDY If the men had to carry the work imposed on them by the state methods they would be

SENATOR MURRAY If a person has insurance and can get service when he wants it, do you think he would be inclined to ask for it when he did not need it? DR KENNEDY There is always that inclination in anything that is made available

SENATOR MURRAY I do not know It may be an inclination to some people Anybody that holds insurance in the United States, and by that I mean life insurance, is entitled to go to the insurance company and get a medical examination I have talked to agents of insurance companies and I have policies in several big insurance companies and I have never applied for a free medical examination The agents told me that they could not understand why more people did not avail themselves of that opportunity Other people carry other policies of insurance that enable them to get examinations and do not avail themselves of that at all I do not understand how it could be said that merely because a person has a right to demand medical service they are going to ask for it regardless of whether they need it or not unless they are mentally affected or cranks on the subject DR KENNEDY So far as the English system and my observations are concerned they do ask for it.

SENATOR MURRAY They do? DR KENNEDY Whether we will in America or not I do not know

SENATOR MURRAY Well I quoted a little while ago a little statement from the British Medical Association in which they state that despite its defects this service has been an undoubted success ' And proposals are now pending over there for an extension of the service They are opposing of course some of the provisions of the extension, but they are in favor of an extension of the service DR KENNEDY I did not get that reaction from the statements made in the London *Times* of March 22 which I have here which carries a full copy of the proposed bill I should be glad to leave it with you if you care to read it, sir

SENATOR MURRAY If you care to leave it I would be glad to have it put in the record I might also ask to have some papers here, taken from THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION in which they discuss the status of the English doctor and wherein communications from British medical men are carried pointing out some of the misunderstandings in this country regarding the English system Doctor do you approve of handling this problem we have in this country by a voluntary system? DR. KENNEDY Yes now

Senator Murray Or do you think we could gradually work out of this situation without any system of any kind DR. KENNEDY I am in favor of a voluntary attempt to meet any

demand, and as such on last Sunday I was elected president of the Indiana Mutual Medical Care, Inc which is intended to offer insurance particularly to those of low income classes

SENATOR MURRAY Well the general objection that has been urged against the voluntary system is that it costs too much, takes a lot of conditions and requirements that prevent the people who most need insurance from being insured and it is not a complete coverage, and therefore it does not cure the problem we have in this country with reference to bringing adequate medical care to the American people That is one of the main objections to it DR KENNEDY We are attempting to find out the costs We nor any one else know exactly what they will be We hope by experimentation to find that out

SENATOR MURRAY Well I just merely called your attention to that Some study has been already made of a number of these societies like the Michigan Medical Service the Group Health Association here in the District of Columbia the Southern Permanente Foundation of Kaiser Corporation in California and the Ross-Loos Clinic in California and each of those societies fails to supply or furnish a complete coverage complete medical and hospital care and other care that the present bill purports to offer to the American people DR KENNEDY That is quite true The American Medical Association has recently approved the formation of an organization of these different plans by which they might set up basic standards and their operations will interchange information s to the costs and possible extensions of service It is a matter relatively in its infancy We will be unable to give definite findings on it until we have had time to work it out.

SENATOR MURRAY You think it might be possible then under a voluntary system to cover the country to such a degree that the cost of complete medical care and hospitalization would be brought within the reach of the American people? DR KENNEDY We hope to

SENATOR MURRAY Well, that is the great problem for us DR KENNEDY Yes sir

SENATOR MURRAY The question is whether or not it can be done by a voluntary system or a compulsory system and we are very glad to have your statement here, Doctor

SENATOR DONNELL Doctor, in England is there a British Medical Association and also an independent branch of physicians independent of the British Medical Association? DR KENNEDY I know of none.

SENATOR DONNELL What I have in mind is this I observe in this copy of the London *Times* that one mention is made here of the "Medical Correspondent"

First thoughts on the Health Bill by the *Lancet* the leading independent weekly medical journal can be summed up as a cautious acceptance of the proposals It points out that the regional scheme for hospitals is not integrated with either the general practitioner service or the local authority health services and it emphasized that the quality of this vast service will depend upon how it is administered.

Do you understand the *Lancet* is a publication of the British Medical Association? DR KENNEDY No it is an independent paper

SENATOR DONNELL Doctor I observe in this copy of the London *Times* that the article appearing in column 7 of page 8 starts this way

Doctors and the Bill Reaction of the B M A

That is the British Medical Association? DR KENNEDY Yes

SENATOR DONNELL (reading)

Views of the scheme

Preliminary objections to proposals in the new Health Bill were put forward yesterday at a press conference held at the British Medical Association s headquarters in London

Dr Charles Hill secretary of the association announced that 56 000 copies of the White Paper would be sent out to members as soon as possible and today a document setting out the considered views of the association would be issued with the full authority of the council Subsequently area meetings of doctors would be held and a special representative meeting of about 250 delegates would be held in London on May 1 and 2 to consider what action should be taken Doctors said Dr Hill would never strike but the profession might decide in the event of their feeling they could not cooperate in the scheme to offer their services to the public as individuals apart from any particular scheme.

Et cetera And then I observe farther down quoting again from Dr Hill

Dr Hill said the association s immediate reaction to the proposals was that they would lead sooner rather than later to doctors becoming whole time salaried servants of the state. That was a form of service they believed to be contrary to the public interest Meetings of members and nonmembers would be called in every part of the country during the first fortnight of April Delegates at the representative meeting while they would not have exactly a mandate would have instructions from their areas

The chairman in reply to questions said that forms for the fighting fund which the association proposed to launch would be sent out immediately They had no idea what would be the response but had already had encouraging signs even some patients asking if they could join it

And I observe somewhat similar language in the *Daily Telegraph* London issued under date of March 22 in which it states

We have no idea what the response will be said Dr Guy Dain chairman of the council yesterday We have had encouraging signs for the fighting fund we propose to launch Even some patients have asked if they could join it.

Et cetera

I would ask that these two articles which are not very long being in the neighborhood of half a column each should be set forth in the record.

SENATOR MURRAY All right It is a pretty heavy record but I believe it is important enough to have anything in the record that any Senator wishes

SENATOR DONNELL I think that is particularly important.

DR KENNEDY In the English case the standards were lowered by overworking primarily and also economic needs as a contributing cause As a logical sequence there appears justice in our claim that governmental plans have not in Europe secured the benefits of improved public health In America, on our own initiative handicapped as well by deficiencies of sanitation, of housing, of food and of recreation we have progressed and with our accustomed methods of proving things, we hope to bring to every American the utmost in good health We approve and solicit governmental aid and support in securing better living conditions and will wholeheartedly support health education wider sanitation better housing and all such measures as may aid in improving the public health and be outside the practice of medicine

SENATOR DONNELL Mr Chairman there is one further question I would like to ask the doctor

Doctor, have you observed what government records doctors are required to keep in Germany and Great Britain? DR KENNEDY I have seen them in Germany, but I have not a very clear recollection of the precise forms I have a rather clear recollection of some of the British forms because I have seen them filled out under rather an amusing system if it had not been so potentially dangerous

A record must be kept by the general practitioner working on the panel system of the case of every applicant and care, together with his illness They occur in books which are made up in columns and those records are inspected at fairly frequent intervals, and if they are not completely made up there are fines applied. I have seen the practitioner repeatedly having the names kept in proper sequence, then fill in from memory the diagnoses which were absurd and the statistics and reports from them were utterly erroneous

SENATOR DONNELL One concluding question Doctor Do you favor all in all S 1606 or are you opposed to it? DR KENNEDY As a whole, or in part?

SENATOR DONNELL As a whole. Well I will put it entirely with respect to the compulsory health insurance feature of it set forth in title II DR. KENNEDY That particular portion of the bill from my experience and beliefs I do object to There are parts of it referring to better sanitation and better medical education and to the establishment of public hospitals for those unable to care for themselves and where the communities cannot do it I am in sympathy with all those aims

SENATOR DONNELL But not the compulsory health insurance? DR. KENNEDY The compulsory health insurance, with its necessary inevitable regimentation of medicine I oppose

SENATOR MURRAY But you would have no objection to the establishment of a voluntary system if it could be made to apply so extensively in the country as to bring down the costs of medical care so that everybody could get access to it? DR. KENNEDY I am heartily in favor of it and actively engaged and interested in the creation of a single facility for doing that.

SENATOR MURRAY I mean to say, would you be interested in some plan the American Medical Association with its vast power and influence, might set up, one voluntary system to cover the whole country and give the people low insurance rates which would enable them to get everything we are seeking to get under this bill? DR. KENNEDY I think that the needs of this vast country are such that it would be difficult to

include within one scheme the needs of every section of the country, so I favor the state organizations, which may be fitted to their particular needs

SENATOR DONNELL Do you believe those state organizations could be so organized and operated on a voluntary prepayment basis as to solve these problems to the extent or better than the government compulsory insurance would solve them? DR. KENNEDY I do so think

SENATOR MURRAY You think they could bring down the cost of medical care to such a degree that it would make it possible for every one in the country to get adequate medical care at a very low cost? DR KENNEDY I believe so I hope so and am engaged in an effort to prove it

*(To be continued)*

# National Health Program

## PLATFORM ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

***One of the ten points in this platform will be published each week.***

**6 A program for medical care within the American system of individual initiative and freedom of enterprise includes the establishment of voluntary nonprofit prepayment plans for the costs of hospitalization (such as the Blue Cross plans) and voluntary nonprofit prepayment plans for medical care (such as those developed by many state and county medical societies) The principles of such insurance contracts should be acceptable to the Council on Medical Service of the American Medical Association and to the authoritative bodies of state medical associations The evolution of voluntary prepayment insurance against the costs of sickness admits also the utilization of private sickness insurance plans which comply with state regulatory statutes and meet the standards of the Council on Medical Service of the American Medical Association.**

# Washington Letter

*(From a Special Correspondent)*

May 6, 1946

### Support for Voluntary Health Program

Mrs Charles W Sewell of Oterbein, Ind administrative director of the Associated Women of the American Farm Bureau Federation, representing a million U S farm women and their families opposed the Wagner-Murray-Dingell compulsory health insurance bill at hearings of the Senate Education and Labor Committee last week To a question by Chairman Murray she declared that "the voluntary system can supply everything that is necessary in the way of a national health program We would like to be sure that we don't have black markets and things going wrong as in some of these other well intentioned programs I would like to see the voluntary plan tried first ' In her formal statement to the committee Mrs Sewell a convincing witness quoted the resolution passed by the 1945 convention of the American Farm Bureau Federation, which stated "We believe in the extension of the voluntary group prepayment service or some type of insurance plan that provides greater flexibility and would be more likely to succeed over wide areas than a regimented, uniform plan on a compulsory basis" Mrs Sewell endorsed in principle the proposals of the Hill Burton bill, which would 'establish commissions to study health needs and then set up hospitals" During the past weeks testimony Senator Forrest C. Donnell, Republican of Missouri, questioned Secretary of Labor Lewis B Schwellenbach as to whether the cabinet minister had written his own statement endorsing the Wagner-Murray-Dingell bill Mr Schwellenbach said he had received expert assistance from officials of the Children's Bureau and the Bureau of Labor Statistics whereupon Senator Donnell observed that 'this system of endorsing a bill through a statement one didn t prepare and knows nothing about" was 'highly improper" Senator Taft proposes a substitute national health program which would earmark $220,000,000 a year of federal aid to the states to establish a national health agency under the direction of "an outstanding physician" He has termed the Murray-Wagner-Dingell bill "socialistic" Veterans Administrator Bradley asked that the Veterans Administration retain "exclusive jurisdiction" over veterans hospitalization benefits in a national health plan

### Pleas of Nolo Contendere by Sixty-Three Artificial Limb Antitrust Trial Defendants

Sixty-three of the defendants in the artificial limb antitrust trial thirty-three companies and thirty individuals today had changed their pleas of not guilty to pleas of nolo contendere on charges of violating the Sherman Anti-Trust Act. The new plea means that the defendants do not admit but do not contest the charges Federal Judge Bower Broaddus of Oklahoma said that sentences would be passed within a month to six weeks Ten other defendants, seven firms and three individuals, also charged under an indictment returned last November with conspiracy to fix unreasonably high prices on artificial limbs informed the court that they were ready to go to trial and Judge Broaddus set May 9 as the trial date. Counsel for the Association of Artificial Limb Manufacturers of America one of the defendants, said that the group had adopted a resolution authorizing a plea of nolo contendere but that the actual plea would not be made until he gets written authorization

### Washington Hospitals Reported "Worst in Country"

The report of a four months survey conducted by the Metropolitan Health and Hospital Survey has found Washington D C hospital conditions 'the worst which would be encountered in any comparable area in the United States" The three man medical survey board consisted of Drs Claude W Munger, director, St. Luke's Hospital New York Ira V Hiscock professor of public health, Yale University School of Medicine, and C. E. A Winslow, professor emeritus in public health at Yale They declared that present conditions are advisedly described as heart breaking and disgraceful, and they added that the "first and foremost' reason for the intolerable situation is "the fact that nearly a million people inhabiting the District are disfranchised and have no share in their own self government. The system has the serious fault that the real governing bodies have no responsibility to the people who are governed" The report recommended an expenditure of $35 million to improve hospitals in the Capital

### Penicillin to Continue Under Allocation

Despite a 40 per cent increase in production during the first quarter of 1946, penicillin must continue under allocation, it was recently agreed by members of the Penicillin Industry Advisory Committee and the Civilian Production Administration The first quarter production totaled 4 667 33 billion units, equal to about two thirds of the entire 1945 production increasing from 1,306 30 billion units in January to 1 523 02 billion units in February and 1,838 01 billion units in March About 1½ trillion units of penicillin was allocated for May to domestic civilian and export use in parenteral (hypodermic) forms compared with about one half that amount in January

### Cancer Society Drive Extended Into May

Because its goal of $12,000,000 had not been reached by the scheduled April 30 closing the American Cancer Society s drive for $12,000,000 to study the control of cancer has been extended into May, according to Robert I Berger public relations director of the campaign Reports indicate that the halfway mark has been reached. President Truman had designated April as Cancer Control Month

### Medical Progress Reported to Senate Committee

Reports to the Senate Education and Labor committee indicate that malaria can be conquered in five years and tuberculosis, venereal disease and rheumatic fever substantially reduced The reports were based on questionnaires sent by the committee to one hundred and eighty medical, dental, nurses and hospital associations and societies

# Medical Legislation

## MEDICAL BILLS IN CONGRESS

### The Taft-Smith-Ball National Health Bill

Senator Taft Ohio, for himself and Senator Smith New Jersey, and Senator Ball Minnesota, has introduced S 2143 proposing the enactment of the "National Health Act of 1946' The bill was referred to the Senate Committee on Education and Labor It contains three titles Title I would create a National Health Agency to which would be referred designated health activities now carried on by the federal government Title II proposes amendments to the Public Health Service Act to authorize, for a five year period annual appropriations of $200,000 000 for allotments to the states to enable them to provide for general medical service for families and individuals with low income Additional appropriations are proposed to enable the states to provide dental health services for school children and families and individuals with low income Funds would be made available for general medical health research for neuropsychiatric research and for dental research Title III proposes certain amendments to existing laws that would be necessary if the bill is enacted This title also would authorize payroll deductions from the salaries of government employees to facilitate their participation in nonprofit medical, hospital and dental care plans

### Industrial Hygiene

The Senate Committee on Education and Labor has favorably reported S 1271 in an amended form proposing to enact an 'Industrial Safety Act" As originally introduced this bill seemed to provide for a reassignment of industrial health and sanitation programs from health departments to state labor departments As amended according to the report of the committee the bill "eliminates any possibility of such a situation occurring" The committee recognizes, however that if any state wishes to include in the program authorized by the bill features of an industrial health program it is free to do so under the language of the amended bill

### Miscellaneous

A bill introduced by Representative May, Kentucky H R 6305 would make permanent the provisions of the Act of July 11 1941, prohibiting prostitution in the vicinity of military and naval establishments

## STATE LEGISLATION

### Missouri

*Bills Enacted*—S 343 was approved April 25 It provides for the creation of a bipartisan board of six members to be known as the Missouri State Board of Medical Examiners to register and license persons for the practice of medicine, surgery and midwifery and provides for the transfer of records now in the possession of the department of medical licensure of the state board of health of Missouri to the Missouri State Board of Medical Examiners S 434 was approved April 25 Relating to the licensing of midwives, it provides for the transfer to the state board of medical examiners of certain powers heretofore vested in the state department of health S 349 was approved May 3 It provides for the creation and establishment of a department of public health and welfare

### New Jersey

*Bill Enacted*—S 278 has become chapter 259 of the Laws of 1946 It amends the law relating to medical service corporations by providing language purporting "to enable veterans with service connected disabilities to choose their own personal physician and to be treated in local hospitals that have been designated by the Veterans Administration' This quotation is from a statement attached to the bill as introduced

### Rhode Island

*Bill Enacted*—S 266 was approved April 24 It is a joint resolution to revivify the special Rhode Island public health laws survey commission and to appropriate funds to enable the commission to continue its work.

# Council on Medical Service and Public Relations

## PREPAID MEDICAL CARE NEWS

### Progress in Voluntary Prepayment Medical Care Plans

*Seal of Acceptance*

The Council on Medical Service and Public Relations is preparing an interpretation of the "Standards of Approval" as they will be used in granting the "Seal of Acceptance" The details will be made available to all plans interested in making application for approval

Suggestions as to the type of seal that might be used have been received from various sources and will be acted on by the executive committee of the Council this month The favorite to date is a shield outlined in blue, with a caduceus in the center

As a preliminary step for putting the "acceptance" program into operation the following plans have been tentatively approved as meeting the standards of the Council California Physicians Service, Iowa Medical Service, Michigan Medical Service Ohio Medical Indemnity, Oregon Physicians Service, Medical Service Association of Pennsylvania, Medical-Surgical Plan of New Jersey, Nebraska Surgical Plan and Surgical Care, Inc, Kansas City, Mo

Their applications for approval will be formally presented for acceptance at the May meeting of the Council Additional applications will be acted on at the June 28 meeting of the Council

*New Brochure Ready Soon*

An up to date brochure on prepayment plans will be ready soon for distribution It will present factual data on plans An effort has been made to compile the data in such a way as to permit comparison between plans The material will be arranged under the headings of Organization, Governing Bodies, Medical Society Approval, Area Covered, Type of Contract, Income Limits, Enrolment, Benefits, Exclusions Waiting Periods Monthly Premiums, Blue Cross Relationship Change of Employment, Insignia Used and Miscellaneous Provisions

*A Complete File on Plans*

The Council has received almost 100 per cent cooperation from plan executives in setting up a central headquarters for prepayment plan information The files now contain copies of the by-laws contracts agreements, forms and promotional material of nearly every plan In addition statistical data on enrolment, income, payment of claims and administration expense has been compiled and will continue to be gathered at regular intervals

Thirty one states now have voluntary prepayment medical care plans These are Alabama, California, Colorado, Connecticut, Delaware, Florida, Indiana, Iowa, Kansas, Louisiana Massachusetts, Michigan, Missouri, Montana, Nebraska, New Jersey, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Ohio Oklahoma, Oregon, Pennsylvania Texas, Utah, Virginia, Washington, West Virginia and Wisconsin

Seventy-three plans are included in the thirty one states named However, for tabulation purposes the twenty Washington state bureaus and the five Oregon plans might better be set forth as two statewide plans, thus reducing the quoted total to fifty-one plans Twenty three states have only one plan in most cases statewide Four states have two plans each, a statewide plus a local plan, or two plans dividing the state. Three states have three plans One state has five plans and one state has six plans Thirty-four of the plans operate in coordination with Blue Cross Plans

Enrolment in medical society and Blue Cross sponsored or approved plans, as reported on Dec 31, 1945, totaled 2,800 000 This is not an imposing figure but does represent an excellent increase, 114 per cent, over the enrolment of one year ago There were eight plans with a reported increase of over 100 per cent during the year These are Colorado Medical Service,

Dallas County (Texas) Medical Plan Massachusetts Medical Service, Surgical Care, Inc. (Kansas City), Western New York Medical Plan, Inc., Medical Service Association of Pennsylvania, New Hampshire Physicians' Service and Surgical Care (Milwaukee)

The seven plans with a reported enrolment of over 100,000 are, first, Michigan Medical Service with 858,235, second the Washington State Bureaus with 250,000, third Massachusetts Medical Service with 206 729, and, fourth, California Physicians' Service with 202 000 Other plans over the 100,000 mark are United Medical Service (New York), Hospital Savings Association (North Carolina) and Hospital Care Association Inc. (North Carolina)

*Ten Medical Plans Launched in 1945*

The ten medical plans launched in 1945 are the Alabama Hospital Service Association (by rider), Iowa Medical Service, Hospital Service of New Orleans (by rider), Missouri Medical Service (St Louis), Nebraska Surgical Plan, Central New York Medical Plan, Inc (Syracuse) Medical Mutual of Cleveland, Oklahoma Physicians Service, Group Medical & Surgical Service (Dallas, Texas) and Surgical Care, Inc (Roanoke, Va.)

*Ten Plans Set Up So Far in 1946*

The ten plans that have been set up thus far in 1946 are Connecticut Medical Service Florida Medical Service Corp, Mutual Medical Service, Inc, of Indiana, Kansas Physicians' Service, Montana Physicians Service, New Mexico Physicians Service, Northeastern New York Medical Service, Inc, Albany, Ohio Medical Indemnity, Medical Service Bureau of the Utah Medical Association, Inc., and the Wisconsin State Association Plan.

In eight additional states and the District of Columbia plans are in process of formation Arizona, Idaho, Illinois, Maine, Maryland, Minnesota, Rhode Island and Wyoming

*Characteristics*

In speaking of prepayment medical care plans there are two characteristics that separate them from prepayment group practice plans, consumer sponsored plans, private insurance programs and other types of prepayment organizations These are *voluntary free choice of physician* and *control of all medical features by the medical profession* Most of the prepayment plans have been sponsored by county or state medical societies and are operated as nonprofit organizations usually under special enabling legislation

The plans vary widely in some ways and yet, surprisingly enough, are quite similar in their basic characteristics They vary widely in the areas covered There are county plans city plans, area plans and state plans They vary considerably in the benefits provided to subscribers Mostly they provide only in-hospital surgical and obstetric coverage although benefits for x-ray and anesthesia are frequently included A small number of plans include all services medical and surgical, in or out of the hospital A fairly recent benefit which is increasing in popularity is in-hospital medical care. This benefit does not start until after several days have elapsed and continues at a per diem rate for a period of from one to two and a half months

The plans are similar in that all have a free choice of physician and that all are voluntary and with few exceptions include the entire family The principle of allowing subscribers to continue the contract after leaving the group has been generally accepted In such instances the premiums are paid at less frequent intervals, i e. quarterly or semiannually Waiting periods have become fairly well standardized and include from nine to twelve months for maternity cases and one year for tonsillectomies A preexisting condition clause is found in some contracts

The most popular type of plan is a combination service-indemnity plan in which subscribers earning less than a given amount may not be charged an additional fee by the doctors. When the subscribers earnings are more than the stated income limit, the doctor is free to make an additional charge.

A year ago the biggest problem in the prepayment medical care program was stimulating the state and county medical societies to organize specific plans With thirty-one states now having voluntary prepayment medical care plans and nine states with plans in the process of formation, this problem is well on the way to solution The big problem now is to devise ways and means for increasing the enrolment of existing plans While the increase in the enrolment during the past year was over 100 per cent, this still left the total enrolment far short of an imposing figure The emphasis during the remainder of 1946 should be placed on the education of the public to the advantages of enrolling themselves and their families in voluntary prepayment medical care plans

## Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St Chicago 10 Secretary

American Academy of Tuberculosis Physicians San Francisco June 30 Dr Oscar S Levin P O Box 7011 Denver 6 Colo Secretary

American Association for the Study of Goiter Chicago June 20-23 Dr Thomas C Davison 478 Peachtree St N E. Atlanta 3 Ga Secretary

American Association for the Surgery of Trauma San Antonio Texas June 26 28 Dr Gordon M Morrison 520 Commonwealth Ave Boston Secretary

American Association for Thoracic Surgery Detroit May 29 1 Dr Richard H Meade Jr Kennedy General Hospital Memphis 15 Tenn Secretary

American Association of Genito Urinary Surgeons Stockbridge Mass June 20-22 Dr Charles C Higgins 2020 E 93d St Cleveland 6 Secretary

American Association of Plastic Surgeons Toronto Canada June 3-4 Dr Frederick A Figi 102 Second Ave S W Rochester Minn Secretary

American Association of the History of Medicine Atlantic City May 26-27 Mr W B McDaniel II 19 S 22d St Philadelphia 3 Secretary

American Broncho-Esophagological Association Chicago May 31 Dr Paul H Holinger 700 N Michigan Ave Chicago 11 Secretary

American College of Allergists San Francisco June 28 30 Dr Fred W Wittich 401 LaSalle Medical Bldg Minneapolis 2 Secretary

American College of Chest Physicians San Francisco June 27 30 Mr Murray Kornfeld 500 N Dearborn St. Chicago 10 Executive Secretary

American College of Radiology San Francisco June 29 Mr. Mac F Cahal 20 N Wacker Drive Chicago 6 Secretary

American Dermatological Association Hot Springs Va, June 10-14 Dr Harry R Foerster 208 E. Wisconsin Ave Milwaukee, Secretary

American Federation for Clinical Research Atlantic City, May 28 Dr Richard H Lyons University Hospital Ann Arbor Mich Secretary

American Gastro-Enterological Association Atlantic City May 24 25 Dr J Arnold Bargen 102 Second Ave S W Rochester Minn Secretary

American Laryngological Association Chicago May 29 30 Dr Arthur W Proetz 3720 Washington Blvd. St Louis 8 Secretary

American Laryngological Rhinological and Otological Society Chicago May 27 28 Dr C Stewart Nash 277 Alexander St Rochester 7 New York Secretary

American Medical Women's Association San Francisco June 29 30 Dr Beulah Cushman 25 E Washington St Chicago Secretary

American Neurological Association San Francisco June 26-28 Dr Henry Alsop Riley 117 E 72d St New York 21 Secretary

American Ophthalmological Society San Francisco June 26-28 Dr Walter S Atkinson 129 Clinton St Watertown N Y Secretary

American Orthopedic Association Hot Springs Va June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2 Secretary

American Otological Society, Chicago May 31 June 1 Dr Gordon D Hoople 713 E Genesee St Syracuse N Y Secretary

American Proctologic Society San Francisco June 30 Dr Harry E Bacon 2031 Locust St Philadelphia 3 Secretary

American Psychiatric Association Chicago May 27 30 Dr Winfred Overholser St Elizabeths Hospital Washington 20 D C Secretary

American Radium Society San Francisco June 28 29 Dr Edward H Skinner 1103 Grand Ave Kansas City 6 Mo Secretary

American Rheumatism Association New York May 24 25 Dr Richard H Freyberg 321 E 42d St New York 17 Acting Secretary

American Society for Clinical Investigation, Atlantic City May 27 Dr Eugene A Stead Jr Grady Hospital Atlanta 3 Ga Secretary

American Society of Clinical Pathologists San Francisco June 27 30 Dr A S Giordano 531 N Main St South Bend Ind Secretary

Association for the Study of Internal Secretions San Francisco June 28 29 Dr Henry H Turner 1200 N Walter St. Oklahoma City Secretary

Association of American Physicians Atlantic City May 28 29 Dr Joseph T Wearn 2065 Adelbert Road Cleveland 6 Secretary

Idaho State Medical Association Boise June 17 20 Dr F B Jeppesen 105 N 8th St Boise Secretary

Maine Medical Association Poland Spring June 23 25 Dr Frederick R Carter 142 High Street Portland 3 Secretary

Massachusetts Medical Society Boston May 21 23 Dr Michael A. Tighe 8 Fenway Boston Secretary

Minnesota State Medical Association St Paul May 20-22 Dr B B Souster Lowry Medical Arts Bldg St Paul 2 Secretary

National Tuberculosis Association Buffalo N Y June 11 13 Dr Charles J Hatfield 1790 Broadway New York 19 Secretary

New Jersey, Medical Society of Atlantic City May 21 23 Dr Alfred Stahl 55 Lincoln Park Newark, Secretary

New Mexico Medical Society Santa Fe, June 6-8 Dr L B Cohenour, 221 W Central Ave Albuquerque, Secretary

North Dakota State Medical Association, Bismarck May 26-28 Dr L W Larson, 221 Fifth St Bismarck Secretary

Society of American Bacteriologists Detroit, May 21 24 Dr Leland W Parr 1335 H St. N W Washington 5 D C Secretary

South Dakota State Medical Association Aberdeen June 1-4 Dr Roland G Mayer 225½ S. Main St, Aberdeen Secretary

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION AND PUBLIC HEALTH)

## CALIFORNIA

**New Tuberculosis Head**—Dr Robert J B Anderson, formerly of San Antonio, Texas on loan from the U S Public Health Service, has been appointed chief of the bureau of tuberculosis, California State Department of Health, with headquarters in San Francisco Dr Anderson graduated at the University of Minnesota Medical School, Minneapolis in 1940

**Music During Physical Examination**—According to the *Bulletin* of the San Francisco County Medical Society, the E. T Mape Music Company, exclusive distributors of the "World Music Service" in San Francisco, announce they are expanding their facilities to provide more medical offices with their service To date, two large medical buildings in the city have been wired for the transcribed music. Most physicians find that the music helps relax their patients during medical examinations, Mape officials reported

**Millions for Medical Education**—Legislation has been enacted in California appropriating $7,500,000 to establish a new state university medical school in Los Angeles It is proposed that the new school will be in conjunction with the University of California at Los Angeles The University of Southern California Medical School, Los Angeles, and the College of Medical Evangelists, Loma Linda, are now carrying on undergraduate work The Alumni Association of the University of California and the Los Angeles County Medical Association conducted a dinner March 21 to celebrate the legislative action which assures a new medical school for the city Governor Earle Warren and Assemblyman Davis author of the bill for the medical school were guests at the dinner In San Francisco an expansion program will be carried on at the University of California Medical School under a recent $4,000 000 appropriation The project would include two new large buildings a medical science unit and a modern teaching patient hospital With these additions it is planned to use the present hospital building exclusively for private patients In addition to the recent $4,000,000 appropriation the university will receive about $2,000 000 that had been earmarked in earlier legislative sessions for additional construction and facilities to meet the needs of the medical library and the department of dentistry and pharmacy

## COLORADO

**Ward Darley Dean of Colorado**—Dr Ward Darley Jr Denver, is now dean at the University of Colorado School of Medicine, Denver, and Mr Robert C. Kniffen is superintendent of hospitals Both positions were held by the late Dr Maurice H Rees, who joined the Colorado faculty in 1921 as professor of physiology and pharmacology, becoming dean in 1925 Dr Rees died May 25 1945

**The Jackson Memorial Lecture**—Dr Lawrence T Post professor and head of the department of ophthalmology, Washington University School of Medicine, St Louis delivered the Dr Edward Jackson Memorial Lecture April 19 at the University of Colorado School of Medicine Denver, under the auspices of the Medical Society of the City and County of Denver His subject was 'Changing Eyes in a Changing World

**Rocky Mountain Regional Conference**—On June 5 the first Rocky Mountain Regional Conference on Medical Service and Public Relations will be held at the Shirley-Savoy Hotel, Denver, under the auspices of the Council on Medical Service and Public Relations American Medical Association. Among the speakers will be

Dr James R McVay, Kansas City The Purposes of This Meeting.
Dr George F Lull Chicago Problems of the Returning Medical Officer
J W. Holloway Jr., Chicago, The National Legislative Picture Today
Dr Franklin S Crockett, Lafayette, Ind., How to Keep 'Em Healthy Down on the Farm.
Dr Bradford Murphey Denver What We Expect From the American Medical Association and This Council
Dr Alfred W Adson Rochester Minn. The Council's Big Job
Jay Ketchum Detroit The Progress of Prepayment Plans
Dr Joseph S Lawrence Washington, D C., Results of Senate Committee Hearings on the Wagner-Murray Dingell Bill.
Thomas A Hendricks, Chicago, Public Relations Begin at Home.

There will be a number of round table discussions covering various subjects Participating in the conference will be officers and committeemen of the state medical associations of Colorado Kansas, Montana, Nebraska New Mexico, North Dakota, South Dakota, Utah and Wyoming

## CONNECTICUT

**Personal**—Dr Benjamin Simon has returned from military service to his position as clinical director of the Connecticut State Hospital, Middletown. Dr Harry S Whiting, who has been acting clinical director has been named director of the outpatient service and will be in charge of clinics to be set up in various towns and cities in the district served by the hospital, according to the *Connecticut State Medical Journal*

**Dr Lamoureux Succeeds Millard Knowlton**—Dr Eugene E Lamoureux, Wethersfield, has been appointed director of the bureau of preventable diseases of the Connecticut State Department of Health to succeed Dr Millard Knowlton, Hartford, who is resigning after twenty three years' service Dr Lamoureux graduated at Tufts College Medical School, Boston, in 1935

**Special Committee to Survey Veterans Home and Hospital**—*Governor Raymond E Baldwin has appointed a special* committee to make a survey of the medical service and hospital operation at the Connecticut Veterans Home and Hospital, Rocky Hill Serving on the committee are Drs James C Fox Jr, Hartford, Gerald Klatskin, New Haven, William E. Hall, Meriden and Edward J Ottenheimer, Willimantic Dr Creighton Barker New Haven executive secretary of the Connecticut State Medical Society is chairman of the survey committee Construction is now under way at the Veterans Home to expand the hospital facilities to more than 600 beds

## ILLINOIS

**Hepatitis in Illinois**—The Illinois State Department of Public Health announces that 19 cases of hepatitis had been reported in the state up to April 12, 5 in January, 6 in February and 8 in March

**Community Hospital Foundation**—Harvard Community Hospital Foundation Inc, 36 North Ayer Street, Harvard has been granted a charter by Secretary of State Edward J Barrett 'to promote the public health and welfare of the citizens of Harvard and the surrounding community by and through the construction, maintenance and operation of a public or community hospital"

**Physicians Honored**—Dr George R Hays, Marissa, was guest of honor at a dinner, March 18 given by the Marissa Lions Club on behalf of the community in recognition of the physician's recent completion of fifty years of practice. He was presented with a wrist watch Dr Hays, with Dr Fred Rose, Millstadt was admitted into the Fifty Year Club of the Illinois State Medical Society, each receiving gold pins signifying the honor

**New Directors for Cancer and Industrial Hygiene**—Dr G Howard Gowen who was recently released from service in the army and who formerly served as health officer of Champaign-Urbana, has been appointed chief of the division of cancer control of the Illinois Department of Public Health, effective March 1 He succeeds Dr Raymond V Brokaw Springfield, who resigned Dr John F Shronts on terminal leave from service in the navy, has been appointed chief of the division of industrial hygiene of the state department of health Prior to entering the navy Dr Shronts was district health superintendent with headquarters in Woodstock.

**Advice Sought on Fund Distribution**—*The trustees of* the Swanberg Medical Foundation of the Adams County Medical Society Quincy, would like counsel or suggestions concerning the distribution of a trust fund The foundation was established in 1943 (THE JOURNAL, Feb 5 1944, p 376) by Dr Harold Swanberg, Quincy, and the county medical society as an irrevocable trust. The income of the fund is now more than $600 annually The principal must be held intact, and not to exceed 80 per cent of the income may be expended annually, so the foundation will naturally grow The trustees are empowered to use the funds "to sponsor or undertake one or more things of a charitable, scientific literary or educational nature which will bring public and professional honor and respect to the medical profession.' The board of trustees of the foundation has not determined when the foundation will assume activities or what these activities will be Since they know of no other foundation that has been organized as this one, the trustees

have had no experience to guide them and will therefore be grateful for any suggestions Communications and suggestions should be sent to Dr Ralph McReynolds president, Swanberg Medical Foundation 1101 Main Street, Quincy

### Chicago

**New Chairman of Anatomy**—After July 1 Dr Peter P H De Bruyn, associate professor of anatomy, University of Chicago School of Medicine will be chairman of the department He succeeds Dr William Bloom who is resigning the chairmanship to become a member of the recently established Institute of Radiobiology and Biophysics at the university (THE JOURNAL, Sept. 29 1945, p 370) but who will continue as professor of anatomy

**Course in Electroencephalography**—The department of psychiatry University of Illinois College of Medicine, announces a course in electroencephalography by Dr Frederic A and Erna L Gibbs, June 3 29 Instruction will cover the fundamentals of electrophysiology and electroencephalographic instrumentation The technic of recording electroencephalograms will be taught to each student individually and practical training afforded by first hand experience with the electroencephalographic examination of patients A standardized series of 125 sample strips of electroencephalograms will be used for training in classification and localization Additional information may be obtained from the Department of Psychiatry Room 12 University of Illinois 912 South Wood Street, Chicago 12

**Preston Harrison Receives Ricketts Prize**—Dr Preston E Harrison assistant professor of bacteriology Baylor University College of Medicine Houston has been awarded the Howard Taylor Ricketts Prize for outstanding research in the chemotherapy of infectious disease in the department of bacteriology and parasitology University of Chicago The award which was presented May 3 the thirty-sixth anniversary of the death of Dr Ricketts who died of typhus while working on the disease in Mexico was established by his widow Dr Harrison was chosen for his study of the effect of chemotherapy agents on the development of the immunity to experimental pneumococcic infection and the relation of the immune mechanisms to bacterial chemotherapy Dr Harrison graduated at Baylor in 1941 and received his Ph D at the University of Chicago this year

## MASSACHUSETTS

**Malignant Tumors of Infancy and Childhood—Organization of a New Consultation Service**—A consultation service has been established to provide assistance in the diagnosis and treatment of tumors of infancy and childhood. This is a further step in the organization of a Children s Cancer Center which is a unit of the new Medical Center for Children in Boston. This is not a tumor registry It is designed rather to give, without charge, immediate diagnostic assistance and advice concerning therapy and prognosis to any doctor who will send the necessary clinical data microscopic sections or x-rays Replies will be given by air mail or when necessary by telephone or telegraph. This project which is supported in part by a grant-in aid from the National Advisory Cancer Council, will be paralleled by a research program concerning the biology of tumors of early life, with a consideration also of the clinical pathologic and epidemiologic aspects of the problem The consultation service will be rendered by a group of three pathologists Drs Simeon B Wolbach Charles F Branch and Sidney Farber and one roentgenologist, Dr Edward D B Neuhauser all of Boston with the cooperation when indicated of the entire staff of the Children s Hospital through the chiefs of the clinical services Doctors representing all the clinical and laboratory specialties concerned with the infant or child will be available for consultation Communications should be sent to Dr Sidney Farber, the Children s Hospital 300 Longwood Avenue Boston 15 beginning August 1

## MINNESOTA

**Resolutions on Medical Care**—The Stearns Benton County Medical Society at its regular meeting April 16 adopted the following resolutions

*Resolved* That we the members of the Stearns-Benton County Medical Society are opposed to the federal plan of medical care as advocated by the Murray Wagner Dingell bill

That we are opposed to the present form of the E M I C program requiring the employment of specialists for almost all types of work.

That we are in full accord with the principle of free choice of physician

That the E M I C requirement constitutes a violation of the principle of the free choice of physician it being our contention that the matter of the necessity of employment of a specialist is the sole right of the patient and his physician and must not be dictated by any program

That the specialist group who comprise the minority of medical practitioners shall not dictate through government or any other agency the form or privilege of practice by the majority who are general practitioners

That we express our approval of the effort being made to establish prepaid medical and surgical service in Minnesota and throughout the United States by the American Medical Association

That we present these resolutions as an expression of the larger majority of physicians throughout the United States who are not specialists but general practitioners

That each county society in the state and the state medical association be circularized with these resolutions and that our delegates be instructed to present them at the state meeting in May for action by the state society

## NEW YORK

**Society Observes One Hundred and Fortieth Anniversary**—The Richmond County Medical Society recently held a special program to commemorate its 140th anniversary The society was created by an act of the state legislature on April 4 1806 The first meeting was held July 1 but no business was transacted in the absence of a quorum The first officers were chosen at the second meeting July 10 but July 17 was later designated as the official anniversary The names of the first officers were Benjamin Parker president Richard Henderson vice president I B Halsey secretary, and Isaac Stuart treasurer

**Cancer Prevention and Case Finding**—A group of state and local authorities sponsored a conference on cancer prevention and case finding at the DeWitt Clinton Hotel Albany April 25-26 Among the speakers were

Dr Morton L Levin Albany Cancer Incidence as an Index to Prevention and Case Finding
Dr Elise D S L Esperance Results in Cancer Prevention Clinics for Women
Dr Catharine Macfarlane Philadelphia Diagnostic Problems in Cancer Prevention Clinics for Women
Dr Gordon P McNeer The Earliest Symptoms and Signs of Cancer
Dr Fred W Stewart Cancer Prevention Present Status
Dr Harold D Harvey Early Diagnosis of Gastric Cancer
Dr Clyde L. Randall Buffalo Prevention of Endometrial and Ovarian Cancer
Dr Joseph A Hepp Pittsburgh A Method for Prevention of Cancer of the Cervix.
Dr Maurice Fremont Smith Boston The Vaginal Smear in the Early Diagnosis of Cancer of the Uterus
Drs Frank W Foote Jr and George V McClure Valhalla The Relative Accuracy of Cervix and Vaginal Cell Smears
Drs George N Papanicolaou and Siegfried Tannhauser Buffalo Other Types of Cell Smear in Diagnosis of Cancer
Dr Frederick S Wetherell Syracuse The Relation Between Tumor Clinics and Prevention Clinics
Mildred W S Schram Ph D Philadelphia Organization and Management of Health Maintenance Cancer Prevention Clinics.

### New York City

**Bela Schick Lecture**—Dr Alexander A Weech B K. Rachford professor of pediatrics University of Cincinnati College of Medicine delivered the fourth Bela Schick Lecture at Mount Sinai Hospital, May 6 on The Genesis of Physiologic Hyperbilirubinemia"

**Personal**—Dr Herbert S Gasser winner of the 1944 Nobel Prize in medicine and physiology and since 1935 head of the Rockefeller Institute in New York has been made a member of the Swedish Royal Academy of Science——Dr Anthony Bassler has been selected as vice president of the International Gastroenterologic Society and president of the permanent international committee of the organization The next convention will probably be held in England some time when conditions of travel and accommodations are suitable

**Robert Trubek Fellowship in Rheumatic Disorders**—The New York University College of Medicine and the fourth medical division of Bellevue Hospital announce the Robert Trubek Fellowship in Rheumatic Disorders a one year nonresident appointment open to graduate physicians with at least two years of previous training in internal medicine or its equivalent The appointment is renewable for an additional year by mutual agreement. The fellowship will combine supervised research and special clinical training in the rheumatic disorders under the direction of Dr Otto Steinbrocker The stipend is $2 500 a year (Candidates contemplating a two year tenure are preferred) Applicants should send their educational qualifications accompanied by two letters of recommendation from senior physicians under whom work was done to the Robert Trubek Fellowship Committee Fourth Medical Division Bellevue Hospital 26th Street and First Avenue New York 16.

**Name Changed for Malignant Diseases Institute**—On April 1 the name of the State Institute for the Study of Malignant Diseases Buffalo was officially changed to the Roswell Park Memorial Institute. Dr Louis C. Kress who has been director of the institute since Sept. 1 1945 will continue in charge of the project. He was formerly director of the state division of cancer control The change in name was advocated in senate bill 341 One of the reasons for the change is that it has been found that many persons are deterred from seeking treatment at the institute because of the word malignant in its title, and physicians have been reluctant to send persons

there because they did not wish to frighten their patients when they suspected a diagnosis of malignant disease but were uncertain Another reason is the wish to honor Dr Roswell Park who while professor of surgery at the University of Buffalo School of Medicine, was influential in obtaining an appropriation from the state to establish what was known as the New York State Pathological Laboratory of the University of Buffalo in 1898 becoming its first director (THE JOURNAL, March 16, p 726)

## GENERAL

**Louis Neff Goes to Texas**—Mr J Louis Neff has resigned as executive director of the American Cancer Society New York to become executive director of the newly organized Texas division of the society with headquarters in Houston

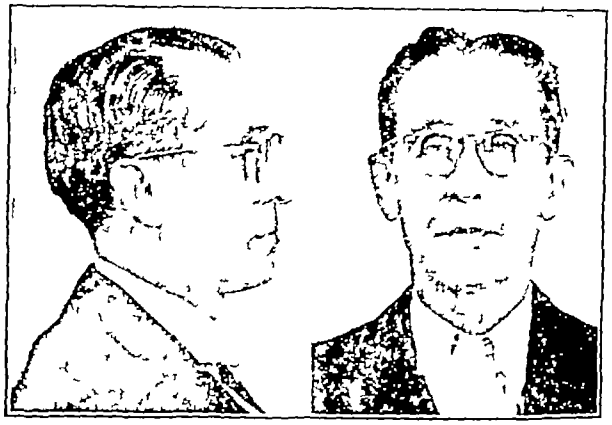
**American Gastroenterological Association**—The forty-seventh meeting of the American Gastroenterological Association will be held at the Hotel Claridge, Atlantic City N J May 24 under the presidency of Dr Abraham H Aaron Buffalo The program has been divided into discussions on experiences in military service, hepatitis and related conditions pancreatic disease peptic ulcer with particular reference to vagotomy streptomycin in the intestinal tract and intestinal absorption on diets deficient in certain B vitamins and during recovery from such diets

**Copies of Brochure on Hospital and Medical Care Exhausted**—The North Carolina Medical Care Commission announces that its brochure 'To All the People of North Carolina A Proposed Statewide Program of Hospital and Medical Care' is no longer available The publication was based on the studies of the North Carolina Hospital and Medical Care Commission, a temporary body appointed by former Governor Broughton It is now out of print and no copies are available for distribution. The many requests to the commission for copies of the booklet stemmed from a Current Comment in THE JOURNAL, February 23 page 498

**Courtney Smith Named Medical Director of Red Cross**—Dr Courtney M Smith, acting medical director of the American Red Cross, Washington headquarters has been appointed administrator, medical services (national medical director) to succeed Dr G Foard McGinnes who was recently appointed vice chairman for health services a newly created position (THE JOURNAL March 23, p 806) Dr Smith has served with the Red Cross since 1944 as deputy medical director and director of disaster medical service He graduated at the University of Oregon Medical School, Portland in 1933 and later received the degree of doctor of public health at Yale University His subsequent activities include service as health officer for the Territorial Department of Health of Alaska with headquarters in Juneau, and from April 1942 until his Red Cross appointment Dr Smith was a medical officer in the Office of Civilian Defense In May 1945 he was given leave from the Red Cross to represent the U S Public Health Service with the Army's Strategic Bombing Survey and did a tour month tour of duty in Germany

**Poliomyelitis Preparedness Program**—The 1946 poliomyelitis preparedness program of the National Foundation for Infantile Paralysis revolves around a series of conferences with health officials scheduled for fifteen states throughout the nation The conferences are being called in cooperation with state health commissioners to determine and evaluate health services and plans of action before onset of the epidemic season late in June Participating will be state and county health officials, directors of crippled children s services, physicians nurses hospital administrators, epidemiologists and representatives of the National Foundation and its chapters The meetings which opened in Florida April 27 will be held in Ohio June 13 14, in Colorado and Wyoming June 17-18 and in Alabama Louisiana, Illinois Mississippi, Pennsylvania, Georgia, Missouri, Arkansas Montana, South Carolina and Oregon. In other phases of the poliomyelitis preparedness program the National Foundation has established four epidemic aid units for duty wherever infantile paralysis strikes and is seeking to double enrolment in its poliomyelitis emergency volunteers, an organization of women trained to assist physicians, nurses and physical therapists in caring for victims of the disease The foundation has also completed a mobile emergency poliomyelitis unit capable of reaching in twelve hours or less any epidemic area within 600 miles of its base In the field of long term preparedness the foundation has allocated $800,000 for establishment of seven more professional level training and treatment centers similar to the poliomyelitis unit set up at Knickerbocker Hospital in New York City last fall and has appropriated $1,516 530 for fellowships, scholarships and training program development in physical therapy Another $1,527,700 has been granted thus far this year for research and education in poliomyelitis and related fields, bringing to $11,071,962.34 the total appropriated in this sphere since the foundation was created in 1938, in addition to research the foundation spent $1,602,456 last year to supplement $5,000,000 expended by its nearly three thousand chapters for actual care and treatment of infantile paralysis patients Funds are provided by the annual March of Dimes

**Ex-Convict Wanted for Practicing Medicine Without a License**—In the hope that he may be apprehended the St. Louis Police Department has issued a warning concerning one John Waite, alias John V Waite, alias Dr Waite, alias Tommaso Armonia, alias Paul Pareant, alias Raoul Armonia alias Jerome Wayte, alias R Jacques Waite was arrested on a charge of practicing medicine without a license. After a warrant had been issued on the same charge Waite was released on bond Feb 10 1944 which he later forfeited Investigations prior and subsequent to Waite s arrest indicate that he is the same person who was arrested in 1916 in Connecticut for obtaining money by false pretense and indecent assault, in New York for illegal transporting of automobiles, in New Jersey and Maryland for false pretense and in Pennsylvania for conspiracy A number of indictments are charged to him as well as sentences in penal institutions According to the description his age is 60, height 5 feet 7 inches, weight 126 pounds He has a slender build blue eyes, medium chestnut hair and swarthy complexion. In St Louis Waite was reported to be apparently the manager of the Civic Medical Center on whose staff there appear to be



Wanted—illegal practitioner

legally licensed physicians He had set himself up however as a 'doctor and had prescribed drugs and had given injections on occasion Evidence discloses numerous dishonest activities in this person s life Some information indicates that Waite under the alias Tommaso Armonia, was operating under the credentials of a deceased physician. Any one coming across a person who fills the description and general makeup of this so-called impostor should communicate with local police authorities who in turn are requested to notify the St Louis Department of Police.

**Association of Industrial Physicians and Surgeons**—A meeting of the Western Association of Industrial Physicians and Surgeons will be held June 30 in the San Francisco Health Auditorium, San Francisco under the presidency of Dr Richard O Schofield Sacramento, Calif Among the speakers will be

Dr Walter R MacLaren Burbank Calif and Albert L Chaney Ph D Los Angeles Evaluation of the Factors Tending Toward Permanent Occupational Deafness
Dr John W C Hannon, Washington Pa The Utilization of Aluminum in the Prevention and Treatment of Silicosis
Dr Waldemar C J Dreessen Bethesda Md Laboratory Procedures to Which the Industrial Physician Should Resort for a Better Diagnosis
Dr Joseph H Boyes Los Angeles The Immediate versus the Delayed Repair of the Digital Tendons
Dr Douglas D Toffelmier Oakland, Calif Reconstruction of the Amputated Stump for Weight Bearing
Dr Oscar A Sander Milwaukee The Pneumonoconioses—Their Differential Diagnosis and Prognosis
Dr Hedwig S Kuhn, Hammond Ind Right Eyes for the Job

A symposium on the Worker and His Job, with Bert Hanman Berkeley, Calif., as chairman will be presented by the following principal speakers Dr Henry H Kessler, Newark, N J, Edwin E Ghiselli Ph.D, Berkeley Dr Karl M Bowman San Francisco, and W F Durant, D Eng., San Francisco A group of experts will discuss the following aspects in

the symposium personnel, veteran rehabilitation, civilian rehabilitation, government employment, industrial safety workmen's compensation, public health education insurance, industrial hygiene, labor and management

**Bulletin of Friends of Medical Research**—Recently publication was started of a *Bulletin* of Friends of Medical Research, a newly formed national organization to oppose groups that are against animal experimentation The *Bulletin* is devoted to comments on legislation concerning this type of research as well as discussions of various lay and medical activities carried on in this field The National Society for Medical Research has been organized under the auspices of the Association of American Medical Colleges Its offices are at 303 East Chicago Avenue Chicago 11 and Anton J Carlson, Ph D, and Dr Andrew C Ivy, both of Chicago are president and secretary-treasurer respectively This group will be an educational organization to determine policies to analyze and select the basic scientific material and to organize local groups of physicians and scientists for educational campaigns where animal experimentation legislation is proposed. Affiliated with it will be the national organization of Friends of Medical Research, whose function will be to obtain the cooperation of lay groups on the state level and to organize and conduct legislative campaigns Offices of the Friends of Medical Research are located at 292 Madison Avenue, New York 17

**Science Writers Honored**—The first presentation of the George A Westinghouse Science Writing Awards took place in St Louis during the meeting of the American Association for the Advancement of Science March 27-31 The science writers receiving the awards which consisted of medals and citations include Watson Davis Frank Thone, Jane Stafford and Marjorie Van de Water, all of Science Service, Howard W Blakeslee, Associated Press David Dietz, Scripps-Howard Newspapers Thomas R Henry, Washington *Star* Waldemar Kaempffert New York *Times* Gobind Behari Lal *American Weekly* William L Laurence, New York *Times* Herbert B Nichols *Christian Science Monitor*, John J O Neill, New York *Herald Tribune* and Robert D Potter, *American Weekly* The fund used for the awards was provided by the Westinghouse Educational Foundation and is administered by the American Association for the Advancement of Science to develop closer cooperation between scientists and news writers in keeping the public informed of scientific developments which more and more affect human lives "in this atomic age (THE JOURNAL, February 2, p 298) At the time the science awards were created, the establishment of an annual $1 000 prize to a newspaper writer for outstanding science reporting of the year was also announced. The first recipient for this award will be reported during the meeting of the American Association for the Advancement of Science in Boston in December

**John Ferrell Leaves Markle Foundation.**—Dr John A Ferrell, New York, who recently retired from the Rockefeller Foundation to become executive officer of the John and Mary R. Markle Foundation has resigned effective July 1 Mr John M Russell, executive director of the joint army and navy committee on welfare and recreation, has been elected vice president with a view to becoming executive director on July 1 The Markle Foundation was established in March 1927 with an endowment of about $15,350,000 Its chief executive officer until 1944 was Archie S Woods, who lost his life in a motor accident in California in April 1944 For the remainder of the war period the foundation invited Dr Ferrell to replace Mr Woods The policy of the foundation for the last decade has been to provide limited research grants in the field of medicine and the physical sciences and to confine the area of operations to the United States and Canada Appropriations in the scientific program for the ten year period ended Dec 31, 1945 amounted to $4 149 557, or an average of $414 955 annually and covered 332 research projects In the general field of endocrinology except that dealing with the sex glands, grants aggregating $430 000 have been made during the last ten years to the National Research Council of Washington D C in support of the program of the committee for research in endocrinology which was established in 1936 after a survey by the council at the request of the Markle Foundation to determine the need for such research The foundation makes no direct grants in this field and it has also excluded aid to such fields as cancer and infantile paralysis As a war measure the program was broadened to include features having direct bearing on the war effort The training of essential personnel in tropical medicine was an important interest and grants were also given to aid researches in emergency problems in the virus diseases and in tropical diseases such as filariasis malaria and dengue Support in these fields have been continued since the end of the war

## FOREIGN

**South African Medical Congress**—The thirteenth scientific meeting and the thirty-fourth medical congress of the Medical Association of South Africa will be held in Durban, Natal October 7-12 This will be the first congress to be held in South Africa since the outbreak of the war Dr A Broomberg is honorary organizing secretary, 506 Payne's Buildings, Durban, Natal, South Africa

### Deaths in Other Countries

**Dr Adolf Lorenz**, noted orthopedic surgeon died in Vienna February 12——**Dr Sir Upendranath Brahmachari**, known for his discovery of urea stibamine in the treatment of kala-azar," died at his home in Calcutta February 6——**Dr H P Lie**, chief medical officer for leprosy in Norway from 1911 to 1935, died Dec. 17, 1945, aged 83——**Dr Mario Donati** died suddenly January 21 after his return from exile in Switzerland and a short time after he had resumed his position as director of the Surgical Clinic in Milan

## CORRECTIONS

***Procaine Instead of Cocaine***—The word cocaine appears in error instead of procaine in the sixth line under the caption Serum Sickness Following the Injection of Antitetanus Serum on page 993 of THE JOURNAL of April 13

**Gift to Pediatric Academy**—The American Academy of Pediatrics has received $100 000 from the National Foundation of Infantile Paralysis and not the Rockefeller Foundation as reported in THE JOURNAL May 4 page 52 The announcement was based on erroneous press reports

# *Government Services*

### Arnold Lehman Joins Food Administration

Dr Arnold J Lehman professor of pharmacology University of North Carolina School of Medicine Chapel Hill has been appointed chief of the division of pharmacology Food and Drug Administration Washington, D C newspapers reported March 21 Dr Lehman succeeds the late Herbert O Calvery Ph D

### New Commanding General of Medical Center

Dr George C Beach Jr, Topeka, has been appointed commanding general of the Army Medical Center succeeding Major Gen Shelley U Marietta Washington, who has retired from active service Dr Marietta who has been in active service for thirty five years, has been stationed at Walter Reed General Hospital since December 1939

### Appointments in Veterans Administration

Dr Louis B Newman, former commander in the Medical Corps, U S Naval Reserve, and head of the department of physical medicine and member of the rehabilitation board at the U S Naval Hospitals Oakland Calif, and Seattle, has been appointed chief of physical medicine at the Veterans Administration Hospital Hines Ill This appointment also includes the Vaughan General Hospital, Hines which is being taken over by the Veterans Administration——Dr Richard B Hullsiek has been named chief medical officer for the Veterans Administration regional office with headquarters in St Paul

### Opportunities for Artists and Photographers

The Medical Illustration Division in the Veterans Administration is providing positions for clinical photographers, medical artists and statistical draftsmen These positions are under federal civil service with starting salaries ranging from $1 902 for clinical photographer trainees to $3 640 for qualified clinical photographers and medical artists Interested workers in this field are invited to apply for these positions by submitting a completed form number 57 (obtainable from any U S Post Office) accompanied by samples of their work, wherever obtainable to Mr C Graham Eddy Director Medical Illustration Veterans Administration Washington 25 D C All samples of work submitted will be returned

# Deaths

**Fred Marlin Meader** ⊕ Kalamazoo, Mich., Johns Hopkins University School of Medicine Baltimore, 1909, born in North Haverhill, N H, Jan 28, 1876, from 1909 to 1914 on the faculty of Syracuse University College of Medicine, where he taught successively pathology and bacteriology and preventive medicine and hygiene, formerly an associate epidemiologist at the Johns Hopkins University School of Hygiene and Public Health, formerly director of the division of communicable diseases, New York State Department of Health, retired in January 1941 as director of medical service and deputy commissioner, Detroit Department of Health, served during World War I, on the staff of the Kalamazoo State Hospital, took part in the investigation which led to the isolation of "Typhoid Mary" while he was a member of the New York State Health Department died in the Henry Ford Hospital, Detroit, April 26, aged 70, of myocardial insufficiency

**Erastus Eugene Holt Jr** ⊕ Portland Maine, Medical School of Maine Portland 1910 born in Portland in 1885, specialist certified by the American Board of Ophthalmology, member of the American Academy of Ophthalmology and Otolaryngology American Ophthalmological Society and the New England Ophthalmological Society fellow of the American College of Surgeons served as councilor of the First District of the Maine Medical Association, executive surgeon and superintendent of the Maine Eye and Ear Infirmary, consulting surgeon to the Maine General Hospital and Children's Hospital in Portland, the Webber Hospital, Biddeford and the Henrietta D Goodall Hospital, Sanford, died February 2 aged 60, of lymphatic leukemia

**Osville Richard Lillie** ⊕ Milwaukee Marquette University School of Medicine Milwaukee, 1913 born in Madison, Wis, June 12 1890, assistant clinical professor of surgery at his alma mater, member of the founders group of the American Board of Surgery past president of the Milwaukee Surgical Society and the Milwaukee Academy of Medicine served overseas on the surgery staff of Base Hospital number 22 during World War I chief Selective Service medical director in Wisconsin during World War II, fellow of the American College of Surgeons, for many years surgeon for the Milwaukee and Northwestern railroads and affiliated with the Milwaukee Hospital where he died February 21 aged 55, of dissecting aneurysm of the abdominal aorta.

**Frederick Lane Brown** ⊕ New Brunswick, N J, Columbia University College of Physicians and Surgeons New York 1910 born in Somerville, N J in 1883 specialist certified by the American Board of Internal Medicine fellow of the American College of Physicians past president of the Middlesex County Medical Society chairman of the county procurement and assignment committee during World War II, since 1931 chief of the medical service at the Middlesex General Hospital where he had been chief of obstetrics from 1929 to 1931, affiliated with the Somerset Hospital Somerville and St Peter's Hospital died in the Neurological Institute, New York January 29 aged 63, of tumor of the brain

**John Morgan Biedler** ⊕ Fort Lauderdale Fla, University College of Medicine, Richmond, 1903, born in Tenth Legion Va Dec 24, 1873 member of the medical advisory board of Rockingham and Page counties, Va, during World War I, resigning in October 1918 to become a first lieutenant in the medical corps of the U S Army, assigned to public health service being discharged in March 1919, member of the Medical Society of Virginia for many years health officer and coroner of Rockingham County Va, a founder of Rockingham Memorial Hospital, Harrisonburg, Va where he later was a member of the staff and a trustee, died January 26, aged 72 of cirrhosis of the liver

**Edwin Leslie Gardner,** Minneapolis, University of Minnesota College of Medicine and Surgery, Minneapolis, 1912, born in Jacksonville, Ill Aug 2, 1886, clinical associate professor of internal medicine at his alma mater specialist certified by the American Board of Internal Medicine member of the American Medical Association and the Central Society for Clinical Research, fellow of the American College of Physicians, past president of the Hennepin County Medical Society, on the staffs of the Northwestern, Swedish and St Mary's hospitals consultant to the Glen Lake Sanatorium in Oak Terrace and the Eitel Hospital, died January 29, aged 59, of cerebral hemorrhage.

**Arthur Beattys Berresford** ⊕ Ithaca, N Y, Boston University School of Medicine, 1935, diplomate of the National Board of Medical Examiners, interned at the Waterbury Hospital in Waterbury, Conn, member of the American Academy of Allergy, served as research fellow in the department of allergy Roosevelt Hospital, New York, on the staffs of the Cornell University Infirmary and Clinic and the Tompkins County Memorial Hospital, co author of "Know Your Hay Fever", died in the New York Post-Graduate Medical School and Hospital, New York, April 16 aged 42, of coronary occlusion.

**Thomas Ward Burnett** ⊕ Colonel M C, U S Army, retired, New York, Columbia University College of Physicians and Surgeons, New York, 1908, fellow of the American College of Physicians, entered the medical corps of the U S Army in 1912, served overseas during World War I with the first division served during World War II, left Hawaii shortly before the Pearl Harbor attack and later was stationed at Governors Island, Camp Pickett, Va., and in Baltimore as surgeon to the Third Service Command, retired in June 1945, died Oct. 19, 1945, aged 63, of coronary occlusion

**Raymond Wright Whittier** ⊕ Colonel U S Army, retired, Little Rock, Ark., University of Minnesota College of Medicine and Surgery, Minneapolis 1912, specialist certified by the American Board of Ophthalmology and the American Board of Otolaryngology, fellow of the American College of Surgeons entered the medical corps of the U S Army as a first lieutenant in 1917, served during World War I, retired Aug 31 1943 for disability in line of duty with the rank of colonel, died in the Baptist State Hospital March 1, aged 58, of coronary occlusion.

**Byron Gracey Anderson,** Uhrichsville Ohio, Starling Medical College, Columbus 1886, died January 17, aged 87, of cerebral hemorrhage.

**Aaron Barlow** ⊕ Philadelphia, Medico Chirurgical College of Philadelphia 1909, specialist certified by the American Board of Ophthalmology member of the American Academy of Ophthalmology and Otolaryngology on the staff of the Wills Eye Hospital and the Mount Sinai Hospital, where he died February 8 aged 62 of coronary thrombosis

**William H Becker** ⊕ St Louis, Missouri Medical College, St Louis, 1898, born in St Louis, Oct. 14, 1875 served as assistant in the surgical clinic at St. John's Hospital and assistant surgeon in the surgical clinic of O'Fallon Dispensary, for many years surgeon for the St. Louis Street Railways, from 1928 until his retirement because of illness in 1938, surgeon for the Chevrolet and Fisher Body plants of General Motors Corporation died January 21 aged 70, of carcinoma of the liver

**Lionel Joseph Bienvenu,** Opelousas, La., Tulane University of Louisiana School of Medicine, New Orleans, 1921 served as vice president of the Louisiana State Medical Society, member of the American Medical Association medical director and part owner of St. Rita's Infirmary died February 7 aged 49, of coronary occlusion.

**Elmer Wiley Bingaman** ⊕ Carmel Calif, Medical Department of the University of California, San Francisco, 1907, died in Salinas, January 14, aged 62, of coronary thrombosis

**Harold Bonoff,** Peekskill, N Y, University and Bellevue Hospital Medical College, New York, 1905 died January 30 aged 69, of coronary thrombosis.

**Charles T Bower** ⊕ Hillsdale, Mich., Michigan College of Medicine and Surgery Detroit 1904, on the staff of the Hillsdale Community Health Center director of the Hillsdale State Savings Bank, died February 24, aged 67, of hypertensive cardiovascular disease

**Warren Henry Butz,** Allentown Pa. Medico Chirurgical College of Philadelphia, 1915, member of the American Medical Association, on the staff of the Allentown Hospital where he died January 19, aged 55, of a skull fracture received in a fall.

**Daniel Avery Capwell,** North Woodbury, Conn., Bellevue Hospital Medical College, New York, 1884 member of the American Medical Association and the Medical Society of the State of Pennsylvania, at one time superintendent of the Moses Taylor Hospital and old Lackawanna Hospital in Scranton, Pa. died January 16 aged 86 of injuries received in a fall.

**Cornelius Lennon Carter,** Harrisburg Pa, College of Physicians and Surgeons, Boston, 1904 member of the American Medical Association died January 22, aged 73, of carcinoma of the tonsil.

**Tracy Roscoe Conklin Sr,** Abilene, Kan. St. Louis College of Physicians and Surgeons 1898, member of the American Medical Association, senior member of the staff of the Memorial Hospital, died January 19 aged 77, of cerebral embolism.

**Frank Howard Conner** ⊕ Nevada, Iowa, College of Physicians and Surgeons of Chicago School of Medicine of the University of Illinois, 1898 died in the Iowa Methodist Hospital, Des Moines January 30, aged 79, of cerebral hemorrhage.

**Hamilton Ralls Coston,** Birmingham Ala Vanderbilt University School of Medicine, Nashville, Tenn 1889 member of the American Medical Association died in Signal Mountain, Tenn., January 31, aged 79 of coronary thrombosis

**Samuel Robert Downing** ⊕ Oakland, Calif Leland Stanford Junior University School of Medicine, San Francisco, 1915, served overseas during World War I and in 1921 appointed a major in the medical corps of the California National Guard, on the staff of the Samuel Merritt Hospital, where he died January 19, aged 62, of arteriosclerosis

**Alva J Drake,** Lancaster, Mo Barnes Medical College, St Louis, 1902, member of the American Medical Association, died January 26, aged 71 of cerebral hemorrhage

**Eleanora Sophronia Everhard,** Dayton Ohio University of Michigan Department of Medicine and Surgery, Ann Arbor, 1896 member of the American Medical Association vice president of the Montgomery County Medical Society in 1927 served as a member of the Oakwood City Council and board of health died in the Miami Valley Hospital January 25 aged 78, of cerebral hemorrhage.

**Henry Clay Floyd** Nashville Tenn Meharry Medical College, Nashville, 1917 instructor in clinical medicine at his alma mater where he was assistant professor of medicine died in the George W Hubbard Hospital January 26 aged 55, of a basal skull fracture received when struck by an automobile.

**Charles M Fullenwider** ⊕ Muskogee, Okla , Rush Medical College Chicago 1903 member of the American Academy of Ophthalmology and Otolaryngology, died January 26, aged 67 of coronary thrombosis

**Fred E Graves,** Brier Hill N Y the Hahnemann Medical College and Hospital Chicago 1888 health officer, member of the board of education died January 28 aged 81, of senility

**C Alonzo Harding** Ashdown Ark. College of Physicians and Surgeons Dallas 1904 member of the American Medical Association also a graduate in pharmacy, died January 29 aged 64 of myocarditis

**Jesse Weathers Humber,** Lumpkin Ga., Atlanta Medical College, 1915 died in the Patterson Hospital, Cuthbert, January 15 aged 55, of acute nephritis

**William Yocum Jones,** Ponca Neb , Omaha Medical College, 1902, died January 31, aged 77, of thrombosis

**Malcolm A Kemper,** Winnetka, Ill. Rush Medical College, Chicago, 1918, member of the American Medical Association and the American Academy of Dermatology and Syphilology diplomate of the National Board of Medical Examiners for many years a member of the National Guard served during World War I died in Cincinnati January 29 aged 56 of coronary occlusion.

**Albert Herbert Kulig,** Thorp Wis Milwaukee Medical College, 1910 died January 27, aged 59 of coronary thrombosis

**Robert Aloysius Neubert Lamb,** Chicago Loyola University School of Medicine, Chicago 1926 member of the American Medical Association member of the staff of the Alexian Brothers Hospital died in the Billings Hospital February 18 aged 49 of sarcoma of the thigh with metastases

**Charles A Lauffer,** St. Petersburg Fla University of Pennsylvania School of Medicine, Philadelphia, 1905, at one time medical director relief department, Westinghouse Electric & Manufacturing Company, in East Pittsburgh died January 3 aged 70 of abdominal carcinoma

**John C Lee** Wyalusing Pa. Baltimore Medical College 1897 member of the American Medical Association died in the Robert Packer Hospital Sayre, January 22 aged 75, of heart disease.

**Chester Alfred Leigh,** Seattle Southern Homeopathic Medical College, Baltimore, 1904 served during World War I for many years associated with the Douglas Aircraft Company in California died in the Seattle General Hospital January 20 aged 66 of pneumonia

**George Benjamin Lutyens,** Springfield Ill College of Physicians and Surgeons of Chicago School of Medicine of the University of Illinois 1906 served in France during World War I, on the staffs of the Memorial and St. John's hospitals, died January 23, aged 73 of coronary thrombosis

**Clarence A McGuire** ⊕ Kansas City Mo , University Medical College of Kansas City 1913 served during World War I died January 16 aged 61, of heart failure.

**Wilber Franklin McMahan** ⊕ Lewiston, Idaho, St Louis University School of Medicine, 1904 died January 8, aged 72, of heart disease.

**Thomas W Martin,** New York, University of the City of New York Medical Department New York, 1888, died in St Elizabeth's Hospital January 28, aged 82 of pneumonia

**Harvey Edward Moss,** Bonner Springs, Kan Louisville (Ky) Medical College, 1893, served as a member of the board of education in Kansas City Mo, where he had been coroner of Jackson County died in Phoenix Ariz, January 12, aged 73, of carcinoma of the rectum with metastases

**James Daniel Nall,** Atlanta, Ga , University of the South Medical Department, Sewanee, Tenn. 1907 member of the American Medical Association, affiliated with the Crawford W Long Hospital, where he died January 24, aged 63, of cerebral hemorrhage.

**James R. Northcutt,** Knox City Mo , College of Physicians and Surgeons Keokuk Iowa, 1878 member of the American Medical Association died January 3 aged 90 of myocarditis

**Stewart Stowe Piper,** Elmira, N Y New York Homeopathic Medical College and Hospital New York, 1906, member of the American Medical Association served during World War I died January 21, aged 69, of cerebral thrombosis, influenza and bronchopneumonia.

**Otey James Porter,** Columbia Tenn University of Nashville Medical Department, 1890 past president of the Maury County Medical Society, died January 17, aged 78 of pneumonia

**Henry C Rogers,** Rockville, Ind Indiana Medical College Indianapolis 1876, Civil War veteran died January 30 aged 101, of cerebral hemorrhage.

**Amy Jean Rule** ⊕ Washington, D C Woman's Medical College of Pennsylvania Philadelphia, 1908, died January 29, aged 73 of chronic myocarditis

**Marion Ellsworth Sayre,** Wilkinsburg, Pa., Temple University School of Medicine Philadelphia 1918 Jefferson Medical College of Philadelphia 1921 for many years a member of the medical staff of the Pennsylvania Railroad died December 19 aged 62 of uremia secondary to prostatic hypertrophy and hypernephroma

**Thomas Valentine Stack** ⊕ New York Fordham University School of Medicine New York 1916 interned at the Norwegian Lutheran Deaconess Home and Hospital in Brooklyn served overseas as a lieutenant in the medical corps of the U S Army during World War I on the staffs of the Harlem and Misericordia hospitals died January 22 aged 51, of cerebral hemorrhage

**Edward Stieren** ⊕ Pittsburgh, Western Pennsylvania Medical College Pittsburgh 1896 specialist certified by the American Board of Ophthalmology in 1933 member of the House of Delegates of the American Medical Association member of the American Academy of Ophthalmology and Otolaryngology, American Ophthalmological Society and the Association for Research in Ophthalmology on the staff of the Columbia Hospital died January 8 aged 72, of coronary occlusion.

**Franklin Arthur Stiles** ⊕ Great Bend Pa University of Michigan Homeopathic Medical School Ann Arbor, 1919, died December 24 aged 52

**Robert Boyd Stith,** Mullins S C. University of Nashville Medical Department, 1909 for many years member of the board of health on the staff of the Mullins Hospital, died February 1 aged 60 of coronary thrombosis

**Ashby Turner,** Harrisonburg Va University College of Medicine Richmond 1900 member of the American Medical Association died recently aged 68 of heart disease.

**Claud E Wann,** Albany Okla. (licensed in Oklahoma under the Act of 1908) member of the American Medical Association died January 24 aged 79, of arteriosclerosis

**George John Wardenburg,** Brooklyn Columbia University College of Physicians and Surgeons New York, 1896, died January 5 aged 72 of arteriosclerosis

**Charles Todd Woodward,** Southbridge, Mass , Dartmouth Medical School Hanover N H 1894, died January 12, aged 72 of heart disease.

**Silas Yarnell,** Spokane, Wash American Medical Missionary College Battle Creek, Mich., and Chicago 1901 member of the American Medical Association at one time superintendent of the Spokane Sanitarium on the courtesy staff of St. Luke's Hospital on the medical staff of the Sacred Heart Hospital and the Deaconess Hospital where he died January 6, aged 69, of carcinoma of the prostate

# DIED WHILE IN MILITARY SERVICE

**Howard Dwight Adams,** Galion, Ohio, George Washington University School of Medicine, Washington, D C, 1944, interned at the Genesee Hospital in Rochester, N Y began active duty as a first lieutenant in the medical corps Army of the United States, in July 1945, died in the Regional Hospital, Fort George G Meade, Md, Aug 22, 1945, aged 27, of virus encephalitis and virus pneumonia

**Floyd William Baugh,** Burlington, Wash University of Nebraska College of Medicine Omaha 1931 member of the American Medical Association interned at the Seattle General and the Children's Orthopedic hospitals in Seattle at one time health officer of Skagit County began active duty as a major medical corps, Army of the United States (National Guard) Sept 16 1940, died in the McCaw General Hospital, Walla Walla, Nov 10, 1945, aged 39, of brain tumor

**Richard Benfield,** New York Medizinische Fakultät der Universität Wien Vienna Austria 1924, member of the American Medical Association began active duty as a captain in the medical corps, Army of the United States, on April 5 1944, served overseas with the 181st General Hospital died in New Delhi, India, Oct 8 1945 aged 45 of myocardial infarction

**Harold Thomas Booth,** Schroon Lake, N Y University of Maryland School of Medicine and College of Physicians and Surgeons Baltimore, 1936, interned at the Church Home and Infirmary, Baltimore served a residency at the Harlem Valley State Hospital in Wingdale began active duty as a captain in the medical corps Army of the United States, on Aug 15, 1942 promoted to major neuropsychiatrist with the 52d General Hospital died in England Aug 30, 1945, aged 34, of pulmonary tuberculosis

**James Wesley Duckworth** ⊕ Colonel, M C U S Army Atlanta Ga Indiana University School of Medicine Indianapolis 1912, born in Gosport, Ind on Sept 6 1890 fellow of the American College of Surgeons entered the medical reserve corps of the U S Army in 1917 and later transferred to the regular army, served in France during World War I, stationed at various posts in the United States and in the Philippines, in May 1941 was commanding officer of the hospital at Fort William McKinley, Manila and the twelfth medical regiment when Bataan fell as a prisoner and under Japanese supervision he was allowed to remain as commanding officer of the hospital he had organized at the outbreak of the war, later when the hospital was removed to another location, he was transferred to various Japanese prison camps being freed from Cabantuan prison camp in January 1945 returned to San Francisco and admitted as a patient in the Letterman General Hospital, on May 27, 1945 returned to duty at his own request after a seven day leave assigned as commanding officer of the Winter General Hospital at Topeka Kan and later of the Lawson General Hospital where he died Dec 26, 1945, aged 55, of coronary thrombosis

**Willard Earl Fischer,** Wayne, Mich Wayne University College of Medicine Detroit, 1939, member of the American Medical Association, interned at the Grace Hospital in Detroit, served a residency at the Wyandotte General Hospital in Wyandotte began active duty as a first lieutenant in the medical corps, Army of the United States, on Sept 28 1942 promoted to captain and major went overseas in February 1944 with the Ninth Air Force awarded the Distinguished Unit Citation, ETO ribbon with four battle stars, and a Purple Heart, returned to the United States in April 1945 and was stationed at the Percy Jones Hospital in Battle Creek, died March 6 aged 34, of virus pneumonia

**Paul Mitchell Glenn** ⊕ Cleveland Heights Ohio Western Reserve University School of Medicine, Cleveland, 1935, interned at the University Hospitals Cleveland, where he served a fellowship in internal medicine at one time fellow and instructor in medicine at the Hospital of the University of Pennsylvania, Philadelphia, senior instructor in medicine at his alma mater specialist certified by the American Board of Internal Medicine, associate, American College of Physicians member of the American Gastroenterological Association and the American Federation for Clinical Research, visiting physician, chief of the gastrointestinal clinic, City Hospital, began active duty as a captain in the medical corps, Army of the United States, on Jan 10, 1942, promoted to major, ward officer, general medical and gastroenterological sections, Fourth General Hospital Melbourne, Australia, from January 1942 to February 1943, served as chief of the gastroenterology section at the Finney General Hospital in Thomasville, Ga., where he was chief of the gastroenterology and cardiovascular renal sections and assistant chief of the medical service, died in the Lawson General Hospital, Atlanta, Dec 21 1945, aged 39, of disseminated lupus erythematosus

**Benjamin Franklin Handelsman,** Brooklyn, University and Bellevue Hospital Medical College, New York, 1922 member of the American Medical Association interned at the Bellevue Hospital in New York, served as a cardiologist at the Greenpoint Hospital and associate on medical service at the Wyckoff Heights Hospital began active duty as a captain in the medical corps of the Army of the United States, Sept. 22, 1942, served two and one-half years in the China-Burma-India theater died Sept 24, 1945, aged 47

**Harold Frederick Kirchmer,** Jackson Heights, N Y, Columbia University College of Physicians and Surgeons, New York, 1938, interned at the Lenox Hill Hospital, New York where he served a residency, served a residency at the St Joseph Hospital for Consumptives in New York, interned at Our Lady of Lourdes Memorial Hospital in Binghamton, began active duty as a first lieutenant in the medical corps, Army of the United States, on June 23 1942, promoted to captain, died in France July 28, 1945, aged 31

**Harry Allen Durfee O'Connor,** New York, University and Bellevue Hospital Medical College, New York 1921, served as assistant clinical professor of surgery at his alma mater, now known as the New York University College of Medicine, member of the American Medical Association, fellow of the American College of Surgeons, served on the staffs of the Bellevue, French and Misericordia hospitals, began active duty as a lieutenant commander in the medical corps of the U S Naval Reserve on Dec 4 1940, promoted to commander and captain, served as chief surgeon at the Naval Hospital in Brooklyn, accidentally drowned in the East River Nov 28, 1945, aged 49

**William Samuel Prout** ⊕ Colonel, M C, U S Army, Concordia, Kan, Kansas Medical College, Topeka, 1913, born in Virginia City, Mont March 14, 1889 formerly staff assistant and roentgenologist at St Joseph's Hospital, where he served as assistant to the general surgeon for two years graduated at U S Army Medical School 1920, appointed a first lieutenant in the medical reserve corps of the U S Army in 1918 and in the regular army in October 1919, served as chief of the clinical laboratory and x-ray service in the General Hospital, Oteen, N C, Sternberg General Hospital Manila U S Military Academy, West Point Fort Shafter Hawaii, Army and Navy General Hospital in Hot Springs National Park and the Fitzsimons General Hospital in Denver where he died Dec 11 1943 aged 54 of brain tumor

**Henry Seymour Rothbart,** Brooklyn Long Island College of Medicine Brooklyn 1935 member of the American Medical Association, interned at the Greenpoint Hospital, began active duty as a first lieutenant in the medical corps, Army of the United States, on Sept 24, 1942, died in Fort Bliss, Texas, July 27, 1943, aged 32

**Henry Alexander Silberstein,** Sloatsburg, N Y, Friedrich-Wilhelms-Universität Medizinische Fakultät Berlin Prussia, Germany, 1928, member of the American Medical Association, served as the first member of the fire department of Sloatsburg and on the staff of the Good Samaritan Hospital in Suffern, began active duty as a first lieutenant in February 1943 of the medical corps, Army of the United States promoted to captain went overseas early in 1944, landing in Normandy on D day, died in France May 14, 1945, aged 40, of coronary thrombosis

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

April 20, 1946

### Problem of Neurotic Ex-Soldiers

The Ministry of Health has had an investigation made to discover how men discharged from the army on account of neurosis readjust themselves to civilian life. The investigation was carried out by Dr Eric Guttman of the Mill Hill Emergency Hospital and Miss Elsie L Thomas, a psychiatric social worker The investigation covered 382 selected cases chosen on an area basis representing industrial and rural districts exposed to enemy attack, including one heavily bombed city The investigation was limited to discharges in the three months that began on Jan 1, 1943 The following are the main conclusions

Men discharged because of neurosis have considerable difficulty in readjusting to civil life and even fifteen months after discharge have a high incidence of neurotic complaints and illness The majority find it difficult to return to employment, as shown by delay in starting work and a high rate of absenteeism Some are unhappy in their private lives, self conscious and liable to social frictions However, more than 200 still held the same job taken on leaving the army, while another 80, after a false start, had settled down to their second job Married men changed their jobs less frequently than bachelors In many cases the men themselves or their relatives reported that their avocations had changed, that they had become less sociable, less interested and less active. Three fourths of the group had definite neurotic traits before enlistment, and more than half complained of physical ill health before joining the army

The authors conclude that the critical time in readjustment to civil life is the early period after discharge The better provision now made for discharged men by the Disabled Persons (Employment) Act and the newly organized Board of Control for mental disease will result in better treatment and advice and thus enable men to return to work earlier The return of psychiatrists from the services should provide increased facilities for outpatient treatment

### The Bread Question

In 1942 the government made compulsory an extraction rate from wheat of 85 per cent for bread making Extraction in peacetime had been 75 per cent. The object was to save shipping space for the importation of wheat, which was then seriously threatened by the submarine sinkings When the danger to our food supply diminished, the extraction rate was lowered first to 82 5 per cent and then to 80 per cent This reduction produced a storm of criticism because of the loss of vitamins in the higher extraction flour The government s defense was that new methods of milling enabled the percentage of extraction to be reduced without "appreciably lowering the vitamin B content. But this did not satisfy the critics who claimed that under the 85 per cent extraction the health of the population had been maintained in spite of the great restriction in diet resulting from war conditions Because of the world s shortage of wheat the government has gone back in two stages to the 85 per cent extraction, which has given rise in the House of Commons to the opposite protest, against people being compelled to eat the darker bread when they preferred white bread The question of the relative nutritive value of the two breads was again raised, but no official answer was given on this point It is unfortunate that, while it has been the subject of much discussion both by food experts and by leading physicians, no clear pronouncement has been made The fact that persons who enjoy a liberal diet can eat white bread with impunity seems to blind critics to its defects for those who have to make bread "the staff of life" The fact that natives who have excellent teeth when living on their primitive diets suffer from dental disease on a European diet, particularly one including white flour, is forgotten

## PARIS

*(From Our Regular Correspondent)*

April 22, 1946

### Preparatory Conference for World Health Organization

The Preparatory Committee of public health experts met in Paris from March 19 to April 6 under the egis of the Economic and Social Council of the United Nations to plan the international health conference One of the aims of this committee is to coordinate the work of the four existing international sanitary organizations The International Office for Public Hygiene, established in 1907, is located in Paris and diffuses and controls information regarding epidemic diseases and the application of international conventions and health measures in land, sea and air traffic During the war its action was restricted to occupied Europe. It was represented by its director Dr Robert Pierret, in a consultative capacity The Hygiene Section of the League of Nations with an epidemiologic and statistical service had as its delegate Dr Ives M Biraud UNRRA was represented by Dr Andrew Topping and Dr Neville Goodman The Pan American Sanitary Bureau had Dr Aristides A Moll, secretary as representative At the Paris conference Dr Rene Sand, counselor to the Belgian ministry of health, presided The United States was represented by Dr James A Doull, Surg Gen Thomas Parran, Dr H Van Z Hyde, all three of the Public Health Service, and Miss Marcia Maylott, technical adviser of the State Department Great Britain was represented by Dr Melville Mackenzie Sir Wilson Jameson, Mr G E Yates, Miss E A East, all of the Ministry of Health, and Dr C Lal Katial of the ministry of pensions Dr A Cavaillon, general secretary to the Ministry of Public Health, and Dr Leclainche represented France Dr G B Chilsholm, deputy minister of national health Canada Dr Martin Kacprzak, president of the National Health Council of Poland, Poland Dr Andriga Stampar, Yugoslavia, Dr Manuel Baez, vice chairman of the Preparatory Committee, Mexico, and experts from Czechoslovakia, Norway Switzerland, Brazil, Argentina, Greece, Egypt and India

The Preparatory Committee has been unanimous in recommending the establishment of a single world organization to function as a specialized agency in relation to the United Nations The committee is generally agreed that the new organization should continue and develop the international cooperation in health at present carried out by the aforementioned four organizations Among the more important responsibilities of the World Health Organization will be the stimulation of its member governments to maintain constant improvement of health services and to provide technical assistance on request. It is also proposed that the World Health Organization should promote research in the fields of medicine and health, making the findings of investigators everywhere available to every one An information service and facilities for the exchange of vital data will be at the disposal of all states participating

The proposed constitution also mentions the role of the World Health Organization in promoting conventions and regulations in international health and sanitary matters for initiative here will tend to equalize development in different countries and control epidemic and social diseases, which otherwise might spread unchecked.

The Preparatory Committee decided that the International Congress for Health will be held in New York on June 19

## PALESTINE

*(From Our Regular Correspondent)*

JERUSALEM, March 30, 1946

### Infection with Bovine Leptospirosis in Man in Palestine

The cooperation of clinicians and bacteriologists in the study of an endemic of jaundice resulted in the isolation of a new species of Leptospira by Bernkopf in Jerusalem Clinically, Leptospirosis in cattle was reported in 1942 by Freund, Traimn and Malkin but the micro organism responsible for the infection was not detected In calves the disease runs a similar course to that of Weil's disease in man, with high temperature, leukocytosis and increased urea values Isolated human cases reported in the past few years showed that almost exclusively individuals were attacked who had contact with animals, such as veterinarians, butchers and farmers

Serologically and in its pathogenicity, the strain of Leptospira isolated by Bernkopf differs in many respects from Leptospira icterohemorrhagica and Leptospira canicola Leptospira bovis (Bernkopf) could be experimentally transferred to calves A number of the infected animals developed jaundice and succumbed, others showed a milder variety characterized by rise of temperature, leukocytosis and increased urea values In the urine of these animals Leptospira was eliminated from three weeks up to two months after subsidence of the acute symptoms

The pathologic-histologic examinations of the experimentally infected calves was performed by Ungar In animals that had succumbed two to three days after the infection the liver showed a severe degree of dissociation of cords cholangitis with retention of bile in the bile ducts and erythrophagia in the reticuloendothelial system The kidneys showed nonpurulent, interstitial inflammation with some absorption of hemoglobin by the tubular epithelium In 3 of the calves in which the disease ran a milder course without jaundice the internal organs showed no particular changes, while in a fourth animal, which was killed after fifty-four days, only interstitial nephritis was found Examinations were also made in a third group of infected animals offering a more serious picture without, however, having developed jaundice. Here liver dissociation was of the same degree as in the first group, while the kidneys showed a mild degree of interstitial nephritis with only a few occasional focal necroses in the tubular epithelium After staining according to Levaditi, Leptospira could be identified in the liver and kidneys Similar pathologic-anatomic changes were reported by Casper and Reif for human beings and Leptospira was here detected in the liver

Clinical data concerning the disease are given by Padersky of Affulah and Btesch of Tel Aviv The onset is sudden, with violent conjunctivitis headache and abdominal pain, vomiting, muscular pain and high temperature After four to five days the temperature declines and jaundice may appear In contradistinction to infective hepatitis, the patient does not feel better after the subsidence of temperature, on the contrary, he grows toxic and may develop stupor or pass into a coma This toxic stage may be brief (one to two days) and is followed by a renewed rise of temperature During this second stage the renal complications usually make their appearance and in the majority of cases this is the time when nephritis develops, with retention of urea Leptospira appears in the blood of the patient during the first few days of the disease and can be detected in the urine after the seventh to tenth day After that time, positive agglutination can be obtained in the blood with specific Leptospira.

Therapeutically, Ephrati of Tiberias reports one success after penicillin treatment The administrations were started on the eleventh day at three hourly intervals In the course of eight days, a total of 1 million units was given, the patient simultaneously receiving vitamins $B_1$ and K, nicotinic acid and liver extract

These results, obtained by a close cooperation of clinicians and bacteriologists, have shown why so far no case of Weil's disease has apparently occurred in Palestine The L bovis now identified by Bernkopf differs serologically from L ictero hemorrhagica and L canicola. It is probably closely related to the Leptospira reported by Russian authors for cattle in the northern Caucasus (Michin, Azinow) A separate report on the results of these investigations will be given in a special issue of the Harefuah on March 1

### Relationship Between Eosinophilic Erythredema and Filariasis

The etiology of a special type of migrating and itching swellings of the skin associated with high eosinophilia of the blood is still imperfectly understood Since their first appearance coincided with the arrival of large contingents of colored troops in this country and since outwardly they present a striking resemblance to the so called calabar swelling, they were suspected to represent an early stage of filariasis However, microfilaria could not be detected in the blood in any single case Since in filariasis the cutaneous reaction yields positive results with a specific antigen, at two Palestine hospitals cutaneous tests were performed with antigen from Dirofilaria immitis

At the dermatologic outpatient clinic of the Hadassah University Hospital in Jerusalem, Dostrovsky and Sagher undertook skin tests in 12 cases of erythredema with a control series of 32 normal patients With a concentration of antigen of 1 1,000 all 12 cases yielded positive results after twenty-four and forty-eight hours With a concentration of 1 10,000, 10 cases showed a positive reaction after twenty-four hours, in 6 of which it continued to be present even after forty eight hours Of the control persons suffering from all kinds of skin diseases after twenty-four hours 14 showed a positive, the rest a negative reaction After forty-eight hours the picture was the same.

Three erythredema cases showed exacerbation of the original lesion, with redness and itching after the skin test. This would suggest a specific local reaction. Since, however, so many normal persons likewise showed a positive intracutaneous reaction, this test cannot very well be considered a specific one and the question of whether the eosinophilic erythredema should be considered a manifestation of filariasis remains further unsolved

Similar results were reported by Lass from the outpatient department of the Hadassah Municipality Hospital in Tel Aviv In 16 cases of eosinophilic erythredema antigen in concentration 1 8000 elicited an immediate reaction in 7, a late reaction in 8 and 4 patients remained negative. Among 20 control cases the reaction was positive in 3

## Marriages

JAMES HAMMOND WALKER Birmingham Ala. to Miss Martha Jane Greaves of Philadelphia at Valley Forge, Pa, March 16

ROBERT LINTON RALSTON, Henderson N C, to Miss Ruth Alice McBride of Boston in Bethesda, Md, March 9

WILLIAM JOSEPH MAY, Thomasville, N C, to Miss Doris Elizabeth Burke in Winston-Salem, March 27

EDWARD KNUTSON, Cumberland Wis, to Dr Constance M Turner of McGregor, Iowa, March 17

ALBERT P OEHLMACHER, Chattanooga, Tenn, to Mrs Jean Vandergrift in Sewanee, March 20

EDWARD RABB NELL to Miss Jane McRae Graham, both of Kalamazoo, Mich, May 4

# Bureau of Investigation

## AN INSTITUTE FOR THE TREATMENT AND CARE OF THE DIABETIC

JOSEPH H BARACH M D
Pittsburgh

The following notes represent part of my experience to date with patients who, without my knowledge have been to the Kaadt Institute of South Whitley Ind in search of a cure for diabetes These patients stated that acquaintances or friends had urged them to go there, advising them that they could be treated or cured of diabetes and that they would be freed of the need for insulin injections I have reason to suspect that some of this propaganda is carried on by scouts who visit diabetic patients, diabetic clinics and hospitals One such incident known to me personally occurred in the diabetic clinic under my supervision and another at the Presbyterian Hospital in the guise of a nurses aide wearing a Red Cross uniform This young woman urged my patient to go to the aforementioned institute, where patients are 'cured' without the use of insulin

I am informed by my patients who have been there that a medical history of their cases was not taken that physical examinations were not made and that their blood sugars were not determined My record of 17 patients with diabetes who had been there for treatment reveals that 12 developed diabetic coma and were taken as emergency cases to various hospitals after the coma had existed for some time. Of these 12 patients, 5 died. Two deaths are known to other physicians, but details are not available at this time.

These cases were reported to me by one physician who had 4 patients, another who had treated 4 one who treated 2, and 2 were my own patients The remaining patients were treated individually by their own physicians

The mortality of 5 deaths in 12 cases of coma suggests that the patient probably held out against calling the family physician, relying on the medicines they were taking and were in deep coma before they reached the hospitals, beyond the stage of favorable mortality rate.

The treatment, according to my patients reports consists in dietary advice a box of tablets of unknown composition and the ingestion of a cider vinegar like mixture with added ingredients

The patient pays $30 for a gallon of the liquid and a package of tablets Neither of these that I have seen are labeled or their contents indicated After the medicine is used up the patient is expected to return to the institute for another supply, since the medicine is not sent to the patient by mail or express, so far as I know

### HIGHLIGHTS FROM LECTURES GIVEN AS RECORDED BY A PATIENT WHO LATER DEVELOPED DIABETIC COMA

#### LECTURE I

Clover or buckwheat honey is all you are allowed to take

Eat a little of everything every day

You are positively not allowed to eat grapes, watermelon, honeydew or cantaloupe.

Eat all kinds of meat except bologna Also eat all the vitamins you can

Whisky is the best thing for diabetes You can have a bottle of beer occasionally as long as you don't drink half a dozen Of course, you can overdo drinking

Acid burns the nerves and causes drowsiness

Diabetes is caused from shock 100 per cent

You can drink coca cola or root beer The sugar is already boiled

Take it easy on the candy and pop

There are several things that we know are not good for diabetics Among them are melons (watermelons cantaloupes, honeydews etc.), grapes or anything made from grapes (wine, jelly, etc)

Fresh fruits (apples pears peaches etc.) are very acid and should be used sparingly by any diabetic.

#### II. TYPEWRITTEN INSTRUCTIONS BROUGHT BACK BY ONE OF MY COMA PATIENTS

Sweet potatoes are better for the diabetic than white potatoes

Fresh fruits (apples, pears peaches etc) are very acid and should be used very sparingly by any diabetic

But among the things most diabetics have been taught to avoid but which in many cases are beneficial are

Ice cream
Cakes and pie
Milk and cream
All citrus fruits
Honey (clover or buckwheat only)
In fact most anything that is made with sugar that has been *thoroughly cooked*
Lots of lean beef

Meats eggs and fresh vegetables should provide 90 per cent of the diet. In many cases the diabetics lose weight at the beginning of this treatment, which should cause them no alarm for they will gain again in a short time If you think you are losing too rapidly eat more and drink lots of milk Even four meals per day if it is necessary But try not to interrupt the treatment. Insulin patients are more apt to do this than the nonusers of insulin.

If you will eat a little of many things you will not get enough of any one thing to do much damage. Try a little of each

# Correspondence

## TREATMENT OF UREMIA

*To the Editor* —In view of the remarkable result obtained by Frank, Seligman and Fine by peritoneal irrigation in a case of anuria due to sulfathiazole (THE JOURNAL, March 16) it may be pointed out that lately comparable results have been obtained by Dr W J Kolff with an artificial kidney The first results which Kolff obtained with this artificial kidney were published in the *Acta medica Scandinavica* (**117** 121, 1944) and have been commented on in an editorial in THE JOURNAL (May 26, 1945, p 288) Kolff has followed up his experiments with the artificial kidney and has now reported his later results in a thesis (Amsterdam January 16 in the Dutch language) He emphasizes that the construction of an efficient artificial kidney has been possible only since an efficient anticoagulant, heparin and a good dialyzer consisting of a cellophane tube 23 mm wide and 50 yards long have become available A cellophane tube is wound spirally around a cylinder which consists of a wooden lattice work with a coat of lacquer This cylinder rotates slowly, and the lowest part of the cylinder is submerged in a tank containing 70 to 100 liters of a solution of 0 6 per cent sodium chloride, 0.2 per cent sodium bicarbonate 0 04 per cent potassium chloride and 1 5 to 2 per cent of glucose A glass cannula is tied into a vein on the dorsum of the foot or in the forearm and a slow infusion of salt solution is started. Then another cannula is tied into the radial artery Only then is the patient heparinized with 1,200 mg of heparin or more. The glass cannula in the artery is connected by a rubber tube with a cellophane tube which acts as a dialyzer As the cylinder is turning continuously the blood is transported through the cellophane tube. After it has transmigrated through the whole length of the cellophane tube it is transported via another rubber tube in which a small pump has been built to the cannula, which has been tied in the vein. The cellophane tube is only partially filled with blood. Hereby a small amount of blood is spread over a large surface which greatly increases the rate of dialysis During the passage of the blood through the cellophane tube, large amounts of crystalloid substances of the blood are removed by dialysis As in the fluid against which the blood is dialyzed no calcium can be present because of the sodium bicarbonate content calcium is also removed from the blood. It is there-

fore necessary to give one or two intravenous injections of calcium gluconate to the patient during the dialysis

The dialysis lasts ten to fourteen hours. After the dialysis is finished the cannula in the artery and vein are closed off and left in situ for twenty-four hours. Then the coagulation time of the blood has returned to normal and the cannulas can be removed. The salutary effect of the vividialysis in the artificial kidney is demonstrated by the amount of the urea which is removed from the blood during this period. The largest quantity of urea dialyzed out amounted to 260 Gm. Even in cases in which the blood urea nitrogen before dialysis has risen to 160 mg. per hundred cubic centimeters one dialysis is sufficient to reduce this value to 45 mg. per hundred cubic centimeters. At the same time the increased nonprotein nitrogen, uric acid, creatinine and indoxyl of the blood descend to nearly normal values, and the xanthoprotein reaction of the serum diminishes significantly. Clinical signs of uremia usually disappear within twenty-four hours. It is evident that the artificial kidney will have only a temporary effect in patients with chronic nephritis and uremia. However, in instances in which an individual with previously competent kidneys suddenly develops loss of renal function the artificial kidney may well have a life saving action. Kolff cites 2 cases in which survival has at least partly been due to the purification of the blood in the artificial kidney.

*Case 1.*—A man aged 52 who had suffered from dilatation of the heart and auricular fibrillation since 1938 came down with a pneumonia in 1944. He was treated with sulfamethylthiazole 6 Gm. daily for two days. The temperature came down but rose again. There was evidently a relapse of the pneumonia, so that two weeks later he received 6 Gm. of sulfapyridine daily for two days. Thereafter anuria developed which lasted for four days. At that time there was a continuous hiccup and the blood urea had gone up to 103 mg. per hundred cubic centimeters. In view of the dilatation of the heart and the auricular fibrillation no further examination was ordered, but the patient was immediately treated with vividialysis in the artificial kidney. During a period of fourteen hours 50.8 liters of blood passed through the apparatus and 52 Gm. of urea was removed. The blood urea nitrogen went down to 47 mg. per hundred cubic centimeters and the condition improved considerably. However, the diuresis did not start until two days later, when cystoscopy and lavage of both renal pelves were performed. Thereafter urinary secretion set in and complete cure ensued.

*Case 2.*—A woman aged 67 was admitted with high fever, distension of the abdomen and a large inflammatory tumor around the gallbladder. There was slight jaundice and complete anuria. She evidently suffered from acute cholecystitis and pericholecystitis, which had led to a hepatorenal syndrome with shutdown of the kidney. On the eighth day of the anuria, cystoscopy and lavage of the renal pelves were performed, which however was not followed by diuresis. On the next day the blood urea nitrogen was 184 mg. per hundred cubic centimeters. Potassium of the serum was 55 mg. per hundred cubic centimeters and the carbon dioxide combining power 40 volumes per cent. The patient was comatose and could hardly be awakened by shouting. There was edema of the buttocks and legs.

Vividialysis in the artificial kidney lasted for eleven and one-half hours during which time 80 liters of blood passed through the apparatus and 60 Gm. of urea was removed. After the dialysis of the blood urea nitrogen had gone down to 57 mg. per hundred cubic centimeters and the potassium to 19 mg. per hundred cubic centimeters on the next day, uremic signs disappeared and the mental condition became completely normal. Diuresis gradually set in.

Two months later the general condition was excellent. The urine contained only a trace of albumin, and the blood urea nitrogen was normal, 23 mg. per hundred cubic centimeters.

It seems certain that at least in the second case the artificial kidney acted as a life saving device.

Isidore Snapper, M.D.,
Mount Sinai Hospital,
New York

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Charitable Hospitals—Right of Nonprofessional Employees to Strike and Picket.**—The plaintiff, Society of the New York Hospital, filed an action to restrain the New York Building and Construction Trades Council's Maintenance Organization, A. F. of L., from causing any strike of the plaintiff's employees and from picketing in front of the plaintiff's hospital. The case was tried in the Supreme Court, special term, New York County.

The plaintiff is a public, charitable, nonprofit and nonsectarian corporation engaged in the operation and maintenance of a general hospital in the city of New York for the care and treatment of the sick and injured and for the advancement, through research and teaching, of preventive and curative medicine. In addition to its professional staff, the plaintiff employs approximately 2,500 persons, including employees working in the hospital's power plant, elevator operators and maintenance men such as electricians, mechanics, plumbers, carpenters, painters and upholsterers. The hospital is wholly dependent on its power plant for electricity to light and heat its premises and to operate such equipment as oxygen tents, respirators, incubators, sterilizers and other instruments and machines recognized as essential to the proper operation of a hospital. On Nov. 19, 1945 about 116 nonprofessional employees, including power plant workers, elevator operators and maintenance men, failed to report for work following a statement made two days previously by an officer of the defendant union to plaintiff's officers that some workers would not report on that day because conferences between plaintiff and defendants had apparently reached an impasse. These workers had not, at the time of the hearing, returned to their jobs, and their absence handicapped plaintiff in the performance of its functions. Also on November 19 members of the defendant union and employees of the plaintiff picketed in front of plaintiff's hospital. The picketing was, however, discontinued late that day pursuant to a temporary restraining order.

The Labor Law of New York (art. 20, sec. 700-715) provides for the creation of a Labor Relations Board. After defining the right of employees to organize and bargain collectively and prohibiting certain unfair labor practices by employers, it specifically exempts from its terms the employees of charitable, educational or religious associations or corporations. The plaintiff concedes that its employees have the right to organize for the purpose of collective bargaining, to attempt to bargain collectively with the plaintiff, and to assert and advertise their alleged grievances in any proper manner, it concedes that both the strike and the picketing performed by the defendant were entirely peaceful, unaccompanied by violence, misrepresentations, fraud or excesses of any kind, but it contends that the Labor Law in excluding from its benefits the employees of charitable, educational or religious associations or corporations, sets forth a public policy removing them from the pale of legal protection and outlaws any strike or strike supporting activities by such employees.

This raises, said the court, a very interesting question of statutory interpretation. Obviously, the legislature chose to single out the excepted categories for cogent reasons of public policy but there may well be charitable, educational or religious activities in which such interference would constitute a relatively minor or negligible nuisance. On the other hand, there are some occupations not excluded from the applicability of the Labor Law in which strikes and strike supporting activities might nevertheless be enjoined. It is the court's duty in each case, the opinion continued, to determine the purposes and objectives which workers embraced in the exempt categories may lawfully attempt to achieve by striking. In so doing the court must weigh the public interest against that to be served by allowing

such workers to obtain fair treatment through the utilization of those economic weapons which are available to them The right to strike has proved to be of proper potency to labor in our industrial history, but there are some contravening considerations which can be of even greater importance to the public interests as a whole. It is difficult to conceive of a public service of greater value than the maintenance of hospitals for the care of the sick and the injured and it is almost impossible to conceive of such hospitals functioning properly if they are subject to interference by strikes or otherwise Ministration to the sick cannot be delayed, surgical operations, as well as the routine care of those requiring medical attention, must be permitted to proceed at all times, the effective strength of medicines and serums must be preserved continuously under scientific conditions, the frantic immediacy required for the treatment of emergency cases cannot be suspended while awaiting the outcome of parleys between the hospital management and its employees over terms of labor These elements imperatively command that the generally broad right to strike be enjoined or otherwise limited in such cases A strike by its employees which injuriously affects the essential functions of a hospital must therefore be held to be improper and inimical to public interest. No strike productive of such results can be permitted against a hospital which is supported by the public through voluntary contributions as well as through contributions made by the local government, and which is maintained for the benefit of the entire public, including those who cannot pay either in whole or in part the cost of their care and medical attention

It does not follow, however, that merely because the court will enjoin a strike it will also prohibit peaceful picketing Labor's right to picket has been developed by the courts following a strong tide of enlightened public opinion In the case at bar the picketing was entirely peaceful and was conducted without violence or misrepresentation. It did however, accompany a strike, the existence of which was well known to the members of other unions who would have to cross the picket line to deliver the hospital's necessary supplies and who would inherently be averse to do so while the strike was in effect Striking and picketing usually are concomitants in the public mind. Inasmuch, said the court, as peaceful picketing has consistently been held to be an exercise of the constitutional right of freedom of speech, we do not feel that defendants should, at this time at least be enjoined from picketing, provided however, that the picketing be done in such form as will not deter persons having business or professional relations with the hospital from crossing the picket line, and provided, further, that such picketing does not otherwise interfere with the hospital's functions

Accordingly the court ordered that a decree be submitted prohibiting strikes against the plaintiff but permitting peaceful picketing not interfering with the hospital's functions—*Society of New York Hospital v Hanson, 59 N Y S (2d) 91 (N Y, 1945) [interim injunction continued 60 N Y S (2d) 589 (N Y, 1945)]*

**Evidence Conflict of Opinion Between Experts and Consulting Physician**—For some time prior to Sept. 28, 1945 the claimant had been undergoing treatment for a retroverted uterus On that day she suffered an accidental injury in the course of her employment with the Wright Aeronautical Corporation. At a subsequent hearing of her claim for workmen's compensation her physician testified that the accident aggravated her prior condition Two physicians who testified as experts on behalf of her employer, however, said that there was no causal connection between her work and her condition on the 28th The court of common pleas of New Jersey said that, when there is contradictory medical testimony, it is reasonable to give greater weight to the consulting physician's testimony, especially where, as here, she was also the treating physician and knew the claimant's condition before the date of the accident. Accordingly the award of the Workmen's Compensation Bureau in favor of the claimant was affirmed.—*Schumacher v Wright Aeronautical Corporation, 45 A (2d) 447 (N J, 1946)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL, May 11 page 178

### BOARDS OF MEDICAL EXAMINERS

ALABAMA Montgomery, Jan 21 23 Sec., Dr B F Austin 519 Dexter Ave. Montgomery 4

ARKANSAS * *Medical* Little Rock, June 6-7 Sec, Medical Board of the Arkansas Medical Society Dr L J Kosminsky, Texarkana *Eclectic* Little Rock June 6 Sec, Dr C H Young 1415 Main St Little Rock

CALIFORNIA *Examination* San Francisco June 11 13 Sec., Dr Frederick N Scatena 1020 N St Sacramento 14

COLORADO * *Endorsement* Denver July 2 Final date for filing application is June 17 Sec., Dr J B Davis 831 Republic Bldg Denver 2

CONNECTICUT * *Medical* Hartford, July 9 10 Sec to the Board Dr Creighton Barker P O Box 1438 New Haven *Homeopathic* Derby July 9 10 Sec Dr Joseph H Evans 1488 Chapel St., New Haven

DELAWARE *Examination* Dover, July 9 11 *Reciprocity* Dover July 16 Sec Medical Council of Delaware Dr J S McDaniel 229 S State St Dover

DISTRICT OF COLUMBIA * *Reciprocity* Washington June 10 Sec Commission on Licensure, Dr G C. Ruhland, 6150 E Municipal Bldg Washington

FLORIDA * Jacksonville June 24-25 Sec. Dr Harold D Van Schaick 2736 S W Seventh Ave. Miami 36

GEORGIA Atlanta Oct. 8 10 Sec. State Examining Boards, Mr R C Coleman 111 State Capitol Atlanta 3

HAWAII Honolulu, July 8-11 Sec Dr S E Doolittle 881 S Hotel St Honolulu 53

IDAHO Boise, July 9 Dir Bureau of Occupational Licenses Miss Agnes Barnhart, 355 State Capitol Bldg Boise.

INDIANA *Examination* Indianapolis June 1947 Exec Sec Board of Medical Registration & Examination, Miss Ruth V Kirk 627 K. of P Bldg Indianapolis 4

KANSAS *Reciprocity* Topeka, June 6 Sec. Board of Medical Registration & Examination Dr J F Hassig 905 N Seventh St Kansas City 10.

MAINE Augusta July 2 3 Sec Board of Registration of Medicine Dr Adam P Leighton 192 State St Portland

MARYLAND *Homeopathic* Baltimore June 18 19 Sec Dr J A Evans 612 W 40th St Baltimore. *Medical* Baltimore Dec 10 13 Sec Dr J T O Mara 1215 Cathedral St Baltimore

MASSACHUSETTS Boston July 9 12 Sec. Board of Registration in Medicine Dr H Q Gallupe 413 F State House Boston 33

MICHIGAN * Lansing Oct 9 11 Sec Board of Registration in Medicine Dr J E McIntyre 100 W Allegan St Lansing 8

MINNESOTA * Minneapolis June 18 20 Sec. Dr J F Du Bois 230 Lowry Medical Arts Bldg St Paul 2

MISSISSIPPI June. Asst. Sec. State Board of Health Dr R N Whitfield Jackson 113

NEW JERSEY Trenton, June 18-19 Sec Dr E S Hallinger 28 W State St Trenton.

NEW YORK Albany Buffalo New York and Syracuse June 24 27 Sec. Dr Jacob L Lochner Education Bldg, Albany

NORTH DAKOTA Grand Forks July 2 5 Sec., Dr G M Williamson 4½ S Third St Grand Forks

OREGON * Special Examination May 22 24 Final date for filing application is May 8 *Examination* Portland July 24-26 Exec Sec Miss Lorienne M Conlee 608 Failing Bldg Portland 4

SOUTH CAROLINA Columbia June 24-26 Sec. Dr N B Heyward 1329 Blanding St. Columbia

SOUTH DAKOTA * Pierre July 16-17 Sec., Medical Licensure State Board of Health Dr Gilbert Cottam Capitol Bldg Pierre.

TEXAS Dallas June 11 13 Sec Dr T J Crowe, 918 20 Texas Bank Bldg Dallas 2

WASHINGTON * Seattle July 11 12 Sec., Department of Licenses Miss Nell Adams Olympia

WISCONSIN * June 25 27 Sec. Dr C A Dawson River Falls

WYOMING Cheyenne, June 3 4 Sec. Dr G M Anderson Cheyenne.

* Basic Science Certificate required.

### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

COLORADO Denver, June 5 6 Sec. Dr Esther B Starks, 1459 Ogden St Denver

CONNECTICUT June 8 Address State Board of Healing Arts 250 Church St. New Haven 10

FLORIDA Gainesville, June 4 Final date for filing application is May 20 Sec. Dr J F Conn John B Stetson University DeLand

IOWA *Examination* Des Moines July 9 Sec. Division of Licensure & Registration Mr H W Grefe Capitol Bldg Des Moines 19

MINNESOTA *Examination* Minneapolis June 4-5 Sec Dr Raymond N Bieter 126 Millard Hall Univ of Minnesota Minneapolis 14

OREGON Portland July 6 Sec., Mr C D Byrne, Univ of Oregon, Eugene.

SOUTH DAKOTA Probably Aberdeen June 7 8 Sec Dr G M Evans, Yankton

TENNESSEE *Examination* Memphis, June 13 14 Sec., Dr O W Hyman, 874 Union Ave, Memphis

WISCONSIN *Examination* Milwaukee June 1 Sec Prof R N Bauer, 152 W Wisconsin Ave, Milwaukee 3

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

## American Journal of Clinical Pathology, Baltimore

**16**: 1-62 (Jan.) 1946


Comparative Cytology of Wright's Stained Smears and Histologic Sections in Multiple Myeloma. I. A. Arf and P. A. Herbut.—p. 1.
Lymphoblastic and Megakaryocytoid Multiple Myeloma. P. A. Herbut and I. A. Arf.—p. 13.
Giant Follicular Lymphoblastoma. S. F. Cohen and V. W. Bergstrom.—p. 22.
Use of Pectin and Celatin in Processing of Plasma in Blood Bank. M. G. Levine and R. I. Hoyt.—p. 40.
Problems in Blood Grouping, in Relation to Transfusion. I. J. Unger, A. S. Wiener and Eve B. Sonn.—p. 45.
Resistance of Erythrocytes to Hemolysis in Jaundice. H. Cohen.—p. 49.
Photoelectric Erythrocyte Count. II. Clinical Application. L. I. Blum.—p. 53.


## American Journal of Diseases of Children, Chicago

**71**: 1-112 (Jan.) 1946


*Mumps. Use of Convalescent Serum in Treatment and Prophylaxis of Orchitis. A. C. Rambar.—p. 1.
Pathogenesis of Congenital Hemolytic Disease (Erythroblastosis Fetalis). I. Theoretical Consideration. A. S. Wiener.—p. 14.
*Id. II. Illustrative Case Histories of Rh Sensitization. A. S. Wiener and Eve B. Sonn.—p. 25.
Sucking Response of Newly Born Babies at Breast. Study of 50 Cases. Mildred A. Norval.—p. 41.
Kaposi's Varicelliform Eruption. Studies on Etiology. W. A. Jaquette, Jr., J. H. Convey and D. M. Pillsbury.—p. 45.


**Mumps Convalescent Serum for Orchitis.**—An epidemic of mumps during the winter of 1945 in a specialized school of the Navy provided the material for this study by Rambar. From March 1 to July 1, 1945, 249 men were admitted to the hospital with mumps. Pooled serum was made from various groups of these patients, blood being drawn three to six weeks after recovery. Orchitis developed in 61 or 24.5 per cent, of the 249 men. In 86, to whom 40 cc. of mumps convalescent serum was given intravenously on admission, orchitis developed in 14, or 16.27 per cent. In 163 controls, orchitis developed in 47, or 28.83 per cent. These figures are significant. There was manifest encephalitis in 40 of the 249 patients, no difference being noted between the serum treated patients and the control groups. In 15 instances orchitis and encephalitis occurred together. Thus 86, or 35.3 per cent, of the 249 patients had orchitis, encephalitis or both. Convalescent serum and pooled plasma were used in the treatment of orchitis. Sixteen of the 26 treated patients had fever three days or less, the temperature of all of them dropping by crisis, as compared with a group of 30 control patients, in 10 of whom the fever lasted three days or less while the temperature dropped by crisis in only 7. Since the total number of days of fever in the treated group averaged 4.52 as compared with 5.4 in the controls, the value of serum or plasma as a therapeutic procedure cannot be definitely demonstrated.

**Rh Sensitization.**—Wiener and Sonn present 11 illustrative case histories in which sensitization to the Rh factor was the cause of congenital hemolytic disease. They stress that the Hr test is a valuable aid in determining the homozygosity or heterozygosity of type Rh. When the Hr test is negative, the person is homozygous (either genotype RhRh or genotype RhRh'), while if the Hr test is positive, he is almost surely heterozygous. If a man is homozygous for the Rh factor and his wife's serum contains Rh blocking antibodies, the prognosis for future pregnancies is virtually hopeless. In the presence of Rh sensitization, transfusions of plasma should be given instead of transfusions of blood unless Rh negative donors are available. Even a small intramuscular injection of Rh positive blood may be sufficient to sensitize an Rh negative woman. The injection of a potent antigen may prevent a person from becoming sensitized to a weaker antigen to which the person is exposed simultaneously. For example, the injection of typhoid or pertussis vaccine during pregnancy may be worth while in the case of Rh negative patients with sisters who have had erythroblastotic infants. Once sensitization has developed, however, counterimmunization does not affect the sensitization. That univalent antibodies (blockers) are more important than bivalent antibodies (agglutinins) in the pathogenesis of congenital hemolytic disease is proved by the ease with which the former can be demonstrated in the serum of erythroblastotic infants in the absence of agglutinins. This accounts for the lack of correlation between the isoagglutinin titer of the maternal serum and the severity of the hemolytic process in the infant. In the transfusion therapy of congenital hemolytic disease the washed red cells of the mother can be used because a newborn infant's serum never contains antibodies capable of reacting with the maternal red cells. A high hemoglobin concentration in an infant with hemolytic disease may mean that the disease process is mild, but frequently in such cases kernicterus or hemorrhagic manifestations develop and the infants die.

## American J. Obstetrics and Gynecology, St. Louis

**51**: 151-298 (Feb.) 1946. Partial Index


Dermoid Cysts of Ovary. Their Clinical and Pathologic Significance. W. J. Blackwell, M. B. Dockerty, J. C. Masson and R. D. Mussey.—p. 151.
Obstetrician's Responsibility for Hazards of First Few Days of Life with Special Reference to Anoxia and Prematurity. A. C. Beck.—p. 173.
Studies of Surgical Morbidity. II. Effect of Prostigmine on Urinary Tract in Gynecologic Surgery.—p. 184.
Cyclic Variations in Viscosity of Cervical Mucus and Its Correlation with Amount of Secretion and Basal Temperature. Hermann Vierlyer and W. F. Lommerenke.—p. 192.
Tubal Sterilization. R. van Dyck Knight.—p. 201.
*Early Controlled Ambulation in Puerperium. W. J. Guerriero.—p. 210.
Anesthetic Management of Patients with Respiratory Paralysis Requiring Laparotomy. I. A. Rovenstine and H. Strauss.—p. 213.
Pregnancy in Cases of Hilitary Dwarfism. G. Speck.—p. 217.
*Etiology and Treatment of Heartburn of Pregnancy. H. M. Wiley.—p. 221.
Routine Use of Stilbestrol for Engorgement and Lactation in Non-Nursing Mothers. S. Luban.—p. 225.
Penicillin in Obstetrics. Preliminary Survey. H. A. Lower and C. A. Cravotta.—p. 230.
Presacral Sympathectomy for Intractable Functional Uterine Pain. E. G. Waters.—p. 235.
Initial Fetal Atelectasis. H. J. Zeitlenman.—p. 241.
Neoplasms in Apparently Normal Ovaries. T. Cianfrani.—p. 246.
Theca Cell Cystoma of Ovary. J. G. Sharnoff and J. R. Lisa.—p. 253.
Hydradenoma and Hydradenoid Carcinoma of Vulva. G. R. Lacy, Jr.—p. 268.
Excessive Varix of Vulva and Vagina in Full Term Pregnancy. Delivery by Cesarean Section. S. S. Adler.—p. 272.


**Early Controlled Ambulation in Puerperium.**—Guerriero says that a system of early discharge of the puerperal patient from the third to the fifth day under controlled ambulation was instituted in 1940. There was a careful daily follow up in the homes by the nursing service of the Maternal and Child Health Division of the City Board of Health of New Orleans. The initial survey of 2,926 of these patients revealed the fact that only 30 developed immediate puerperal complications. These were in the nature of 2 patients with endometritis, 2 with mild pyelonephritis and 26 with engorgement of the breast and/or fissured or cracked nipples. Postpartum examination of these patients at six weeks revealed that the general recovery rate was better in comparison with patients who remained nonambulatory in the hospital. Relaxations and/or uterine prolapse, malpositions of the uterus and subinvolution of the uterus were present in a smaller number than in nonambulatory patients. A further detailed study of 323 private patients was undertaken in order to assay the advantages or disadvantages in a class of patients usually seen in private practice. The author concludes that early controlled ambulation offers advantages to the obstetric patient without imposing disadvantages.

**Heartburn of Pregnancy**—Normally the emptying time of the stomach is about two hours, whereas in pregnancy this time may be doubled. Twenty pregnant women complaining of heartburn were given a supply of neostigmine bromide tablets (15 mg. each) and instructed to take one as soon as the symptom appeared. Fifteen of the 20 patients reported complete relief within fifteen minutes after taking one tablet. If the symptom recurred (as it often did each day) another tablet of neostigmine bromide gave similar prompt relief. Two patients reported partial relief; 2 obtained no benefit at all and in 1 case the results were inconclusive.

## American Journal of Pathology, Ann Arbor, Mich

**22** 1-234 (Jan.) 1946

Paget's Disease of Nipple with Special Reference to Changes in Ducts. K. Inglis.—p. 1
Chronic Granulomatous Disease of Swine with Striking Resemblance to Hodgkin's Disease. W. D. Forbus and C. L. Davis.—p. 35
*Fat Embolism. S. Warren.—p. 69
Growth of Rickettsiae of Tsutsugamushi Fever on Chorioallantoic Membrane of Developing Chick Embryo. H. L. Hamilton.—p. 89
Lesions of Skeletal Muscles in Rheumatoid Arthritis: Nodular Polymyositis. G. Steiner, H. A. Freund, B. Leichtentritt and M. E. Maun.—p. 103
*Hydrogen Sulfide Poisoning: Report of 2 Cases, 1 with Fatal Outcome. from Associated Mechanical Asphyxia. A. W. Freireich.—p. 147
Hyperplasia of Adrenal Cortex Associated with Bilateral Testicular Tumors. H. Cohen.—p. 157
Studies on Ameboid Motion and Secretion. of Motor End Plates. VII. Experimental Pathology of Secretory Mechanism of Motor End Plates in Thermal Shock. E. J. Carey, L. C. Massopust, W. Zeit and E. Haushalter.—p. 175

**Fat Embolism**—Warren reviewed 100 consecutive cases of fat embolism from the files of the Army Institute of Pathology. Ninety one cases were due to trauma with fracture of one or more bones, 4 cases were due to blast injury without fracture, 3 to burns and 1 each to pressure asphyxia without fracture and to trauma from shell fragments. Fat embolism produced instant death (peracute form) in 9, death following symptoms of immediate origin (acute form) in 17 or death following symptoms developing after a free period (subacute form) in 58 cases. The occurrence of fat embolism is apparently independent of the nutritional state. A free period in which the patient may be apprehensive may precede the development of symptoms. Fat embolism may be recognized clinically by the development of pulmonary or cerebral symptoms following (*a*) a fracture or extensive injury of soft parts or (*b*) manipulation of a fracture. After some time, lipuria or fat droplets in the sputum may aid in establishing the diagnosis. Although renal fat embolism may be severe, renal failure is not a cause of death. Fat embolism may be missed as a cause of death unless it is searched for consistently. In necropsy material the presence of fat may be checked by watching for vacuoles in the glomerular tufts or in the lung parenchyma in routine sections. Therapy is usually unavailing and is best directed toward the prevention of anoxia.

**Hydrogen Sulfide Poisoning**—Freireich reports 2 cases of hydrogen sulfide poisoning, 1 with fatal outcome, as a result of cleaning a cesspool to which concentrated sulfuric acid had been added. The author urges that health agencies and the public should be warned of the dangers of such procedures.

## American Journal of Public Health, New York

**36** 101-208 (Feb.) 1946

The Rh Factor, Vitamin K and Rubella Virus in Relation to Infant Mortality and Morbidity. Edith L. Potter.—p. 101
Tuberculosis Case Finding with Mobile Photoroentgenographic Unit in Sumner County, Tenn. R. B. Turnbull, W. B. Farris and Mildred Patterson.—p. 110
Control of Typhus in Italy, 1943-1944, by Use of DDT. C. M. Wheeler.—p. 119
Immunologic Studies on Epidemic of Influenza in Iceland. B. Sigurdsson and O. Bjarnason.—p. 130
Public Health Field Experience. B. G. Horning.—p. 135
Public Health Nursing Field Experience. Mildred L. Tuttle.—p. 141
Restaurant Sanitation in South Pacific. K. D. Larson.—p. 147
Survey of Blood Plasma Levels of Vitamin A, Carotene, Ascorbic Acid and Tocopherols of Persons in Area of Endemic Malnutrition. P. L. Harris, K. C. D. Hickman, J. L. Jensen and T. D. Spies.—p. 155
Permanent Program for Typhus Fever Control in Memphis, Tenn. J. C. Beall.—p. 161
Outbreak of Infectious Hepatitis Apparently Milk Borne. W. J. Murphy, L. M. Petrie and S. D. Work, Jr.—p. 169

## Am. J. Roentgenol. & Rad. Therapy, Springfield, Ill.

**55** 1-124 (Jan.) 1946

Roentgenologic Findings in Lungs of Victims of Cocoanut Grove Disaster. M. Finland, M. Ritvo, C. S. Davidson and S. M. Levenson.—p. 1
*Pulmonary Changes in Carbon Tetrachloride Poisoning. C. M. Thompson.—p. 16
Esophagobronchial Fistula Through Esophageal Diverticulum. A. Melamed and B. M. Zimmerman.—p. 20
True Pericardial Diverticulum: Report of Case with Safe Operative Removal. M. L. Mazer.—p. 27
Rickets and Infantile Scurvy Occurring in Case of Osteogenesis Imperfecta. R. S. Bromer.—p. 30
Generalized Leontiasis Ossea. L. H. Garland.—p. 37
Histologic Effects of Radiophosphorus on Normal and Lymphomatous Mice. W. S. Graff, K. G. Scott and J. H. Lawrence.—p. 44
Studies on Effects of Radioactive Sodium and of Roentgen Rays on Normal and Leukemic Mice. T. C. Evans and Edith H. Quimby.—p. 55
Analysis of Physical Factors Controlling Diagnostic Quality of Roentgen Images: Part III. Contrast and Intensity Distribution Function of Roentgen Image. R. H. Morgan.—p. 67

**Pulmonary Changes in Carbon Tetrachloride Poisoning**—Thompson treated 20 patients for carbon tetrachloride poisoning occurring on a submarine. Four were severely ill presenting a typical toxic nephrotic syndrome evidenced by puffiness and swelling of the soft tissues of the face, hands and feet. They had retention of nitrogenous waste products in the blood stream and evidence of kidney damage. One of the 4 patients died. The clinical course in each case and the necropsy observations in the fatal case were consistent with those described in the literature. Pulmonary roentgenographic changes were discovered late in the course of the disease. The changes varied from consolidation of all five lobes to mild increase in all lung markings. In 1 case there was a change in the configuration of the cardiac silhouette between examinations. Only the fatal case manifested symptoms and physical manifestations of organic change in the lung fields. In the other 3 cases the predominating symptoms were gastrointestinal followed by renal failure. The amount of change on the roentgenograms of the chest was directly proportional to the severity of the clinical illness. Perhaps pulmonary x-ray changes may be used as criteria in the prognosis and morbidity of cases of carbon tetrachloride poisoning.

## American Journal of Surgery, New York

**71** 167-302 (Feb.) 1946

Urinary Incontinence: Special Reference to Certain Factors Which Are Necessary in Cure of This Condition. I. F. Frost.—p. 172
Essential Hypertension: Examination of Its Mechanism in Relation to Surgical Treatment. R. C. Shaw.—p. 181
Bronchiectasis and Its Surgical Considerations. H. L. Skinner and R. D. Duncan.—p. 197
Evaluation of Treatment of Cancer of Breast: Suggestion for Its Modification. C. S. White.—p. 205
Benign Tumors of Vulva. L. R. Weinshel.—p. 210
Treatment of Compression Fracture of Spine: Report of 160 Cases at Fordham Hospital. S. W. Boorstein.—p. 216
March (Fatigue) Fractures of Long Bones of Lower Extremity and Pelvis. A. L. Leveton.—p. 222
Penicillin Therapy as Adjunct to Genitourinary Surgery: Report of 11 Cases. C. P. Mathe.—p. 233
Critically Burned Patient. J. C. Urkov.—p. 242
*Use of Blood-Kaolin-Penicillin Paste in Treatment of Varicose and Torpid Leg Ulcers. E. J. Orbach.—p. 253

**Blood-Kaolin-Penicillin Paste for Leg Ulcers**—Considering the requirement of ambulatory treatment of varicose ulcers, Orbach adopted a simple and time saving method whereby the patient's blood, or group O from a blood bank, if available, was mixed with equal parts of kaolin. To this mixture 0.5 cc. of penicillin standard solution (5 000 units per cubic centimeter) was added to 10 cc. of paste. The paste was applied to the ulcer and covered with a sheet of gauze. A thick layer of talcum powder was spread over the gauze and the entire leg was encased in an Unna's paste boot or an elastoplast bandage. The bandage was changed every five to eight days and the patient was kept ambulatory if possible. The author used this method in 19 cases of varicose and trophic leg ulcers with and without chronic eczema. In 2 cases the paste failed to effect a cure. Superficial and deep ulcerations were benefited by the blood paste, whereas chronic varicose eczema became aggravated. Stimulation of granulations, promotion of epithelization, reduction of infection and a pain relieving effect on irritable ulcers were evident. The paste may be considered

to be a valuable adjunct in the treatment of varicose ulcers It seems to exert a nutritional and protective effect on the ulcerations In the therapy, however, the reduction of the venous backflow by ligation, sclerotherapy and supportive bandages must not be neglected

## Am J Syphilis, Gonorrhea and Ven. Dis, St Louis

**30** 1-98 (Jan) 1946

*Experimental Gonococcic Urethritis in Human Volunteers J F Mahoney, C J Van Slyke J C Cutler and H L Blum—p 1
Cardiolipin Antigens in Serodiagnosis of Syphilis Microflocculation Slide Test C R Rein and H N Bossak—p 40
Relative Prophylactic Effectiveness Against Syphilis of Ointments Containing Calomel in Different Particle Size W L. Fleming and Mary H Wolf—p 47
Congenital Syphilis Report of Possible Third Generation Syphilis with Fatal Spontaneous Cerebral Hemorrhage L J Underwood—p 54
Syphilitic Vascular or Cardiovascular Disease Occurring in Early Adult Life Following Acquired Syphilitic Infection I L Schamberg—p 58
Studies on Liver Function II Value of Laboratory Tests in Prevention of Arsenical Toxicity with Report of 2 Unusual Cases of Encephalopathy E Hinds and F Kalz—p 70
Relative Efficacy of Three Treatment Routines for Gonorrheal Urethritis in Adult Male A Gelperin and T Coleman—p 82

**Experimental Gonococcic Urethritis in Human Volunteers**—The study was carried out on 241 human volunteers in the penitentiary at Terre Haute, Ind The most effective method of conveying infection to volunteers was found to be the direct transference of secretions from the infected patient to the urethra of normal volunteers This mode of transmission was not considered adaptable for the study because neither the supply, the bacterial content nor the biologic properties of the inoculum could be controlled adequately All patients who developed experimental disease and who were subsequently treated with penicillin attained clinical and bacteriologic cure All patients infected with sulfonamide susceptible strains attained clinical and bacteriologic cures as a result of one treatment course of a sulfonamide. With 1 exception all patients infected with a strain of organisms considered to be sulfonamide resistant failed to attain clinical cure as a result of sulfonamide therapy There was no instance of a persistent carrier state noted following experimental infection and subsequent therapy There was a significantly lower rate of experimental infections in patients with a history of previous gonorrheal infection

## Annals of Surgery, Philadelphia

**123** 1-160 (Jan) 1946

Delayed Internal Fixation of Compound Battle Fractures in Mediterranean Theater of Operations Follow Up Study in Zone of Interior O P Hampton Jr—p 1
Incidence of Complications in Use of Transfixion Pins and Wires for Skeletal Traction C K Kirby and W T Fitts Jr—p 27
Abdominal Surgery in Evacuation Hospital B Bradford Jr L H Battle Jr and S S Pasachoff—p 32
Chemotherapy in Traumatic Surgery of Abdomen P R Imes.—p 44
Lung Abscess Complicating Penetrating Wounds of Chest T T Jacobs and J Burke—p 48
Operative Treatment of Decubitus Ulcer E J Croce R N Schullinger and T P Shearer—p 53
Role of Chemotherapy in Wounds and Surgical Infections Clinical and Bacteriologic Studies D Ackman and F Smith—p 70
Pain in Men Wounded in Battle H K Beecher—p 96
Retroperitoneal (Mesenteric Pouch) Hernia Case Report. I S Ravdin and P J Hodes—p 106
Cystic Disease of Liver Report of Case O T Clagett and W J Hawkins—p 111
*Congenital Cystic Dilatation of Common Bile Duct Follow Up on Previously Reported Case and Report of Additional Case. T A Shallow S A Eger and F B Wagner Jr—p 119
Traumatic Rupture of the Gallbladder Case Reports and Notes on Choleperitoneum M Norgore—p 127
Sarcoma Complicating Paget's Disease of Bone T J Summey and C L. Pressley—p 135
Extradural Spinal Hemmorrhage A Ver Brugghen—p 154

**Congenital Cystic Dilatation of Common Bile Duct**—In both cases of congenital cystic dilatation of the common bile duct observed by Shallow and his associates the lesion was suspected before the operation The diagnostic triad tumor, jaundice and pain was present in 1 case, but pain was absent in the other The 5,800 cc. of cyst fluid observed in the second case represents the largest amount recorded in an undisputed case. The safest treatment, and the one recommended for general employment, is primary anastomosis of the cyst to the duodenum This procedure was successfully performed in case 2 Extirpation of the cyst followed by primary anastomosis of the remainder of the biliary duct system to the duodenum may be attempted if the lesion is suspected preoperatively, the patient a good operative risk, the cyst large, and infection minimal or absent. The feasibility of this procedure is demonstrated in the first patient, who is entirely well three years and eight months postoperatively

## Archives of Dermatology and Syphilology, Chicago

**53** 1-78 (Jan) 1946

Reactions of Hemopoietic System to Agents Used in Treatment of Dermatoses Effects of Low Voltage Roentgen Ray Therapy F Pascher and B Kanee—p 1
Incidence of Dermatoses in Office Practice in Hawaii H L. Arnold Jr—p 6
Recurrent Fixed Erysipelas like Dermatophytid M Waisman—p 10
Use of Sulfated Oil for Cleansing External Auditory Canal. R. P Little—p 19
Tyrothricin in Cutaneous Infections H E Anderson—p 20
Oxophenarsine Hydrochloride in Treatment of Lupus Erythematosus A B Hyman—p 26
Localized Sensitivity to Crude Penicillin Report of Case. J A. McGuire—p 31
*Treatment of Dermatophytosis and Hyperhidrosis with Formaldehyde and Cupric Sulfate Iontophoresis E D Freis—p 34
Diffusion of Water Through Dead Plantar Palmar and Torsal Human Skin and Through Toe Nails G E Burch and T Winsor—p 39
*Adrenal Glands in Pemphigus Vulgaris Report of Case J W Goldzieher—p 42

**Formaldehyde and Cupric Sulfate Iontophoresis**—Freis employed the method of formaldehyde iontophoresis in the treatment of 85 patients with epidermophytosis of all grades of severity The therapeutic response in patients whose disease was of moderate severity was prompt and effective The solution proved to be too caustic to be used in severe infections with denuded surfaces Fourteen patients with uncomplicated hyperhidrosis were treated with three daily treatments of solution of formaldehyde by iontophoresis with resulting complete remission of symptoms for approximately one month Thirty five patients with dermatophytosis were treated with cupric sulfate solution by iontophoresis The therapeutic response was good in cases in which the severity of the disease was moderate, but more treatments were required to effect a remission than with the use of formaldehyde. Cupric sulfate was well tolerated in cases of acute severe lesions exhibiting denuded surfaces The results of treatment were good. Iontophoresis was successful in the treatment of severe chronic phytid reactions when other methods of therapy had failed Treatment should be applied to the phytid lesions as well as to the feet Serious toxic reactions were not encountered Judicious use of formaldehyde and cupric sulfate iontophoresis produces a prompt clinical remission of dermatophytosis in 75 per cent of cases

**The Adrenals in Pemphigus Vulgaris**—A woman aged 34 who had pemphigus vulgaris showed good response during a period of therapy with adrenal cortex extract but died after the treatment was discontinued Necropsy revealed a congenital malformation of the left adrenal gland and extensive destruction of the right gland The pathologic process was similar to that described in a previous publication Goldzieher assumes that there was congenital malformation of the left adrenal gland, which was represented only by some scattered nodules of cortical tissue which were highly inadequate from the functional point of view On the right side the major portion of the gland had been destroyed by a thrombosis of not too recent date. The peripheral tissue showed both acute and chronic degenerative changes with fibrosis and some evidence of nodular regeneration Judging from the histologic picture there was really no functional cortex left, the medulla had been entirely destroyed

## Archives of Neurology and Psychiatry, Chicago

**55** 1-78 (Jan) 1946

*Histopathologic Effect of Anoxia on Central Nervous System L. R. Morrison—p 1
Neurologic Manifestations Associated with Malaria in Ducks Clinicopathologic Study D E. Fletcher and R H Rigdon—p 35
Nystagmus Appraisal and Classification. R. N DeJong—p 43
Onset of Guillain Barré Syndrome Following Exposure to Mustard Gas J G Chusid and G H Marquardt—p 57

**Histopathologic Effect of Anoxia on Central Nervous System.**—Morrison exposed 25 dogs daily to atmospheres of low oxygen concentration at the pressure of sea level and 10 monkeys were similarly exposed in a decompression chamber

The oxygen content of the arterial blood was measured in the dogs Microscopic studies were made on the central nervous systems of all the animals and on the adrenal glands of the dogs The degree and duration of anoxia were important. It was found that a single sudden exposure to a simulated altitude of 32,000 feet (10,000 meters) for twenty-five minutes was capable of producing extensive laminar necrosis in the cortex of the monkey With repeated exposures to mild hypoxia it was observed that the first histologic changes occurred in the cell bodies of the cortical gray matter This took place at a level of about 12 or 13 volumes per cent of oxygen in the blood if the exposures were long enough and were repeated often enough. When the proportion of oxygen was reduced still lower to about 10 volumes per cent, and the number of exposures was increased, the white matter also became involved and presented a pattern of demyelination in the corpus callosum, the centrum semiovale and the adjacent fibers of subcortical white matter, which, in the cases of more severe anoxia, suggested a resemblance to Schilder's disease Aside from the lesion of the white matter frank necrosis was usually found to occur only after episodes of anoxia sufficiently severe to produce cessation of respiration The frontal lobe was not often involved and the temporal lobe least often. The cerebellum was more frequently affected than the basal ganglions, and the spinal cord and medulla were unaffected by any degree of anoxia compatible with life. An oxygen level of 4 or 4 5 volumes per cent was about as low as a dog could tolerate. Respirations quickly ceased below that level. The adrenal glands showed increased cortical activity

## Archives of Otolaryngology, Chicago

**43 1-92 (Jan) 1946**

Irradiation of Eustachian Tube Anatomic Physical and Clinical Study of Treatment for Recurrent Otitis Media Applied to Aero-Otitis E P Fowler Jr —p. 1

Clinical Use of Penicillin in Infections of Ears Nose and Throat A T Smith —p 12

Transtubal Instillation of Penicillin in Acute Otitis Media J A Weiss —p 17

Penicillin in Otolaryngologic Practice I Berger —p 19

Laryngeal Neurosis Incident to Military Service B Riseman and W J Aagesen —p 22

*Evaluation of Lempert Fenestra Nov Ovalis Operation in Treatment of Otosclerosis Report on 36 Patients Who Were Selected for This Operation. S D Greenfield —p 25

Tissue Changes Produced in Nasal Mucous Membrane of Normal Mice by Prolonged Local Administration of Some Solutions Containing Sulfonamide Compounds F T Callomon —p 31

Histologic Observations on Healing of Labyrinthine Fistulas in Monkeys J R. Lindsay —p 37

*Bronchoscopy as Aid in Diagnosis and Treatment of Allergic Pulmonary Disease. W A Lell —p 49

Clinical Results in Patients Treated by Intranasal Ethmoidectomy F W Dixon —p 59

Modification of Extralaryngeal Approach to Arytenoidectomy for Bilateral Abductor Paralysis De Graaf Woodman —p 63

Surgical Treatment of Chronic Frontal Sinusitis S Jesberg —p 66

Allergy E L. MacQuiddy and R. E King —p 73

**Lempert's Fenestra Nov-Ovalis Operation in Otosclerosis** —Greenfield reports the results of the Lempert fenestra nov-ovalis operation in 36 selected cases The author concludes that this operation is the only form of treatment for the restoration of hearing in patients with otosclerosis The patients most suitable for operation are those with the purely conductive type of deafness without evidence of nerve involvement.

**Bronchoscopy in Diagnosis of Allergic Pulmonary Disease** —In a bronchoscopic study of 176 children with symptoms of asthma Lell found that 18 had foreign bodies in the respiratory tract, 5 had such objects in the esophagus and 23 had other organic changes The majority of the patients in status asthmaticus who were observed bronchoscopically showed a hemorrhagic and edematous appearance of the mucous membrane of the trachea and both main bronchi with the presence of thick, tenacious secretion In addition most of the patients showed collapse of the posterior tracheobronchial wall Both gross and microscopic studies of the respiratory tracts of 5 patients who died in status asthmaticus confirmed these findings The author states that bronchoscopic aspiration of the pulmonary secretion of patients in status asthmaticus who do not respond to medical treatment may often be a life saving measure The results in 102 patients treated bronchoscopically are tabulated. Oxygen administered through the bronchoscope during the aspiration relieves the dyspnea

## Archives of Surgery, Chicago

**52 1-112 (Jan) 1946**

Arteriovenous Aneurysms of Scalp and Face. W E Dandy —p 1

Pilonidal Sinus and Cyst Clinical Study F J Burns —p 33

*Effect of Intravenous Administration of Oxygen on Shock in Dogs and in Human Beings M Jacobi B Klein H Rascoff and others —p 42

Study of Gastric Lesions by Means of Biopsy Specimens Removed Endoscopically B Kenamore and H Scheff and N A Womack —p 50

Diverticula of Stomach W R Moses —p 59

Progress in Orthopedic Surgery for 1944 XIII Fractures W G Stuck D H O Donoghue H F Johnson and others —p 66

Id XIV Conditions Involving Spine and Thorax Exclusive of Those in Lower Part of Back. J R Cobb —p 98

**Intravenous Administration of Oxygen in Shock** —Jacobi and his associates studied the effects of intravenously administered 100 per cent (commercial and U S P) oxygen in 12 dogs with experimentally induced toxic shock and in 3 human beings with severe acute progressive (secondary traumatic) shock No symptoms of vapor lock (cardiac tamponade), gas embolization or other deleterious effect developed clinically, and no evidence of embolization or vapor lock was noted at necropsy in the animals All 3 human beings recovered rapidly from shock The earliest evidences of improvement consisted in the return of normal color to mucous membranes and an increasing bright pink-red color to the blood followed by an elevation in blood pressure and diminution in respiratory rate. The concentration of blood cells and the specific gravity of the capillary blood, both previously extremely elevated, fell rapidly toward normal Gaseous oxygen intravenously administered at pressures at or slightly above venous pressure and at rates of 60 to 600 cc. per hour depending on the size and the age of the person, can be given with safety in the treatment of secondary shock. It may be efficacious when oxygen by inhalation fails, since by the intravenous route a functionally deficient lung can be by-passed and the necessary oxygen made available to the body

## Bulletin of Johns Hopkins Hospital, Baltimore

**78 1-56 (Jan.) 1946**

*Experimental Production of Anaphylactic Pulmonary Lesions with Basic Characteristics of Rheumatic Pneumonitis J E Gregory and A R Rich —p 1

Relation of Degree of Sensitivity to Tuberculin to Persistence of Sensitivity and to Prognosis in Young Children Lydia B Edwards and Janet B Hardy —p 13

Studies on Acute Schistosomiasis Japonica in the Philippine Islands I Clinical Study of 337 Cases with Preliminary Report on Results of Treatment with Fuadin in 110 Cases F T Billings W L Winkenwerder and A V Hunninen —p 21

**Experimental Anaphylactic Pulmonary Lesions** —Gregory and Rich studied sections from the lungs of 56 rabbits subjected to the serum sickness type of hypersensitive reaction In 10 of the animals there occurred small focal lesions characterized by damage to the alveolar capillaries (thrombosis exudation of fluid and cells hemorrhage) which, in their basic nature resemble the lesions of rheumatic pneumonitis This experimental evidence is offered as further support of the view that the various lesions of rheumatic fever are the results of hypersensitivity

## Endocrinology, Springfield, Ill.

**38 1-64 (Jan) 1946 Partial Index**

Effect of Pituitary Adrenotropic Hormone on Cholesterol and Ascorbic Acid Content of Adrenal of Rat and Guinea Pig G Sayers Marion A. Sayers Tsan Ying Liang and C N H Long —p 1

Influence of Diethylstilbestrol on Alloxan Diabetes Paired Feeding Experiments R G Janes and H Dawson —p 10

Metabolism of Steroid Hormones Isolation of Androgen from Human Urine Containing an 11 Oxygen Substitution in Steroid Ring A M Miller R I Dorfman and E L Severinghaus —p 19

Effect of Diet on Growth and Survival of Adrenalectomized Rats Treated with Desoxycorticosterone Acetate Pellets A Segaloff —p 26

Influence of Adrenalectomy on Utilization of Acetone Bodies. E. M MacKay A N Wick and C Barnum —p 30

## Geriatrics, Minneapolis

**1** 1-116 (Jan.-Feb.) 1946

Geriatrics The General Setting E. L. Tuohy—p. 17
Incidence and Treatment of Delirious Reactions in Later Life E. J. Doty—p. 21
Tuberculosis Among Persons Over 50 Years of Age. J. A. Myers—p. 27
American Contributions to Literature of Geriatrics W. D. Postell.—p. 41
Geriatric Anesthesia E. A. Rovenstine—p. 46
Geriatrics and Postwar Problems M. W. Thewlis—p. 54
Mental Disorders of Old Age H. D. Palmer—p. 60
Bronchial Asthma with Special Reference to Its Elderly Victims. J. Forman—p. 80

## Journal of Immunology, Baltimore

**52** 1-100 (Jan.) 1946

Protection Between Strains of Heterologous Agglutinogenic Types of Beta Hemolytic Streptococci of Group A. III. Further Observations. Alice C. Evans—p. 1
Standardization of Cardiolipin Lecithin Cholesterol Antigen in Precipitation Test for Syphilis. R. Brown—p. 17
Studies with Somatic Antigen of Shigella Paradysenteriae (Flexner). J. Smolens, S. P. Halbert, S. Mudd, Beatrice W. Donk and L. M. Gonzalez—p. 41
Use of Papaverine Hydrochloride in Prevention of Anaphylactic Shock in Guinea Pigs. D. E. Frank—p. 59
Studies on Effects of X Rays on Phagocytic Indices of Healthy Rabbits. Preliminary Report. J. C. Glenn, Jr.—p. 65
Leukoagglutination. Differentiation of Normal Leukocytic and Leukemic Cell Types. B. Steinberg and Ruth A. Martin—p. 71
Method of Producing in Inbred Albino Rats a High Percentage of Immunity from Tumors Native in Their Strain. P. M. Aptekman, Margaret R. Lewis and Helen Dean King—p. 77
Precipitin Reactions of Human Seminal Plasma. V. Ross—p. 87
Decreased Antigenicity of Coupled Hapten-Protein Antigen Resulting from Treatment with Too Much Hapten. W. C. Boyd and Estelle R. Warshaver—p. 97

## Journal of Lab. and Clinical Medicine, St. Louis

**31** 1-106 (Jan.) 1946

Alkaline Phosphatase Activity in Normal and Abnormal Human Blood and Bone Marrow Cells. M. Wachstein—p. 1
Effects of Adrenalin and Nembutal Anesthesia on Blood Constituents Before and After Splenectomy. K. G. Wakim—p. 18
Pectin Excretion Studies in Human Being. D. D. Kozoll, B. W. Volk, F. Steigmann and H. Popper—p. 30
Use of Copper Sulfate Method of Hemoglobin Estimation for Screening Blood Donors. Mary Heiss Boynton—p. 40
Studies on Cultivation of Rickettsiae in Eggs. Florence K. Fitzpatrick—p. 45
Liver Functional Impairment in Therapeutic Malaria with Particular Reference to Unsuccessful Use of Methionine as Protective Agent. C. D. Cook and F. W. Hoffbauer—p. 56
Formation and Excretion of Acetylated Sulfonamides. K. H. Beyer, H. F. Russo, Elizabeth A. Patch, L. Peters and K. L. Sprague—p. 65
Miscellaneous Pharmacologic Actions of Citrinin. Wei Chang Chu—p. 72
Effect of Synthetic Vitamin K and of Quinine Sulfate on Prothrombin Level. A. J. Quick—p. 79
Depression of Gamma Globulin in Hypoproteinemia Due to Malnutrition. E. G. Krebs—p. 85
Inability of Cysteine to Inactivate Penicillin in Presence of Broth and Blood. H. L. Hirsh and C. Barbara O'Neil—p. 90

**31** 107-260 (Feb.) 1946

*Radioactive Phosphorus as Therapeutic Agent. Review of Literature and Analysis of Results of Treatment of 155 Patients with Various Blood Dyscrasias, Lymphomas and Other Malignant Neoplastic Diseases. E. H. Reinhard, C. V. Moore, Olga S. Bierbaum and S. Moore—p. 107
Treatment of Ulcerative Colitis with Sulfadiine and Sulfazole. R. H. Major—p. 219
Observations on Treatment of Tropical Sprue with Folic Acid. T. D. Spies, F. Milanes, A. Menéndez, Mary B. Koch and Virginia Minnich—p. 227
Method for Determining Relative Anticonvulsive Activity of Barbiturates. V. V. Cole and H. R. Hulpieu—p. 242
In Vitro Method for Determining Resistance of Beta Hemolytic Streptococci to Sulfadiazine. M. Trowbridge, Jr.—p. 248
Effect of Metals on Giemsa Stain Solutions in 50 Per Cent Glycerol and Methanol Mixture. R. D. Lillie—p. 253

**Radioactive Phosphorus in Blood Dyscrasias and Neoplastic Diseases**—Reinhard and his associates present the results obtained in 155 patients treated at the Mallinckrodt Institute of Radiology. The half-life of $P^{32}$ (14.3 days) permits steady radiation of tissues for several weeks yet is short enough so that the destructive effect on tissues can be controlled. The authors think that radioactive phosphorus is probably the best therapeutic agent for polycythemia vera. In the great majority of patients, the clinical course of acute lymphatic leukemia is not favorably influenced by $P^{32}$ therapy. In a few patients clinical improvement has been observed. Spontaneous remissions of acute lymphatic leukemia have been observed. In the treatment of chronic lymphatic leukemia, $P^{32}$ is probably as satisfactory as, but no better than, roentgen radiation. Radioactive phosphorus is of no value in the treatment of monocytic leukemia. Hodgkin's disease, lymphosarcoma, reticulum cell sarcoma and multiple myeloma do not respond as favorably to $P^{32}$ as they do to x-radiation. From observations on the few patients who have been treated there is no reason to believe that $P^{32}$ is a satisfactory therapeutic agent for the treatment of lymphoepithelioma, malignant melanoma, carcinoma of the gallbladder, carcinoma of the breast, Ewing's tumor, mycosis fungoides or xanthomatosis. $P^{32}$ has been shown to have a profound effect on the bone marrow. Severe leukopenia, thrombocytopenia and anemia may occur as complications of the therapy. In patients with any type of chronic leukemia, roentgen radiation is more effective in some cases than $P^{32}$ in bringing about a rapid reduction in the size of the spleen or lymph nodes. Therefore x-rays should be employed whenever the prompt reduction of nodes or the spleen is necessary to relieve symptoms or remove pressure on some vital organ. X-rays may be used to supplement radioactive phosphorus therapy for this purpose.

## Journal-Lancet, Minneapolis

**66** 1-30 (Jan.) 1946

Serology and Obstetrics. R. T. LaVake—p. 1
Free Plasma Service in North Dakota. M. E. Koons—p. 4
Short Leg Backache. J. M. Butler—p. 10
Some Common Skin Diseases and Their Treatment. H. C. Leiter—p. 12

**66** 31-64 (Feb.) 1946

The Ulcer Problem. O. H. Wangensteen—p. 31
High Fluid Intake Regimen in Management of Edema. Review, with Some Comments after Four Years. F. R. Schemm—p. 50
Chronic Unstable Colon. D. M. Welty—p. 55

## Journal of Neurosurgery, Springfield, Ill.

**3** 1-100 (Jan.) 1946

Bacteriologic Study of Penetrating Wounds of Brain from Surgical Point of View. A. D. Ecker—p. 1
Observations on Early Type of Brain Abscess Following Penetrating Wounds of Brain. J. E. Webster, R. C. Schneider and J. E. Lofstrom—p. 7
Eye Signs in Pineal Tumors. M. Posner and G. Horrax.—p. 15
Intracranial Angiography. I. Diagnosis of Vascular Lesions. C. F. List and F. J. Hodges—p. 25
Hematomas Associated with Penetrating Wounds of Brain. D. D. Matson and J. Wolkin—p. 46
Incidence of Interhemispheric Extension of Glioblastoma Multiforme Through Corpus Callosum. H. P. Maxwell—p. 54
Early Complications Following Penetrating Wounds of Skull. J. Martin and E. H. Campbell, Jr.—p. 58
Use of Curare in Treatment of Spastic Paralysis. D. F. James and S. Braden—p. 74

**Curare in Spastic Paralysis**—James and Braden used curare in the treatment of spasms of the lower extremities of 12 young men with paraplegia secondary to transverse myelitis incurred as the result of wounds. The drug was administered intramuscularly. The patients were given initial doses of between 0.020 and 0.100 Gm. repeated not oftener than every seventy-two hours. The revised schedules stipulated doses varying from 0.050 to 0.070 Gm. given at six hour intervals. Mild toxic reactions were seen when doses exceeding 0.080 to 0.100 Gm. were employed. When smaller but therapeutically effective doses were used, mild toxic reactions were observed in approximately 50 per cent of the cases. The mild toxic reactions consisted in weakness in ocular convergence, droopiness of the lids and at times generalized muscular weakness. No cumulative effect was noted when the drug was administered four, and in 1 case five times daily over a period of more than a month. When curare is being employed for the purpose of facilitating the use of a walker or braces, it has been found best to administer the drug one hour before the patient begins this exercise. Spasticity was diminished to a noticeable degree in all patients for from one to two or more hours after every administration of an effective dose. Spasticity returned gradually to its original severity in from four to

seven hours following injection The use of curare has been helpful in the management of patients with bed sores, as an aid in physical therapy and in diminishing the number of spasms Relief of pain was coincidental with the alleviation of the spasms effected by curare

## Journal of Pediatrics, St Louis

**28** 117-248 (Feb) 1946

*Lipemic Nephrosis W Heymann and Viola Startzman —p 117
*Induction of Vitamin C Subnutrition Comparison of Intradermal Test with Plasma Ascorbic Acid Levels L B Slobody R A Benson and Joan Mestern —p 134
Vision Test for Pediatrician's Use. A. E. Sloane and J R Gallagher —p 140
Oral Plasma Feeding Preliminary Report of Neonatal Feedings. J F Loehle —p 145
Use of Gentian Violet in Children Infected with Ascaris Lumbricoides. H W Brown —p 160
*Toxoplasmosis in Large Minnesota Family F H Adams R Horns and C. Eklund —p 165
Comparative Study of Immune Response to Various Pertussis Antigens and the Disease L Cravitz and J W Williams —p 172
One Dose Subcutaneous Sodium Sulfadiazine for Acute Infections. K Glaser —p 187
Comparison of Absorption of Vitamin A After Oral and Intramuscular Administration in Normal Children. G Cienfuegos —p 191
Lacunar Skull of Newborn Infant K Van Leeuwen —p 193
Displacement of Mediastinum Due to Pulsion by Caseous Tuberculous Lung Without Pleural Effusion Report of Case in Infant. J F Miller and B H Kean —p 200
Agenesis of Lung Case Report A Widerman and C H Peters —p 204
Atelectasis of Newborn Treatment by Bronchoscopic Drainage H P House and H Owens —p 207
Listerella Meningitis Report of Case with Recovery N I Handelman C C Rotondo E P Scott and H T Knighton —p 210
Congenital Ectodermal Defect Report of Unusual Case Involving Scalp and Leg J L. Callaway R O Noojin Kathleen A Riley and Beatrice H Kuhn —p 214

**Lipemic Nephrosis**—Heymann and Startzman studied 34 children with primary lipemic nephrosis About two thirds were under 3 years of age at the onset, and most of the others were less than 7 years old, that is, the incidence decreases with age In 6 postmortem examinations 3 showed no signs of inflammatory disease, and azocarmine stains revealed normal, not thickened, glomerular basement membranes In the 3 remaining cases renal inflammatory disease was found in addition to nephrotic changes the nephritis being interstitial and pyelonephritic in type. The endogenous origin of the hyperlipemia of nephrosis is shown by the fact that it is not affected by diets of either low or high fat ratios, nor does the nephrotic hyperlipemia decrease when 30 to 40 Gm of soya bean lecithin is given for four weeks The authors recommend a salt free diet containing 3 Gm of protein per kilogram of body weight and a fluid intake limited to 1,200 to 1,500 cc in combination with thyroid This is increased every ten days by ½ grain (32 mg) As soon as toxic symptoms are observed, the dose is reduced by ¼ to ½ grain (16 to 32 mg) and kept as a maintenance dose for two to three months

**Intradermal Test for Vitamin C Deficiency**—Slobody and his associates describe an intradermal test to indicate vitamin C subnutrition states qualitatively, based on the intradermal injection of a dye which will be decolorized by vitamin C Slow decolorization of the dye indicates that the tissues have an insufficient amount of vitamin C Rapid decolorization indicates a sufficient amount Enough of a three hundredth normal solution of sodium 2 6-dichlorphenol indophenol is injected to raise an approximately 4 mm wheal A skin test time (the length of time required for the dye to disappear) of fourteen minutes or more suggests a definite degree of tissue unsaturation, from ten to thirteen minutes is borderline and less than nine minutes indicates a normal amount of vitamin C in the body tissues Vitamin C subnutrition was induced in 16 children by a diet which lacked citrus fruits and tomatoes The plasma ascorbic acid levels and intradermal test followed reliably the induction of vitamin C deficiency and returned to normal with administration of ascorbic acid The intradermal test is cheap easy to perform and quickly read

**Toxoplasmosis**—Adams and his co-workers studied a typical case of toxoplasmosis in a 14 year old girl who was a member of a large Minnesota family The patient had 10 living siblings and 5 other close relatives Complete physical studies, including funduscopic examinations, were made on 11 members of the family Neutralization tests against the toxoplasma organism were done on blood serum from these and 4 other members of the family group Positive neutralization tests against the toxoplasma organism were present in the patient, her mother and 8 of 9 siblings tested The mother and the 9 siblings had no clinical symptoms or signs of toxoplasmosis as determined by physical and roentgenologic examination Whether infection in this patient and her siblings was congenital or acquired could not be ascertained

## Kansas Medical Society Journal, Topeka

**46** 397-436 (Dec.) 1945

Advantages of Cotton and Steel Wire Suture Materials. M. J Owens and G Owens —p 397
Observations Regarding Epidemiology Spread and Diagnosis of Brucellosis I H Borts —p 399

## Laryngoscope, St Louis

**56** 1-20 (Jan) 1946

Review of Literature of 1945 Pertaining to Bronchoesophagology P H Holinger and A H Andrews Jr —p 1
Temporary Deafness Following Exposure to Loud Tones and Noise H Davis C T Morgan J E Hawkins Jr and others —p 19
*Management of Fractures into Nasal Sinuses. J J Shea —p 22
Value of Individual Hearing Aids for Hard of Hearing Children in Public Schools Report to Subcommittee of Committee on Problems of Deafness of National Research Council Otologic Examination and Follow Up E. P Fowler —p 26

**Management of Fractures into Nasal Sinuses**—According to Shea the maxillary is the most frequently entered sinus during a compound facial injury The management of such an accident can be simple or complicated, according to the approach The author shows that a simple procedure similar to steps followed in a Caldwell-Luc operation is sufficient for the management of the repair of fractures in the ordinary "compound facial injury"

## New England Journal of Medicine, Boston

**234** 137-168 (Jan. 31) 1946

*Tick Borne Epidemic of Tularemia W B Warring and J S Ruffin Jr —p 137
*Penicillin in Treatment of Bronchiectasis Preliminary Report I D Bobrowitz J S Edlin S Bassin and J S Woolley —p 141
Clinical Aspects of Rheumatic Fever in Adults D H Rosenberg —p 148
Anhum M Tye —p 152
Foreign Programs of Medical Care and Their Lessons F Goldmann —p 155
Adenocarcinoma of Ampulla of Vater —p 161
Lymphoblastic Lymphoma of Stomach —p 163

**Tick Borne Epidemic of Tularemia**—Warring and Ruffin report an epidemic of 50 cases of tularemia which occurred among soldiers in the Tennessee maneuver area in 1943 All patients but 1 recovered A history of tick bite prior to onset of illness was obtained in 32 of the 50 cases Five appeared to be due to direct contact with rabbits The onset of symptoms in the cases of tick bite occurred within one to twenty-one days The most prominent symptoms were generalized aching, especially in the lumbosacral region and the lower extremities, headache shaking chills, debilitating sweats pain and tenderness in the regional lymph nodes unproductive cough, weakness, dizziness, nausea, vomiting anorexia and abdominal pain At the site of infection or bite were punched out ulcers The primary ulcers were found on the upper and lower extremities, perineum buttocks the lower part of the abdomen and the scapular region Enlarged regional lymph nodes were found in every case with an obvious primary lesion and in 3 without one In the early stages of the disease fever was continuous varying between 101 and 105 F Later there were morning remissions and in the majority of cases the fever fell by lysis to normal in the fourth week of the disease Convalescence was slow Weakness lassitude and loss of weight persisted Most of the patients have been in the hospital for three to six months Treatment was nonspecific and supportive Oxygen was given early to patients with pneumonia it seemed to offer the best chance for recovery Wet dressings and bland

ointments were applied to ulcerated lesions When softening of regional nodes occurred, surgical incision and drainage were instituted Thoracentesis for pleural effusion caused an amelioration of symptoms

**Penicillin in Bronchiectasis**—Bobrowitz and his associates compared the value of various methods of administering penicillin in the treatment of bronchiectasis—intramuscular, intratracheal, intrabronchial, inhalation (nebulization) and combinations of these methods The advantages of the topical or bronchial effect were studied Ten men and 2 women were treated The total dosage of penicillin varied from 550,000 to over 5,500,000 units and the length of treatment from four to one hundred and fifteen days The concentration of penicillin in the sputum was highest with intratracheal administration, less with inhalation and lowest with intramuscular injection The most rapid results were achieved with intratracheal instillations The simplest method of administration is inhalation The sputum was considerably diminished and its odor was removed, most organisms were eliminated and purulence was reduced Considerable symptomatic improvement occurred These changes were maintained while the penicillin was continued but did not persist long when it was stopped As symptomatic therapy for nonoperative cases and possibly for the control of bronchiectasis, penicillin will be required over a long period and perhaps indefinitely Penicillin given intratracheally and by inhalation is also suggested as a form of preoperative preparation for lung resection for bronchiectasis

## Texas State Journal of Medicine, Fort Worth

**41** 499-556 (Feb) 1946

Nephrotic Edema in Diabetes Mellitus E J Lefeber and G M Decherd Jr—p 506
Cytologic Study of Nipple Secretions Aid in Diagnosis of Breast Lesions D Jackson and A O Severance—p 512
Coarctation of Aorta Patent Ductus Arteriosus and Interventricular Septal Defect Report of Case. I D Fagin, W L Shepeard and A. T Morrison—p 515
Causes of Economic Blindness in Texas Statistical Survey of 6 106 Cases, Aid to Blind Program Texas State Department of Public Welfare J A Crockett—p 519
Maternal Overprotection in Young Children C S E Touzel—p 524
Clinical and Pathologic Study of 170 Ovarian Tumors C T Ashworth—p 525

## United States Naval Med Bulletin, Washington, D C

**46** 169 322 (Feb) 1946 Partial Index

Protection of Feet Immersed in Cold Water C R Spealman—p 169
Study of 100 Cases of Abdominal Pain in Service Women B Gillespie—p 179
Filariasis Among White Immigrants in Samoa E H Webster—p 186
Asymptomatic Microfilariemia in the Caribbean Area J H Danglade and P J Fitzgerald—p 193
Acute Infective Jaundice (Acute Hepatitis) Occurrence at North African Base Hospital H B Conaway and J F Shaul—p 203
Treatment of Battle Casualties Resulting from Dive Bombing Attack on Essex Class Carrier G B Ribble W G Holford Jr, W S Luedemann and J A Riser—p 211
*Radiation Sickness in Nagasaki Preliminary Report. J T Timmes—p 219
Suture of Fingernail in Crushing Injuries W H Hamrick.—p 225
Coccidioidomycosis at U S M C. Air Station Mohave California E F Pfanner—p 229
Action of Supernatants from Combined Growth of Fusarium Solani and Pseudomonas Aeruginosa Against Tubercle Bacillus. L G Carr—p 237
Susceptibility of Serologically Typed Group A Streptococci to Penicillin C L Spingarn and A. N King—p 239
*Electric Ophthalmia L K Woodward Jr—p 247
Detection of Malingering Further Study W A Hunt.—p 249
Mental Health of Men Discharged Under Point System Preliminary Note V S Briden and W L. Wilins—p 255
Suppression of Early Syphilis by Subtherapeutic Dosage of Penicillin Report of Case J L. Derzavis and F T Bond—p 259

**Radiation Sickness in Nagasaki**—Timmes says that when the atomic bomb exploded the concentrated energy diffused itself in three main channels pressure, heat and radiation. The effects of the atomic bomb differ from the ordinary explosive bomb only in its release of radiant energy The atomic bomb dropped on Nagasaki was exploded at an estimated altitude of 800 feet. At this height much of the radiant energy was expended into the atmosphere with the probably anticipated result that the underlying terrain would not remain radioactive for a prolonged period. In contrast, the New Mexico test bomb, exploding only 100 feet above the ground, caused the earth in the surrounding area to contain radioactive materials for months after the explosion. X-ray film buried in the Nagasaki bombed area and attached to various objects failed to reveal the presence of radioactive elements Investigators with Geiger point counters found only negligible amounts of radiation X-ray films attached to the limbs of atomic victims and kept in place for eighteen hours failed to reveal radiation The patients examined showed true forms of radiation sickness Only a few cases which could be classified as x-ray skin burns were noted. Many cases of alopecia were seen Some of these victims began to lose their hair four or five days after the explosion, while others first noted this phenomenon about the third week None of the persons exhibited complete loss of hair At the end of a month a few had already begun to grow new hair of a downy nature. The principal effect of the radiation was on the bone marrow, with a considerable degree of depression of the marrow function. Most of the cases seen showed an aplastic type of anemia The blood was deficient in red blood cells and hemoglobin. As granulopoiesis was greatly impaired, agranulocytosis resulted A white blood cell count under 1,000 offered a poor prognosis, however, 1 person with 400 cells per cubic millimeter recovered. Petechiae were commonly seen, as were gross hemorrhages. Bleeding times were increased. The oral changes consisted in a glossy, smooth tongue, with ulcerative lesions of the mucous membranes Liver extract seemed to benefit a few patients but in general was not very effective. Pentnucleotide was used in limited amounts in 7 cases, and in each 1 a progressive rise of the white blood cell count appeared

**Electric Ophthalmia**—Woodward observed 47 cases of flash burn of the eyes, or electric ophthalmia, on a repair ship The greater number of cases were contracted by men working in the immediate vicinity of the welders, and all these men had momentarily removed their goggles at the time an arc was struck or did not use goggles while at work. The symptoms were principally a mild to severe injection of the conjunctiva, and more especially an episcleral injection In 5 instances there was considerable edema of the eyelids In 6 men there was evidence of pseudopterygium with accompanying injection Superficial ulceration of the cornea was present in 2 cases Treatment consisted in irrigation of the eye with mild boric acid solution and instillation of a solution containing pontocaine hydrochloride and neosynephrin hydrochloride. In many instances an ointment containing 2 per cent butyn sulfate also was employed Relief was obtained, especially when there was edema of the lids, by application of cool boric acid compresses The response to therapy was prompt About one third of the patients were removed from duty for a twenty-four hour period

## Western J Surg, Obst. & Gynecology, Portland, Ore

**54** 1-44 (Jan) 1946

Menstrual Dysfunctions Amenorrhea Oligomenorrhea and Hypomenorrhea S C Freed—p 1
Rh Factor Review and Critical Analysis G Macer—p 10
Case Report of Use of Dual Onlay Graft and Penicillin in Infected Bone Defect L S Lucas and J H Gill—p 18
Gastric Adenomas Pathologic Study J H Rieniets and A C Broders—p 21

**54** 45-76 (Feb) 1946

Menstrual Dysfunctions Abnormal Uterine Bleeding S C. Freed.—p 45
Recent Advances in Pediatric Pathology Jaundice in Childhood H W Edmonds—p 50
Caudal Analgesia with Aid of New Appliance Report on 250 Cases. M Hornstein—p 56
Oxytocic Action of Methergine Synthetic Ergonovine. E W Cartwright and W C Rogers—p 59
Trichomoniasis Twelve Year Study K J Karnaky—p 61
Gastric Adenomas Pathologic Study J H Rieniets and A C. Broders.—p 65

## Wisconsin Medical Journal, Madison

**45** 173-280 (Feb) 1946

Seven Year Report From Neuropsychiatric Department, Student Health Service, University of Wisconsin. Annette C Washburne.—p 195
Evaluation of Present Status of Thiouracil Therapy in Thyrotoxicosis and Report of Its Use in 22 Cases Marie L Carns and R F Poser—p 205
Shock in Forward Areas J M. Sullivan—p 213

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below Single case reports and trials of new drugs are usually omitted

### Lancet, London

**1** 221-256 (Feb 16) 1946

Ancient Apothecaries and Modern Biochemists E C Dodds—p 221
Treatment of Macrocytic Anemia with Folic Acid T D Spies—p 225
*Pneumococcal Meningitis After Head Injury Treated with Intrathecal Penicillin R P Jepson and C W M Whitty—p 228
*Endemic Fluorosis in Kweichow China O Lyth—p 233
*Unsuspected Genital Tuberculosis as Main Cause of Tubal Occlusion I Halbrecht—p 235

**Intrathecal Penicillin in Pneumococcic Meningitis**—Jepson and Whitty report the results of treatment of 10 cases of pneumococcic meningitis with intrathecal penicillin In 9 cases the meningitis followed head injury Treatment included sufficient sulfadiazine to maintain a cerebrospinal fluid concentration of 8 to 14 mg per hundred cubic centimeters Fifteen thousand units of penicillin was given intramuscularly every three hours for possible extrameningeal sources of pneumococcic infection Direct intrathecal injections were made every twenty-four hours since previous observations had shown that 5,000 to 10,000 units of penicillin in the cerebrospinal fluid inhibited a standard organism up to twenty four hours When the clinical state was very grave, lumbar puncture was done more frequently Lumbar and ventricular routes were used and dosage varied from 5,000 to 50,000 units per dose Five patients recovered 4 died and 1 recovered from meningitis but died of other causes The importance of starting treatment early is emphasized Observations made on the cerebrospinal fluid reactions to penicillin suggest that the pronounced pleocytosis often seen is due to factors other than penicillin itself The cerebrospinal fluid cell count is not always reliable as the chief index for further treatment

**Endemic Fluorosis in Kweichow, China**—A high incidence of mottled enamel and spondylitis has been reported in Kweichow The drinking water in these regions contains approximately 6 parts per million of fluorine. The drinking water frequently comes from coal mines or sources near to the mines Lyth reports a study of 4 cases of spondylitis occurring in this area and the skeletal findings in 1 case in which death occurred after a trivial fall Of 134 persons examined, dental fluorosis was observed in 97

**Genital Tuberculosis as Main Cause of Tubal Occlusion.**—Halbrecht found that of 150 sterile women examined by salpingography at the Sterility Clinic in Tel Aviv 48 had partial or complete tubal occlusion Biopsy revealed tuberculosis of the endometrium in 18 This suggests that one of the main causes of tubal occlusion may be pelvic tuberculosis

### Leprosy Review, London

**16** 37-72 (Dec.) 1945 Partial Index

Occupational Therapy in Leprosy Institutions D Dow—p 57
*Modes of Transmission of Hansen's Disease (Leprosy) B Moiser—p 63
Palm Oil in Leprosy L. Lengauer—p 67

**Transmission of Leprosy**—Moiser reports studies of cockroaches collected in the vicinity of the Ngomahuru Hospital, Southern Rhodesia Sixty nine per cent examined showed small acid-fast "oval bodies ranging from the size of a red blood corpuscle to that of a small bacillus such as Hansen's Most of the oval bodies were opaque and stained very deeply with carbolfuchsin, but occasionally a ruptured one was found the contents of which were either granular or bacillary and indistinguishable from Hansen's bacillus Oval bodies were not found in bedbugs, ticks or flies Hansen's bacilli were found in large numbers in the dried feces of cockroaches fed a meal to which had been added material from ulcerating nodules In some the bacilli were so numerous as to suggest multiplication in the intestine. Bacilli were found to remain unchanged in the dried roach's droppings for 169 days Scars of roach bites also were found to contain bacilli of Hansen Of 230 roaches caught in various native patients' huts and not fed specially on leprous material 55 were found positive for Hansen's bacilli The author concludes that further investigations on cockroaches may produce evidence that the disease is occasionally transmitted by the bite of the roach and possibly by its dried feces coming into contact with the skin or being ingested with food

### Medical Journal of Australia, Sydney

**1** 1-32 (Jan 5) 1946 Partial Index

Epidemic of Poliomyelitis Occurring Among Troops in Middle East J E Caughey and W M Porteous—p 5
Contribution to Problem of Masculinization H F Bettinger and H Jacobs—p 10
Purulent Meningitis of Infancy and Childhood Twelve Months' Survey of Results of Treatment by Penicillin Elizabeth K. Turner—p 14

### Revista Mexicana de Tuberculosis, Mexico, D F

**7** 339-404 (Nov-Dec.) 1945

Treatment of Tuberculous Cavities M Jiménez Sánchez—p 339
Hematogenic Pulmonary Tuberculosis R Garcia C—p 361
Fluorographic Examination as Base of Prophylaxis of Tuberculosis M de Abreu—p 377
*Interesting Case of Acute Silicosis Bagassosis M A Mañas—p 391

**Acute Silicosis Bagassosis**—Mañas discusses observations on mining engineers who were doing geologic work in a region which was only 4 kilometers from an active volcano Eruptions from this volcano caused the atmosphere to be so densely charged with dust that vision beyond a few meters was impossible After about four months the men began to notice respiratory symptoms in the form of a dry, spasmodic cough There was disseminated erythema over the thorax and abdomen, and at the same time there existed intense pallor of the face One of the men developed what appeared to be an influenzal attack with fever, headaches, muscular aches, general malaise and furred tongue. Roentgenoscopy of the lung revealed infiltrations of small or larger foci Subsequent roentgenograms showed the same or a more severe picture of infiltration The patient died in severe dyspnea with cyanosis and cardiac insufficiency The author thinks that this was a case of acute silicosis The author is also concerned with a form of pneumonoconiosis that occurs in the utilization of the bagasse of sugar cane. The bagasse is used either for fuel or for the manufacture of a fiber board for insulation For the fabrication of this board the bagasse is cut up and in this process much dust is produced Workers who are exposed to the dust develop symptoms of bagassosis in from two to four months Violent attacks of coughing continue for several days and there is severe dyspnea. The mucous sputum is frequently tinged with blood The cough and dyspnea are accompanied with retrosternal pain Debility may persist for months Roentgenologic examination of the lungs reveals signs that are characteristic of the first phase of silicosis The pathologic process in the lungs may disappear so that the normal state is restored or it may progress to a typical fibrous lesion It is suggested that the bagasse contains an allergen which may produce sensitization The acute phase of bagassosis is possibly an allergic response of the lungs to this allergen The second phase may be the response of the lung to the crystalline cellulose that is contained in the bagasse The third stage is a fibrous process

### Acta Medica Scandinavica, Stockholm

**123** 1-110 (Dec. 15) 1945 Partial Index

*Chromaffin Tumor Simulating Toxic Diffuse Goiter E Waaler—p 1
Effect of Glyceryl Trinitrate in Cardiospasm R Weyde—p 12
*New Flat Epithelial Layer Covering Gastric and Intestinal Mucosa F Duran Jorda—p 26
Method for Examination of Function of Each Kidney Separately K Larsen—p 56
Recent Studies of Tubular Functions in Normal and Deficient Kidneys with Special Regard to Urea Part VII G Ekehorn—p 66
*Origin and Development of New Therapy for Crush Injury Transfusion Kidney and Certain Number of Other Diseases J T Peters—p 90
Clinical and Pathologic Findings in Myelomatosis and Plasma Cell Leukemia J Bpe—p 101

**Chromaffin Tumor Simulating Toxic Diffuse Goiter**—Waaler reports a case of chromaffin tumor in a man aged 49 The patient developed palpitation excessive sweating and nervousness The symptoms occurred in bouts lasting from two

to three hours There was high blood pressure and increased basal metabolism The urine contained albumin, casts and erythrocytes, the clearance was diminished A diagnosis of toxic diffuse goiter with nephritis was made and subtotal thyroidectomy was performed Palpitation of the heart and excessive sweating recurred some time after the operation The disease lasted three and a half years, when the patient died with signs of a subarachnoid hemorrhage The postmortem revealed a pheochromocytoma originating in the right semilunar ganglion Thirty five mg of epinephrine was found in this tumor, but the examination was carried out thirty hours after death and it may be assumed that the original amount had been much higher Patients with chromaffin tumors are sympathicotonic, and one must expect an increased basal metabolism due to hypersecretion of epinephrine There may be oscillations in the basal metabolism corresponding with the variations in the other manifestations This case presented the signs and symptoms of toxic diffuse goiter and of Jabbes syndrome parabasedowien," and this explains to some extent the mistaken diagnosis

**New Flat Epithelial Layer Covering Gastric and Intestinal Mucosa**—Duran Jorda studied the mucosa of the stomach, intestine, appendix colon, gallbladder and rectum in specimens received from the operating room The material was submitted to a process of slow fixation by drying, in an atmosphere saturated with formaldehyde vapor On microscopic examination a flat epithelial layer was revealed at the top of the gastric and intestinal mucosae This layer is very fragile and disappears if roughly handled or if fixed in formaldehyde saline solution It also disappears from postmortem specimens The layer is formed by flat epithelial cells and contains a large quantity of diapedesic cells and a network of capillaries The layer varied in thickness from the width of one cell of 3 microns to about 75 5 microns The size of its capillaries varied from a diameter of one red blood corpuscle up to 630 by 378 microns In the appendix large fecaliths were included in the flat epithelial layer The existence of this layer was demonstrated in the human fetal gastric mucosa and in the mucosae of different mammals It is suggested that this new layer may protect the mucosa from autodigestion by gastric and intestinal enzymes The presence of this layer aids in the interpretation of microscopic findings in cases of preulcerative processes in the stomach, of the healing process of gastric ulcer and of postulcerative processes The problem of the bleeding, mucosa without any apparent ulcer present can be explained after seeing the large capillaries included in the flat epithelial layer, and the possibility of a profuse hemorrhage with only microscopic lesions can be fully appreciated

**New Therapy for Crush Injury**—By means of an artificial nephron constructed of glass and rubber tubes and connected with two mercury manometers and several clamps Peters imitated the mechanical filtration process which is a part of the kidney function He thus demonstrated that the effect of imitating an anuria without any obstruction is exclusively the result of an increased intrarenal pressure causing a decrease of the effective filtration pressure The common denominator in mercury poisoning, crush injury, transfusion kidney and other diseases, e g sulfonamide poisoning, Weil's disease and acute and chronic nephritis, appears to be a syndrome consisting of oliguria and anuria caused by an increased intrarenal pressure and associated with hyperazotemia and uremia In cases with low blood pressure pressor drugs are recommended since experiments with the artificial nephron showed that an increase of pressure in the afferent arteriole supported the effect of a slight decrease in the intrarenal pressure In addition certain diuretics are recommended which are supposed to extract fluid from the renal interstices As an important part of the therapy, decapsulation of the kidney is recommended as an emergency operation on the first day in which the syndrome develops An increasing blood urea nitrogen during oliguria or anuria is the danger sign Uremia caused by glomerular destruction should be sharply differentiated from the form amenable to treatment and associated with the syndrome discussed, 'pressure uremia' is part of the syndrome while 'glomerular uremia' cannot be cured by lowering the intrarenal pressure

## Nordisk Medicin, Gothenburg

**27 1431-1472 (July 20) 1945 Partial Index**

History of Penicillin and Its Application in Medicine Florey—p 1431

### Hospitalstidende

Can Balance of Fluids in Dehydrated Patients Be Determined by Aid of Simple Intracutaneous Test? I K Sögaard—p 1445

### Hygiea

Vaginal Cysts During, Pregnancy and Delivery I P Bengtson—p 1467
*Ventral Sacral Meningocele N O Eriesson—p 1465

**Ventral Sacral Meningocele**—The malformation is discussed in connection with report of a case in which a cystic tumor the size of a grapefruit was removed from a secundipara aged 33 through a dorsal incision after resection of the coccyx The patient recovered Eriesson tabulates the 26 cases, mostly in women, found by him in the literature Failure of the vertebrae to consolidate is the primary cause, protrusion of a meningeal hernia through the defect the secondary cause Parasacral puncture can be attempted and if necessary repeated If the tumor recurs which is likely, and if the symptoms are troublesome extirpation with sacral incision and resection of the coccyx is advised With a correct preoperative diagnosis the prognosis is probably better than is indicated in the literature

**27 1473 1512 (July 27) 1945 Partial Index**

*Meningitis Cases of Interest I Jacobsson—p 1473 Diagnosis of Syphilis I Jomholt—p 1477

### Hospitalstidende

*Intercapillary Diabetic Glomerulosclerosis (Kimmelstiel and Wilson Syndrome) T Hilden—p 1479
Experiences in Treatment of Thyrotoxicosis with Methylthiouracil J Westergaard—p 1482
*Chemotherapeutic Treatment of Acute Suppurative Pansinusitis F Burhöj—p 1485
Attempts at Respirator Treatment of Patients Poisoned by Hypnotics Aage Kirkegaard—p 1489

### Hygiea

Histologically Specific Skin Reaction in Benign Lymphogranulomatosis Produced by Dead Tubercle Bacilli I E. Warfvinge—p 1493

**Influenzal Meningitis**—Jacobsson reports that of 17 patients with influenzal meningitis treated with sulfonamides 8 recovered, the fatalities occurred in patients under 15 months of age Experience confirms the necessity of high dosage Sulfapyridinine is recommended because it is eliminated more slowly than sulfathiazole and thus gives a constant and higher concentration than the same dosage of sulfathiazole especially in the cerebrospinal fluid, and because secondary toxic effects are considerably reduced The sulfonamide medication should be continued till the cell count in the cerebrospinal fluid and the white blood cell count are normal and the sedimentation rate shows a tendency to drop to normal values Examination of the blood and spinal fluid of those who died and those who recovered showed consistently higher concentration in the latter group Of the 12 patients with pneumococcic meningitis treated with different sulfonamides only 2, aged respectively 2 and 14 months recovered, the second one only after long and intensive therapy with sulfapyridinine

**Intercapillary Diabetic Glomerulosclerosis**—Hilden says that, while reports of approximately 50 cases of this disorder have been published only 11 including a personal case, have been fully described Intercapillary diabetic glomerulosclerosis occurs in older persons, apparently more often in women, and is characterized by a mild diabetes mellitus, grave proteinuria hypertension and edema of the nephrotic type Ascites and hydrothorax may be present Usually there is enlargement of the left half of the heart with functional dyspnea Ophthalmoscopy reveals hypertensive retinopathy The characteristic anatomic pathologic changes consist of hyaline deposits in the central portions of the glomeruli, where the capillaries have degenerated Nearly all the glomeruli are affected Hyaline changes are often found in the vas afferens The relation between urea and diodrast clearance points to this disorder as a distinct syndrome

**Chemotherapeutic Treatment of Acute Suppurative Pansinusitis**—In Burhöj's 43 cases, 10 unilateral, 33 bilateral treatment with sulfonamides resulted in relatively rapid recovery

# Book Notices

**Pathology in Surgery** By N Chandler Foot M D Professor of Surgical Pathology Cornell University Medical College New York Fabrikoid Price $10 Pp 511 with 388 illustrations Philadelphia London & Montreal J B Lippincott Company 1945

This is a new publication and represents a distinctly progressive step The author justifiably designates surgical pathology as a subspecialty The book is modeled after Karsner's Pathology, which in itself indicates that a special teaching approach to the subject is necessary The difference between general pathology and this specialty is briefly considered in the first page of the book Essentially the surgeon and his associate the pathologist are concerned with the future rather than that which has preceded Often a diagnosis is demanded of the surgical pathologist which has important bearing on the future well being of the patient This demands prompt accurate judgment while the patient is yet in the operating room, a responsibility not lightly dismissed

The volume is divided into a number of sections, including technics and general discussion The various tissue systems and organic structures are then discussed in orderly fashion The material included is intended primarily for basic introduction to the field. While most of it is found in any good textbook of pathology, its value lies in the arrangement and attitude to the subject There are many illustrations, which are uniformly excellent At all times the descriptive text is clear and well presented. There is a tendency to cling to former morphologic descriptions which have proved of less value to the surgeon than is generally supposed This is especially true in certain cancers, it must be added that classification has been considerably simplified however, and questions which may be posed by surgeons are answered as far as the scope of the book permits Students and trainees in surgery and surgical pathology will benefit from this work.

**Risk Appraisal** By Harry Dingman Vice President and Medical Director Continental Assurance Company Fabrikoid Price $10 Pp 824 with illustrations Cincinnati National Underwriter Company 1946

This book has been prepared by a well known authority in the field of insurance medicine Its title could well have been 'The Textbook of Prognostic Medicine," for the author tells what happens to the patients who are seen every day His emphasis is not on longevity but on mortality not how long patients live but how often they die What he means, of course, is whether any group of a thousand persons with some specific ailment will have the usual ten deaths per year at some certain period in middle life or will have twenty If twenty mortality prospects are said to be 200 per cent. Insurance literature is cited freely, has an immense reservoir of information of what happens to 10 000 or even 100 000 persons who have definite impairments for example attacks of renal colic, blood pressure readings of 145/95, or weight that exceeds the average by 10 20 or 30 per cent His treatment of circulatory, renal and gastrointestinal impairments is of especial interest in that he presents all the facts on which a long range prognosis may be based. The book is well written and stimulating Material is well arranged and presented It may be considered an authoritative work on prognostic medicine from the point of view of insurance physicians

**Acquisitions médicales récentes dans les pays alliés** Par A Abaza Paper Price 1 000 francs Pp 706 with 9 illustrations Paris G Doin & Cie 1946

The author undertakes in this book to offer, presumably to French readers, a condensed account of the Anglo American medical literature of the years 1940 to 1945 The volume deals with the discovery of penicillin and its uses with the various sulfonamide derivatives and with the newer therapeutic measures employed in the treatment of malnutrition and endocrine diseases The volume will probably serve a useful purpose in filling the gap for the general practitioner in certain European countries which were deprived of access to our literature The information contained in the volume has been conscientiously gathered and is well presented

**The Symptomatic Diagnosis and Treatment of Gynecological Disorders.** By Margaret Moore White M D F R C S M R C O G With a foreword by F J Browne M D D Sc F R C S The General Practice Series Second edition Fabrikoid Price 16s Pp 246 with 103 illustrations. London H K Lewis & Co Ltd 1946

This book is developed on the principle of ready reference for office gynecologic therapy Its style adheres to the headings of symptoms, following which there is classification of disease in relation to the symptom complex and clinical findings The author in several places refers to the medical monilia which causes vulvar and vaginal mycosis as a yeast. This is distinctly an error, for yeasts are nonpathogenic or friendly fungi, with their use dominantly in bakeries, breweries and the like In chapter II, on pruritus vulvae, it is stated that the pruritus is the result of diabetes Recent investigations have shown that glycosuria per se does not cause irritation. It is the medical monilia present which causes a mycosis under these circumstances On page 17 fungous infections are classed as protozoal The fungi belong in the holozoic group Trichomonads are in the protozoic list The discussion of amenorrhea is thorough, and almost as good a presentation of dysmenorrhea is present. In the section on menorrhagia and irregular bleeding, one might get the impression that too much emphasis is placed on medical management The diagrams in the section on vaginal and uterine prolapse are good The author deserves special commendation for the appropriate but not exclusive use of vaginal pessaries The space given to uterine suspension operations is not consistent for office practice or in complete accord with the views of many gynecologists The section on sterility is good, but there is inadequate comment on sperm count and motility and interpretation of seminal fluid findings On the other hand, in the appendix one finds a useful list of the endocrine products and other information At the end of several chapters the author has added brief comments on how to avoid common pitfalls in relation to the subject under discussion. Obviously the author has had a large and active experience in clinical gynecology The book is in no sense a complete reference volume but intended to be a practical immediate reference work for conditions which confront the general practitioner in his office. It is brief, straightforward and clearly written No doubt many physicians in general practice will find it a conveniently useful and an easily read book

**Hospital Care of the Surgical Patient A Surgeon's Handbook with an Appendix on the Treatment of Wounds** By George Crile Jr M D and Franklin L Shively Jr M D Foreword by Evarts A Graham M D Bixby Professor of Surgery Washington University School of Medicine St. Louis Mo Second edition Cloth Price $3.50 Pp 288 with 25 illustrations Springfield Ill Charles C Thomas 1946

That need for a book of this type has long been recognized is evidenced by numerous similar publications now on the market The authors have approached the problem with a complete absence of the dogma which so often characterizes preoperative and postoperative care Their methods are based on strictly physiologic observations specific applications of which are briefly reviewed in connection with every therapeutic measure. This little book is intended for surgical interns and house officers but it could well serve any surgeon It is especially useful in the so-called routine procedures No treatment should ever be routine." This is a common failing in many surgical services where pressure of time and convenience often perpetuate technics long outmoded The authors rightfully point out that individual care of the patient demands as much diversity in premedication and postoperative care as does the operation. Parenthetically it may be added that English authors show a fondness for this type of book and there are many published by them. None compare with this in modern concept and practicality The volume can be summed up as superb

**The Migraine Lesion Describing the Relief and Cure of Typical Migraine by Means of Manipulative Therapy** By H Vincent Langley Cloth Price 6s. Pp 26 with 9 illustrations London Research Books Ltd distributed by Wm Heinemann Medical Books Ltd 1945

This work develops the concept that migraine can be cured by manipulation of the neck. Even though its author is a British specialist in manipulative therapy, his technics resemble those of the chiropractors

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## TREATMENT OF OBSTINATE CONGESTIVE HEART FAILURE

*To the Editor* —A man aged 66 has had symptoms of an enlarged heart and myocardial degeneration for several years At the present time he is almost an absolute bed patient His chief complaints are shortness of breath and a sense of tightness in the chest, both when at bed rest and up The blood pressure is 140/86 The heart is enlarged about two and one half times the normal size Murmurs are heard over all valve areas on both systole and diastole The lungs are essentially normal Auscultation reveals an occasional wheeze There is occasional slight edema of the feet X ray examination of the chest shows some findings of chronic bronchitis Electrocardiograms confirm the diagnosis of chronic valvular heart disease and myocardial degeneration Intradermal tests with the usual substances do not show any sensitivity The patient has been given digitalis theobromine aminophylline iodides ammonium chloride barbiturates and narcotics for sedation and rest in bed Although recommended and maximum doses have been given, there has been only slight relief of shortness of breath Please discuss treatment

J Palmer Moss M D Memphis Tenn

ANSWER —More exact details of history, physical examination, electrocardiogram and x-ray findings are needed to establish an adequate diagnosis before prognosis and treatment can be discussed Is this an old rheumatic heart disease with aortic and mitral valve involvement or is the cardiac enlargement with apparent failure due to syphilitic aortitis with aortic regurgitation and secondary mitral murmurs? Is there calcific aortic valve disease or is there some other condition present? Is the dyspnea in part due to chronic bronchitis with emphysema or is it due to a complicating pulmonary embolism? A more exact description of the murmurs is necessary Are the neck veins full? Has there been any fever or leukocytosis?

Details of past treatment is also important How much digitalis and ammonium chloride have been given? Have mercurial diuretics or a low sodium intake been used?

If this case is one of chronic valvular heart disease with definite enlargement and congestive failure, then the routine measures for congestive failure should be applied Five aids in treatment, in the order of importance, are

1 Digitalis in ample dosage.

2 Rest in bed and chair

3 Diuretics including ammonium chloride and, when necessary, mercurials such as mercupurin or mercuhydrin intravenously or intramuscularly in a dosage of 1 to 2 cc every few days if necessary in order to clear all evidences of congestion

4 A low sodium intake, strictly applied, with fluid *ad lib* provided the sodium intake is low

5 Symptomatic treatment for other conditions

It is quite possible, from the description given, that the additional two measures that would be most useful on the supposition that this patient has obstinate congestive heart failure would be the mercurial diuretics and a low sodium intake

## HYPERTROPHY OF THE PROSTATE

*To the Editor* —May I have some information concerning hypertrophy of the median lobe of the prostate and median bar hypertrophy? Is there any palliative relief for a patient aged 61 whose cardiac condition rules out any surgical procedure? I have not been able to obtain cystoscopic examination of this patient The rectal examination of the prostate is negative the urine normal blood chemistry negative, culture of specimen after massage of prostate negative, residual urine about 3 drachms (11 cc) At times there is some increased urgency and the patient usually has to void once during the night For several months he has had an irregular low grade fever in the evenings for which a cause cannot be found Every day for several weeks at about 6 p m there will be a chilliness followed by fever of 99 to 99 4 F lasting two to four hours Could a median bar hypertrophy with the findings as outlined be the cause of this fever? If and when it is possible I shall obtain cystoscopic examination of this patient but if you are able to offer any suggestions it will be appreciated especially as regards any possible palliative treatment

M D New Mexico

ANSWER.—There is quite general confusion concerning the terms used, but when one says 'median lobe hypertrophy' that indicates a regular, smooth hyperplastic enlargement of tissues arising from the floor of the vesical neck and protruding into the bladder This tissue cannot be felt by rectal examination but is diagnosed only by cystoscopy There is no such lesion as "median bar hypertrophy" What is meant, perhaps, is "median bar formation," which is a fibrous or muscular protrusion of tissue on the floor of the bladder neck usually causing obstruction to the outlet of the bladder These may be congenital, as they are seen in boys aged 3 and 4 years and up or they may be acquired, the result of long-standing prostatitis and seminal vesiculitis Obviously they can be diagnosed only by cystoscopic study

There is no good palliative relief from symptoms of these obstructions unless one would consider intermittent catheterization as palliative or a permanent suprapubic cystotomy as palliative The indications are, of course, for some sort of surgical removal of the obstructing tissue, and with the bar formations these should be done almost always by transurethral resection of the tissues, but, in the hypertrophies, some should be enucleated and other smaller ones can be adequately removed by transurethral resection

Judging from the statements concerning this patient, it is not logical to give any treatment whatever until a diagnosis has been made, and this can only be done by cystoscopic study

## PARALYSIS AND DEATH FOLLOWING SPINAL ANESTHESIA

*To the Editor* —I should like some information concerning spinal anesthesia with subsequent paralysis as a complication Twelve years ago I gave a spinal anesthetic to a perfectly healthy woman and performed a simple appendectomy Immediately following the operation the patient went into shock, having a fast pulse, subnormal temperature and profuse sweating which appeared to be a circulatory collapse With proper treatment infusions and transfusions the patient reacted well, but on the third day she began to complain of pain in both lower and upper extremities Opiates were necessary to relieve her On the tenth day she began to develop a flaccid paralysis of all extremities and the following day there was a complete absence of all reflexes During this time the patient did not have a temperature of over 100 F The spinal fluid was normal The patient lost no tactile sensations at any time For several weeks following this the patient s paralysis progressed to the point where she had no use of her extremities, and she has remained in this condition up to the present Consultants were called in at the time of her illness and a diagnosis was made of poliomyelitis About two weeks ago I performed an appendectomy on a man aged 64 who had acute appendicitis. He was given the same type of spinal anesthesia, 150 mg of procaine crystals being used The operation consumed about thirty minutes and the patient was returned to his room in perfect condition This patient's convalescence was uneventful while in the hospital and he walked out of the hospital on the sixth day On the seventh day I was called to his home to see him because he was unable to rise from the dinner table He stated that he had no difficulty on walking to the table but on arising he was unstable and had very little control of his lower extremities he was assisted back to his bed Examination revealed the blood pressure to be 180 50 points above his normal blood pressure the pulse rate was 80 The patient stated that he felt fine with the exception of a slight headache that morning and the fact that he was now unable to use his legs His reflexes were entirely absent, but all tactile sensations were present The following morning the pains in his legs became excruciating, and the paralysis involved his upper extremities Opiates were necessary to relieve his pain The patient continued in this condition for four days and then his pulse became rapid and his temperature rose to 104 F He complained *of dyspnea and he died within a few hours Spinal fluid examination* the day before was negative The patient at no time lost control of his bladder A consultant was called in and a diagnosis of poliomyelitis was made on this patient These cases were almost parallel in their progress except for the fact that the former patient did not die It is hard for me to reconcile a diagnosis of poliomyelitis in these cases and I should like to know whether a spinal anesthetic could in any way produce the pictures described If so, how?

M D Texas

ANSWER —The 2 cases described pose many interesting questions The only way in which the patients could have had poliomyelitis would be that they had it before their spinal anesthesia was started Frequently infections of the central nervous system have at the onset abdominal pain as one of their symptoms It is more probable that the symptoms in the first patient may have developed because of the spinal anesthesia The anesthetic drug used may have reached the medulla oblongata and produced respiratory and circulatory collapse Following resuscitation brachial and lumbosacral radiculitis may have then developed, which resulted in a flaccid paralysis without sensory loss Although this is a very rare complication now—if it ever occurs—it was seen on occasions early in the use of spinal anesthesia This type of reaction was due in all probability to the chemotoxic properties of the drug and possibly to defects in the technical administration The second case is, on the other hand more difficult to explain because of the late onset Certainly a virus disease of the central nervous system or a cerebrospinal vascular lesion could have resulted in paralysis and death However, it is more likely that the spinal anesthetic either in the form of a chemotoxic reaction or an irritation of preexisting cerebrospinal disease was the cause of death The cases described are rare and certainly do not appear to be poliomyelitis—especially with negative spinal fluids

# The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL 131, NO 4 — CHICAGO, ILLINOIS — MAY 25 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

Acon. No. . . Date. . . . . Price. . . . . JAIPUR.

## THE TREATMENT OF EARLY SYPHILIS WITH PENICILLIN

COMMITTEE ON MEDICAL RESEARCH AND THE UNITED STATES PUBLIC HEALTH SERVICE

*A Joint Statement*

A nationwide study of the effect of penicillin in the treatment of syphilis was begun Sept 1, 1943 under the auspices of the Committee on Medical Research of the Office of Scientific Research and Development On Jan 1, 1946 the financing and general supervision of the project was taken over by the National Institute of Health, U S Public Health Service Prior to this date the study was directed by the Penicillin Panel of the Subcommittee on Venereal Diseases, National Research Council, composed of official representatives of that committee (J E Moore, chairman, and J F Mahoney), of the Committee on Chemotherapeutics and Other Agents (W B Wood Jr ), of the Army (T H Sternberg), of the Navy (Walter Schwartz, later J W Ferree) and of the Public Health Service (J R Heller Jr ) With the transfer of the experiment to the jurisdiction of the Public Health Service the Penicillin Panel was replaced by an Advisory Committee to the National Institute of Health Syphilis Study Section, with the same membership as the aforementioned but with the addition of two clinicians (J H Stokes and H C Solomon) and of a biostatistician (L J Reed)

Participating in the study are forty-one clinics, including four installations of the United States Army,[1] one of the Navy,[2] thirteen U S Public Health Service Rapid Treatment Centers [3] and twenty-three civilian clinics [4] In addition seven laboratories [5] of experimental syphilis are cooperating on a group basis

The major effort of the cooperative study to date has been to define the usefulness of penicillin in the treatment of early acquired syphilis in adults To this end the cooperating clinics examine, treat and follow patients according to a uniform plan, record their results on specially designed forms and forward these to a central statistical unit now operating in the Department of Biostatistics of the Johns Hopkins University School of Hygiene and Public Health, where they are transferred to punched cards and analyzed statistically [6] This phase of the study has been described in a preliminary report [7] and is the subject of the present communication In addition to the study of penicillin in the treatment of early syphilis, the effects of penicillin in the prevention of prenatal syphilis, in the treatment of early infantile congenital syphilis, of certain forms of ocular syphilis (especially interstitial keratitis and optic atrophy) and of neurosyphilis have also been investigated Minor and incidental contributions have been made in late benign (gummatous) syphilis The study of latent syphilis and of cardiovascular syphilis has been purposely avoided because these are essentially long term clinical problems of less pressing importance The laboratories have been engaged in a study of the effectiveness of commercial penicillin and of its available fractions (G, F, X and K) in experimental syphilis in rabbits and are beginning to amass data which already have important clinical applications

The nationwide results in early syphilis presented in this report are based on information available to the Central Statistical Unit up to a cut-off date, Aug 1, 1945 As of this date, twenty-six different treatment schedules had been instituted by the Penicillin Panel These were intended to hold constant the method of

Read before a conference of penicillin investigators, held under the joint sponsorship of the National Research Council and the U S Public Health Service in Washington D C, Feb 6-7 1946

This paper is a joint report from the Committee on Medical Research and the United States Public Health Service. The work described herein was done under several contracts recommended by the Committee on Medical Research of the Office of Scientific Research and Development The names of the participating investigators and the institutions they represent appear in several footnotes

This paper is a partial report of a clinical investigation planned by the Subcommittee on Venereal Diseases National Research Council acting in an advisory capacity to the Committee on Medical Research of the Office of Scientific Research and Development The program was initially financed under several contracts by the Office of Scientific Research and Development and latterly taken over by the U S Public Health Service Because of the dual subvention of the program the report may be looked on as a joint communication from the Committee on Medical Research of the Office of Scientific Research and Development and the U S Public Health Service

1 Camp Howze Texas, and Camp Livingston La Major F Grauer Fort Bragg N C Major W Leifer Walter Reed Hospital Washington D C Capt M J Romansky

2 National Naval Medical Centre Bethesda Md Comdr E C Barksdale.

3 U S P H S Medical Center Durham N C Midwestern Medical Center St Louis, Hampton Roads Medical Center Norfolk Va Rapid Treatment Center Charlotte N C V D Rapid Treatment Center Gallinger Hospital Washington D C Southeastern Medical Center Savannah Ga Jacksonville Rapid Treatment Center No 4 Jacksonville Fla U S P H S Medical Center Hot Springs Ark Piedmont Medical Center Augusta Ga Kanawha Valley Medical Center South Charleston W Va Municipal Hospital Richmond Va U S Marine Hospital Stapleton S I, J F Mahoney Michigan Rapid Treatment Center Ann Arbor Mich

4 Boston University Oscar Cox deceased and W L Fleming New York University Evan Thomas Western Reserve University H N Cole University of Pennsylvania J H Stokes University of Texas Chester Frazier Washington University St Louis W Barry Wood Jr and W Gurney Clark Yale University, Francis Blake Southwestern Medical College Dallas, Texas Arthur Schoch Stanford University C W Barnett Duke University C L Callaway Vanderbilt University, R H Kampmeier Johns Hopkins University R A Nelson Charles F Mohr and Harold Tucker Tulane University, R V Platou Columbia University A B Cannon University of Virginia D C Smith Cornell University Medical College Walsh McDermott Health Department Detroit, Loren Shaffer, Emory University Albert Heyman New York State Department of Health J H Lade Indiana State Department of Health G M Bowman University of Michigan U J Wile Chicago Intensive Treatment Center H N Bundesen

5 U S Public Health Service Venereal Disease Research Laboratory Johns Hopkins Hospital Baltimore Harry Eagle Boston University School of Medicine Boston W L Fleming U S Marine Hospital, Stapleton S I J F Mahoney E R Squibb and Sons New Brunswick N J Geoffrey Rake New Britain General Hospital New Britain Conn, P D Rosahn Rochester University School of Medicine Rochester N Y, C M Carpenter Johns Hopkins University School of Medicine Baltimore A M Chesney

6 The statistical analysis has been conducted under the general supervision and direction of L J Reed with the assistance of J E Moore P D Rosahn M Merrell S Lawler E Tippett and G Futcher

7 Moore J E Mahoney J F Schwartz Walter Sternberg T and Wood W B The Treatment of Early Syphilis with Penicillin A Preliminary Report of 1 418 Cases J A M A **126**: 67 (Sept. 9) 1944

administration (intramuscular) and to explore the time factor of treatment with penicillin alone within the ranges of four (actually three and three-fourths), eight (actually seven and one-half) and fifteen days, the dose factor within the forty-fold range of 0.06 to 2.4 million units, the factor of interval between injections within the range of three and six hours, the combination of penicillin with other agents (arsenic, bismuth and fever) and the effect of absorption delaying methods such as penicillin in peanut-oil-beeswax.

These twenty-six schedules are listed in table 1. Also shown are the dates on which a particular schedule was started and abandoned (a blank in the column "schedule ended on" indicates that the schedule was still in use on Feb. 1, 1946), the total cases treated by each schedule and the percentage of patients so treated who were actually followed for six to eleven months after treatment. The comparatively recent dates on which many of the schedules were started and the schedules for which adequate information is available were employed in the treatment of 6,558 patients (56.6 per cent of the total). The basic material from different clinics differs, sometimes materially, in such factors as race, age, sex, duration of disease and excellence of follow-up. For these reasons, differences in results as between different clinics might have been anticipated and actually did occur. The accumulated data will eventually permit a careful evaluation of results as between clinics and different sections of the country.

The group of patients with early syphilis constituting the basic material of this report was composed not only of individuals receiving treatment for the first time but also of a relatively small number who were retreated with penicillin following clinical or serologic failure, after having been originally treated with penicillin or with other agents. The group is thus heterogeneous, consisting of patients receiving treatment for the first time and of others retreated after failure.

TABLE 1.—*Penicillin Schedules Employed in Early Syphilis to August 1, 1945*

Including Dates Started and Ended, Number of Patients Treated and Percentage of Total Followed to Three Hundred and Eight Days After Treatment (Ten Months)

| Schedule | Agent* | Interval Between Treatments, Hours | Duration of Treatments, Days | Total P, Million Units | Oxophenarsine Mg | Bismuth Subsalicylate Gm | Schedule Started on | Schedule Ended on | Total Cases | Per Cent Actually Followed for 169-196 Days | Per Cent Actually Followed for 281-308 Days |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | P | 3 | 4 | 0.6 | " | | Mar. 44 | Nov. 44 | 198 | 77.8 | 54.5 |
| B | P | 3 | 4 | 1.2 | " | | Mar. 44 | April 45 | 776 | 67.3 | 32.0 |
| C | P | 3 | 4 | 2.4 | " | | May 44 | Mar. 45 | 730 | 51.5 | 21.9 |
| D | P | 3 | 7.5 | 0.06 | " | | Nov. 43 | Mar. 44 | 60 | 85.0 | 61.7 |
| E | P | 3 | 7.5 | 0.3 | " | | Nov. 43 | June 44 | 823 | 70.9 | 74.0 |
| F | P | 3 | 7.5 | 0.6 | " | | Nov. 43 | Mar. 45 | 733 | 79.4 | 79.0 |
| G | P | 3 | 7.5 | 1.2 | " | | June 43 | | 1,073 | 40.8 | 35.2 |
| H | P | 3 | 7.5 | 1.4-1.6 | " | | Nov. 44 | Mar. 45 | 149 | 4.7 | |
| I | P | 3 | 7.5 | 2.4 | " | | April 44 | | 1,180 | 43.9 | 20.8 |
| J | P | 3 | 10 | 1.6 | " | | Nov. 44 | | 380 | 6.0 | |
| K | P | 3 | 15 | 2.4 | " | | Nov. 44 | | 344 | 13.4 | |
| L | P | 6 | 4 | 1.2 | " | | July 44 | Dec. 44 | 292 | 68.8 | 37.3 |
| M | P | 6 | 7.5 | 1.2 | " | | Mar. 44 | Nov. 44 | 702 | 79.3 | 40.2 |
| N | P.O.B. | Varied | Varied | Varied | " | " | Nov. 44 | | 80 | 10.0 | |
| O | P + M | 3 | 7.5 | 0.3 | 320 | " | Dec. 43 | Mar. 44 | 116 | 78.4 | 60.0 |
| P | P + M | 3 | 7.5 | 1.2 | 320 | " | Nov. 44 | | 576 | 5.9 | " |
| Q | P + M | 3 | 7.5 | 1.2 | 320-480 | " | Nov. 44 | April 45 | 448 | 20.1 | |
| R | P + M | 3 | 6-9 | 1.2 | <320 | " | April 45 | | 140 | | |
| S | P + M | 3 | 8-9 | 1.2-1.4 | <320 | " | April 45 | | 104 | | |
| T | P + B | 3 | 7.5 | 1.2 | | 0.6 | Nov. 44 | | 816 | 15.6 | |
| U | P + F | 2 | 4 | 1.2 | " | | Dec. 44 | | 100 | 17 | |
| V | P + F | 3 | 4 | 0.6 | | | Aug. 44 | Mar. 45 | 287 | 27.2 | 12.5 |
| W | P + F | 3 | 7.5 | 1.2 | | | Jan. 45 | June 45 | 112 | 7.1 | |
| X | P + B | 3 | 7.5 | 0.6 | 320-480 | 0.6 | Aug. 44 | April 45 | 603 | 10.4 | 3.3 |
| Y | P + B | 3 | 8-9 | 1.2 | <320 | 0.6 | April 45 | | 140 | | |
| Z | P + B | 3 | 8-9 | 1.2-1.4 | <320 | 0.6 | Feb. 45 | | 234 | | |

* P = sodium penicillin in aqueous solution. P.O.B. = calcium penicillin in peanut oil beeswax. M = oxophenarsine hydrochloride (usually mapharsen). B = bismuth subsalicylate in oil suspension. F = fever therapy mechanically induced.

small number of patients followed for appropriate intervals preclude discussion of fourteen of these schedules at this time. Reasonably satisfactory data are available as of Aug. 1, 1945 only for schedules A to G inclusive, and in addition schedules I, L, M, O and T. All of these deal with the effect of penicillin alone, with the exception of schedule O (0.3 million units of penicillin plus 320 mg. of arsenoxide) and schedule T (penicillin plus bismuth). The factors of continued additions of new patients to a given treatment schedule and the loss of old ones are reflected for example in the oldest schedule, G, consisting of 1.2 million units of penicillin in seven and one-half days. While more than 1,000 patients had been so treated as of Aug. 1, 1945, only 35 per cent of them had been followed for as long as eleven months.

## MATERIAL

From the start of this program to Aug. 1, 1945, 11,589 patients with early syphilis had been treated by the cooperating clinics. Of this number 10,482 (90.4 per cent) had been treated by one or another of the twenty-six schedules shown in table 1. The twelve

Failures have been defined as clinical relapse (mucocutaneous or neurorecurrence), serologic relapse (blood or spinal fluid) and reinfection. In the present state of knowledge it is not possible to segregate the lesions of clinical relapse from those of reinfection, and for this reason these two categories have been considered as a single entity. The group of failures moreover does not include patients classified as seroresistant, since the basic requirement for such a diagnosis as utilized in this study, that is, seropositivity at the end of the first year of observation, has not been fulfilled because of the time factor.

The cumulative failure rates have been based on the assumption that a patient examined at any period was under observation at all previous periods and that he was not a failure until actually observed to be so. On this basis a patient might have been a failure before actual discovery but is assumed to have been successful up to that date. Thus, if a patient was symptom free in the first and second months after treatment, was *not seen in the third and fourth months and relapsed* in the fifth month, he was considered to have been

under observation and to have been negative in the third and fourth months Two other assumptions by which cumulative failure rates may be estimated were also investigated, but that described, which incidentally gives the most conservative set of failure rates of any of the three assumptions studied, is the one hereinafter employed

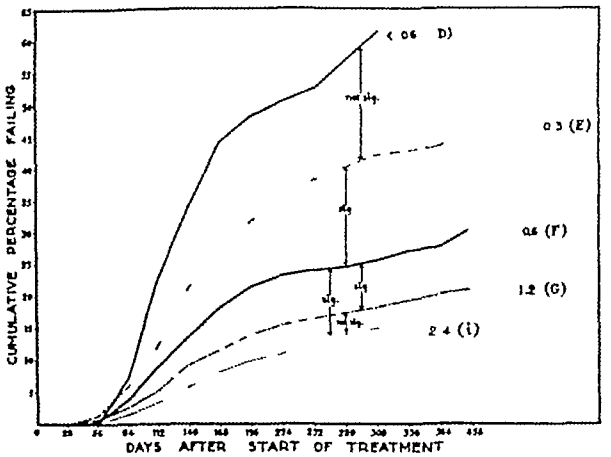



Chart 1 —Cumulative percentage failing by total amount of penicillin Penicillin only three hour interval seven to eight days duration

The total number of patients under observation in successive time periods decreased considerably, so that by the end of the eleventh month after treatment only about 20 per cent of the total number treated was under observation This decrease is the result both of the constant accretion of new cases and the loss of patients who could have been followed for a given time period but were not

## INTERPRETATION OF RESULTS

The results of the use of penicillin in early syphilis, to be presented, must be interpreted in the light of the changing character of penicillin itself As commercially supplied, and as employed in this study, penicillin is not a single substance but a mixture of several At least four, and possibly other, fractions of penicillin have been identified called in this country penicillins G, X, F and K The relative quantities of each of these fractions present in commercial penicillin has varied much from time to time and to an unknown extent in the industry as a whole as between different manufacturers or even at different times from the same manufacturer The relative therapeutic efficacy in syphilis of these several fractions is under study but has not yet been definitely determined Moreover, the potency of commercial penicillin in units per milligram of dried substance, has steadily increased during the progress of this study (from an original average in 1943 of about 200 units per milligram to the present level of 900-1 400 units per milligram) To the extent to which potency has increased, 'impurities" in commercial penicillin, which may themselves possess therapeutic activity, have decreased. The influence of these changes in commercial penicillin on these or other results of the use of penicillin in syphilis cannot yet be assessed

With these reservations in mind, it may be further said that positive statements in the remainder of this report are made only when statistical criteria for significance have been met Such statements, or other generalizations which are moreover applicable only to the twelve treatment schedules discussed, are based on the assumption that the findings in the patients actually traced are representative of the group as a whole

## RESULTS

*Cumulative Percentage Failing by Total Amount of Penicillin* —In chart 1 is shown the cumulative percentage failure rates for early (primary and secondary) syphilis as a group, observed under five different treatment schedules, in each of which penicillin was given by the intramuscular route over a seven and one-half day period at three hour intervals, the total dosage of penicillin ranging from 60,000 to 2,400,000 units The ordinate gives the cumulative percentage failing, and the abscissa records days after the start of treatment The different schedules produced no different failure rates in the first two months after the start of treatment Thereafter the failure rates became widely separate one from the other The highest failure rate at the end of eleven months was 62 per cent on schedule D, employing a total dose of 60,000 units Schedule I, utilizing a total dose of 2,400,000 units, gave the lowest failure rate, 15 per cent at the end of eleven months The other three schedules hold intermediate positions between these two extremes at levels ordered inversely with total dosage Beginning with a total dose of 300,000 units, doubling the dose resulted in progressively fewer failures but not in proportion to the increased amounts of penicillin The comparable values at the end of eleven months were 42, 26, 18 and 15 per cent respectively for total doses of 300,000, 600,000 1,200,000 and 2,400,000 units

*Cumulative Percentage Failing on Penicillin Alone and on Penicillin Combined with Arsenoxide* —Chart 2 shows the effect of adding 320 mg of arsenoxide to a standard amount of penicillin The cumulative results with schedule G (1,200,000 units) shown in chart 1 are included here for comparative purposes Schedule E, involving 300,000 units of penicillin given every three hours for sixty injections, in doses of 5,000 units per injection, produced a failure rate of 42 per cent at the end of eleven months The addition of 320 mg of arsenoxide (given in eight daily injections of 40 mg each) to this penicillin schedule reduced the failure rate

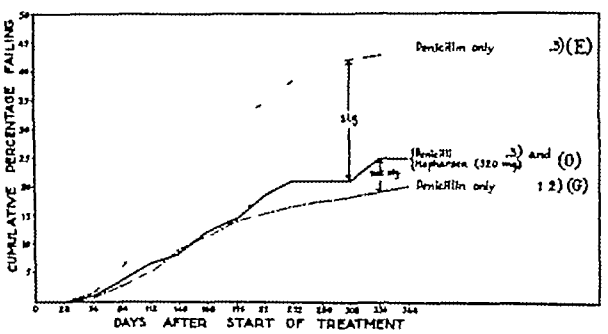



Chart 2 —Cumulative percentage failing Penicillin only and penicillin with oxophenarsine hydrochloride. Three hour interval seven to eight days duration

by one half, to 21 per cent The chart further demonstrates that the schedule involving 300,000 units of penicillin plus arsenoxide produced a failure rate no different from that employing 1,200,000 units of penicillin alone, i e four times as much penicillin Whether the latter conclusion will be confirmed by additional observations on a greater number of cases followed for a longer period of time remains to be seen

*Cumulative Percentage Failing on Penicillin Alone and on Penicillin Combined with Bismuth*.—Chart 3 presents a comparison between two schedules (G and T), each employing 1,200,000 units of penicillin at three hour intervals for sixty doses. Schedule T, in addition to this amount of penicillin, includes bismuth subsalicylate in a total dose of 0.6 to 1.0 Gm. Information available to the Central Statistical Unit does not carry observations on the latter group beyond two hundred days, but at one hundred and twelve days the failure rate with schedule G (penicillin alone) was approximately 5 per cent and with penicillin plus bismuth approximately 2 per cent. These two rates are significantly different. It is a matter of major importance to determine through further study and observation whether a larger proportion of penicillin-bismuth treated patients become seroresistant or develop late lesions of syphilis than the group given penicillin alone. Regardless of the eventual outcome of the individual case, the addition of bismuth to a penicillin schedule may be of public health importance in diminishing the incidence of infectious relapse.

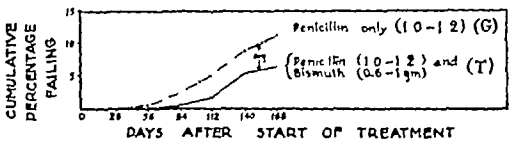



Chart 3.—Cumulative percentage failing. Penicillin only and penicillin with bismuth subsalicylate. Three hour interval, seven to eight days' duration.

*Cumulative Percentage Failing by Duration of Disease*.—Chart 4 depicts the cumulative failure rate in relation to the duration of syphilitic disease. Duration is defined as the interval between the day of the appearance of the initial lesion and the day of treatment. (The actual duration of infection is, of course, some three weeks longer, represented by the incubation period.) In order to avoid data based on the uncertain duration of the disease which usually characterizes the infection in the female, women have been excluded, and the results are based on a consideration of males alone, including only those who were able to date the appearance of the chancre with reasonable accuracy. The basic data consist of a combination of eleven of the twelve treatment schedules reported herein, schedule T having been omitted. This grouping is warranted by the fact that the distribution of the different schedules by duration of disease was essentially the same in these eleven schedules. The highest incidence of cumulative failures, 32 per cent at the end of eleven months, occurred in the group with infections of fifty-six or more days' duration (i.e., secondary syphilis). The best results (that is, the lowest incidence of failures, 14 per cent at the end of eleven months) were observed in the group whose infections were less than seven days in duration (i.e., seronegative primary syphilis). Intermediate relative positions in the chart are held by the groups with intermediate durations of disease. The findings are striking evidence of the general observation that, the longer the lapse of time between infection and treatment, the poorer are the anticipated results.

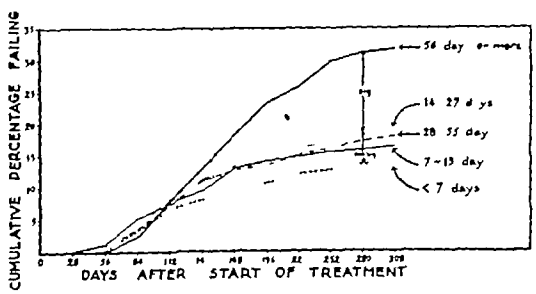



Chart 4.—Cumulative percentage failing by duration of disease. Males, eleven treatment schedules combined.

*Comparison of Failure Rates in Negro and White Patients and in Males and Females*.—The cumulative failure rates, determined for two different schedules, showed no essential difference in Negro patients as compared to white, and only slightly higher values in females as compared with males.

*Frequency of Relapse and Reinfection According to Treatment Schedule*.—No attempt will here be made to discuss the problem of relapse versus reinfection following the penicillin treatment of early syphilis. This highly controversial issue has been discussed in a recent editorial.[8] However, the cooperating clinics were asked to supply their own estimate as to whether a new dark field positive lesion appearing after penicillin treatment represented relapse or reinfection and in addition to submit to the Central Statistical Unit specific data on every patient in whom such a clinical failure was discovered. This questionnaire was so worded as to elicit information regarding each of the following criteria for reinfection:

1. The first infection was proved by dark field examination.
2. The patient received antisyphilitic treatment.
3. All evidence of syphilis must have disappeared after treatment and the patient shall have remained free from lesions in the interval between the first and second infection.
4. The serologic test for syphilis became negative after the first infection.
5. The serologic test for syphilis was negative at the time of the second infection.
6. A new chancre developed at a different site from the original chancre.
7. The new chancre was dark field positive.
8. There was no sign of activity at the site of the original chancre.
9. The spinal fluid was negative between the first and second infections.
10. The contact was demonstrated to have dark field positive lesions at the time of the stated exposure.

Table 2 presents, for each of eleven treatment schedules, the percentage of cases of failure which were classified by the cooperating clinics as relapse or reinfection.

TABLE 2.—*Penicillin Study of Early Syphilis*

Distribution of Failures as to Cause as Classified by the Cooperating Clinics by Treatment Schedule

| | Treatment Schedule | | | | Distribution of Failures Per Cent | | |
|---|---|---|---|---|---|---|---|
| Code | Interval Hrs | Duration Days | Total Dose Million Units | Number of Failures | Relapse | Reinfection | Other |
| A | 3 | 3¾ | 0.6 | 42 | 92.8 | 2.3 | 4.9 |
| B | 3 | 3¾ | 1.2 | 124 | 90.3 | 8.0 | 1.6 |
| C | 3 | 3¾ | 2.4 | 79 | 89.8 | 10.1 | 0.0 |
| D | 3 | 7½ | 0.60 | 35 | 89.5 | 2.8 | 8.5 |
| E | 3 | 7½ | 0.3 | 320 | 81.6 | 11.6 | 6.6 |
| F | 3 | 7½ | 0.6 | 175 | 80.2 | 12.0 | 1.7 |
| G | 3 | 7½ | 1.2 | 115 | 83.4 | 9.5 | 6.9 |
| I | 3 | 7½ | 2.4 | 90 | 86.6 | 10.0 | 3.3 |
| J | 6 | 3¾ | 1.2 | 40 | 82.2 | 10.5 | 2.2 |
| M | 6 | 7½ | 1.2 | 144 | 82.6 | 17.3 | 0.0 |
| O | 3 | 7½ | 0.3+ | 50 | 86.6 | 3.3 | 10.0 |
| | | | 300 mg Mapharsen | | | | |

Table 2 presents, for each of eleven treatment schedules, the percentage of cases of failure which were classified by the cooperating clinics as relapse or reinfection.

8. The Changing Concept of Reinfection with Syphilis and Its Applicability as a Criterion of Cure, editorial, Am. J. Syph., Gonor. & Ven. Dis. 29:474, 1945.

fection The "Relapse" group includes all cases of clinical or serologic relapse The "Reinfection" column includes all cases of possible reinfection as determined by the judgment of the clinic group Parenthetically, of 157 supposed reinfections reported as such by the clinics, the clinicians associated with the Central Statistical Unit would have agreed to the fulfilment of adequate criteria in only 2 The column headed "Other"

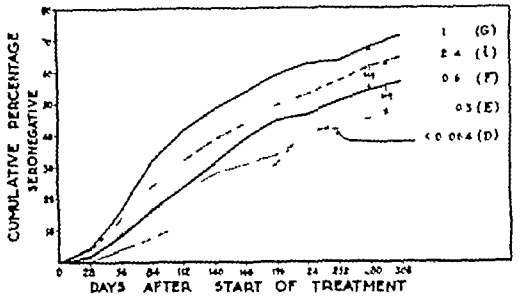



Chart 5 —Cumulative percentage becoming seronegative by total amount of penicillin Penicillin only three hour interval seven to eight days duration

includes failure because of the birth of a syphilitic child, because of treatment resistance or because of clinical or asymptomatic neurorecurrence Of all cases of failure, relapse made up from 81 7 per cent for schedule E to 92 9 per cent for schedule A The latter value, however, is based on a small group of 42 failures On schedules with 100 or more failures the percentage of failures which were probable reinfections varied from 8 1 to 17 4 When cases of serologic relapse were excluded and clinical failure alone was considered, the percentage of failures which were possible reinfections was roughly twice as high as that shown in the table, but for the eleven treatment schedules tested there was no definite order associated with amount of penicillin given, in the values for possible reinfections There thus appears to be no evidence suggesting that the rate of supposed reinfection was influenced by the amounts of penicillin given according to the schedules listed

*Cumulative Percentage Becoming Seronegative by Total Amount of Penicillin* —The cumulative percentage becoming seronegative on all treatment schedules having three hour intervals and seven and one-half days' duration is shown in chart 5 Only those patients seropositive at the start of treatment are included The phrase "becoming seronegative" is not intended to convey the impression of becoming and remaining seronegative, since all cases becoming seronegative in any observation period were excluded from the computations for all subsequent observation periods At the end of the seventh month the values range from about 30 per cent for the 60,000 units schedule D to 59 per cent for the 1,200,000 units schedule G In general there is an orderly progression of increasing cumulative percentage becoming seronegative with increasing total doses of penicillin An exception is noted with respect to schedule I, involving 2,400,000 units The 49 per cent value for seronegativity at the end of seven months of this schedule was significantly lower than the 59 per cent observed on schedule G, which utilized only one half as much penicillin Patients receiving 60,000 units of penicillin plus 320 mg of arsenoxide (not shown in chart 5) had a cumulative seronegativity rate comparable to the highest dosage of penicillin alone approximately 62 per cent at the end of seven months

With schedules involving three hour intervals and three and three-fourths days' duration, the expected results were reversed On such schedules a decreasing cumulative percentage becoming seronegative with increasing doses of penicillin was observed At the end of seven months the value for the 2 400,000 units schedule C, 25 per cent, was significantly lower than the values of 53 per cent and 62 per cent for schedules B and A, which employed 1,200,000 units and 600,000 units respectively An effort was made to determine if possible the reason for this unexpected result The three groups treated with schedules A, B and C did not differ significantly as to duration of disease When the rates were made specific for color and for sex the same direction of results as to seronegativity were found, and in fact the differences were even greater It was found that these three schedules were concentrated in certain clinics Fifty-five per cent of all cases treated with schedule A came from two clinics, the same percentage of all cases treated with schedule B came from a single clinic, and all the patients on schedule C were treated in seven U S Public Health Service rapid treatment centers These findings were therefore further explored

*Cumulative Percentage Becoming Seronegative by Clinic* —The cumulative percentage becoming seronegative in three different clinics each employing the same schedule I of 2,400,000 units in seven and one-half days was determined At the end of seven months the value for clinic 30 was 72 per cent, which was significantly higher than the 44 and 48 per cent respectively of clinics 2 and 44 These differences occurred in spite of the fact that 97 per cent of all patients treated in these three clinics were tested by a supposedly identical serologic technic The results in two clinics each employing the identical schedule of 600,000 units were then determined At the end of seven months clinic 35 reported a 54 per cent cumulative result becoming seronegative, a significantly higher value than the 39 per cent found in clinic 34, which however used a different serologic technic These differing results may perhaps be due to differences in the sensitivity of the serologic tests employed or in laboratories performing the same test It cannot be stated with certainty that the paradoxical results for seronegativity observed on schedules A, B and C are explicable on the basis of differences in clinic performance, but these differences did exist and warrant further study Likewise the dates between which these several treatment schedules were in use, and possible changes in the therapeutic efficacy of the penicillin employed at these times require additional evaluation

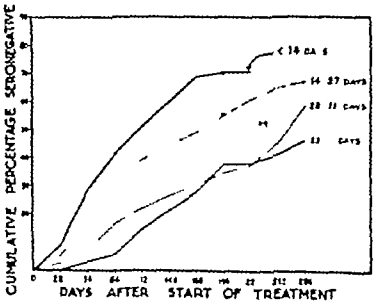



Chart 6 —Cumulative percentage becoming seronegative by duration of disease. Schedule I 2 to 2 4 million units three hours, seven to eight days

*Cumulative Percentage Becoming Seronegative According to Duration of Disease* —For this determination schedule I was employed throughout This schedule was in use by twenty-seven different clinics It was therefore selected for analysis on the assumption that because of the scattering among many clinics any clinic or laboratory difference that might have existed would in effect be neutralized Chart 6 is a graphic

presentation of the results At the end of seven months the group with infections of less than fourteen days' duration showed 70 per cent becoming seronegative, in contrast to the comparative values of 55 per cent, 34 per cent and 38 per cent for the groups with duration of infection from fourteen to twenty-seven days, twenty-eight to fifty-five days and fifty-six or more days before treatment In general the shorter the duration of the disease, the higher the cumulative percentage becoming seronegative at the end of seven months

*Herxheimer Reactions*—The distribution of Herxheimer reactions by eleven different treatment schedules is shown in table 3 From 28 to 69 per cent of the patients receiving treatment with these various systems had no recorded evidence of therapeutic shock The different treatment methods showed significant differences among one another with respect to this variable, but there was no evidence of any systematic or orderly differences among schedules A similarly erratic pattern is observed when the grade of the Herxheimer reaction is studied Here again there is evidence of significant differences among the several schedules so far as the frequency of reactions of different

TABLE 3—*Penicillin Study of Early Syphilis*

Distribution as to Herxheimer Reactions as Classified by the Cooperating Clinics by Treatment Schedule

| Code | Treatment Schedule: Interval, Hrs | Duration Days | Total Dose Million Units | Number of Cases* | Distribution of Reactions Per Cent: None | Fever or Cutaneous Only | Fever and Cutaneous |
|---|---|---|---|---|---|---|---|
| A | 3 | 3¾ | 0 6 | 171 | 40 7 | 46 2 | 7 0 |
| B | 3 | 3¾ | 1.2 | 757 | 38.8 | 57 8 | 3.3 |
| C | 3 | 3¾ | 2 4 | 703 | 51 6 | 40.5 | 4.8 |
| D | 3 | 7½ | 0 06 | 60 | 28.3 | 41 6 | 30 0 |
| E | 3 | 7½ | 0.3 | 321 | 42.3 | 53.5 | 4 0 |
| F | 3 | 7½ | 0 6 | 733 | 53.6 | 44 0 | 2.3 |
| G | 3 | 7½ | 1 2 | 1 043 | 35.9 | 57 2 | 6.8 |
| I | 3 | 7½ | 2 4 | 1 159 | 34.8 | 52 0 | 13 1 |
| J | 6 | 3¾ | 1 2 | 202 | 50 3 | 47 6 | 2 0 |
| M | 6 | 7½ | 1 2 | 701 | 68.9 | 28 6 | 2.3 |
| O | 6 | 7½ | 0.3+ 320 mg Maph | 116 | 30 1 | 65 5 | 4.3 |

* Cases with no data on Herxheimer reaction excluded

grades is concerned, but no uniform trend or clear pattern emerges Variations among clinics with respect to the accuracy of their clinical examinations and criteria for grading may perhaps alone be responsible for the erratic nature of these findings

None of the twelve schedules studied produced any of the more serious reactions There were no instances of bismuth stomatitis or nephrosis, or of hepatitis, blood dyscrasia, toxic encephalopathy, peripheral neuritis or death Fourteen cases of urticaria occurred, 6 of these on schedule I There was only 1 instance of bloody diarrhea, this in a patient receiving penicillin plus arsenoxide Secondary fever occurred in 152 patients, distributed more or less uniformly among all treatment schedules There were 2 instances of angioneurotic edema, both patients having been treated with schedule I

## SUMMARY

The following statements are based on the evidence presented in the body of this report, refer to the treatment schedules analyzed and are to be interpreted with the indicated reservations as to the changing character of penicillin

I EVIDENCE OF TREATMENT FAILURE—A *Total Dosage*—The cumulative percentage failure at the end of eleven months after treatment varied from 15 per cent (2,400,000 units) to 62 per cent (600,000 units)

B *Combined Drugs*—The cumulative percentage failure at the end of eleven months with a total dose of 300,000 units was twice as great when it was given alone as when it was given in combination with 320 mg of arsenoxide (42 per cent versus 21 per cent) This combined dose gave the same results as penicillin alone at a total dosage of 1,200,000 units

The cumulative percentage failure at the end of four months with 1,200,000 units was twice as great when penicillin was given alone as it was when given with 0 6 to 1 0 Gm of bismuth (5 per cent versus 2 per cent)

C *Duration of Disease*—For long durations of disease the failure rate was higher than for short durations For a duration of two months or more the failure rate at the end of eleven months was twice that of those treated within the first week of the disease (32 per cent versus 14 per cent)

D *Color and Sex*—There was no evidence of a difference between colored and white races by the end of eleven months The female failure rate was slightly higher than the male

E *Reason for Failure*—The failures were considered by the clinics to be relapses in about 85 per cent and possible reinfections in about 10 per cent There were no appreciable differences in these proportions for different schedules

II EVIDENCE OF SERONEGATIVITY—A *Percentage Becoming Seronegative*—The cumulative percentage becoming seronegative by the end of the seventh month ranged from about 30 for patients receiving less than 60,000 units to about 50 for patients treated with 1,000,000 or more units on three hour seven and one-half day schedules Patients treated with 300,000 units of penicillin plus 320 mg of arsenoxide had an accumulated seronegativity rate comparable to that obtained with the highest dosage of penicillin alone

For patients on three hour three and three-fourths day schedules these findings were reversed The group receiving 600,000 units had an accumulated percentage seronegativity of 62, while only 24 per cent of patients receiving 2,400,000 units became seronegative by this time When these rates were made specific for color and sex, the same results were found The groups *did not differ significantly as to duration of disease.* They were, however, concentrated in certain clinics

B *Clinic Differences for Same Schedules*—A comparison of different clinics handling the same treatment schedules showed definite differences in the percentage becoming seronegative It was not possible to test whether this factor accounted for the unexpected results for seronegativity with increasing doses in the three hour three and three-fourths day schedules, since there was no single clinic using all three schedules In view of the differences in clinic results, it is deemed advisable to compare results on seronegativity for different treatment schedules only if there is a general scattering of clinics involved, or if the results from a single clinic can be compared Where different schedules are concentrated in a few and different clinics, any comparisons may be misleading, at least until the differences arising from laboratory technics are evaluated

C *Duration of Disease*—For schedule I (2,400,000 units) the percentage becoming seronegative by the end of the seventh month showed a decrease with increasing duration of disease Those with lesions of at least two weeks' duration before treatment had a cumulative percentage of 70 becoming seronegative by

the seventh month after treatment, while those having had the disease for more than eight weeks had a rate of only 38 per cent

III HERXHEIMER REACTIONS.—The several treatment schedules differed significantly among one another as to both the incidence and the severity of Herxheimer reactions. Although these differences were noted, there was no clearcut pattern which could be discerned. The results for different schedules could be accurately compared only if these are scattered generally among the various clinics or, alternatively, if the results from a single clinic employing several different schedules are available for analysis.

No serious reactions occurred in patients treated with any of the twelve treatment schedules reviewed.

---

## THE CHANGING CHARACTER OF COMMERCIAL PENICILLIN

### With Suggestions as to the Use of Penicillin in Syphilis

COMMITTEE ON MEDICAL RESEARCH, THE UNITED STATES HEALTH SERVICE AND THE FOOD AND DRUG ADMINISTRATION

A Joint Statement

Chemical information concerning penicillin has been withheld during the war. The first published statement dealing with the chemical constitution of the drug appeared as a joint communication from the British Medical Research Council and the American Committee on Medical Research in December 1945.[1] This statement provided information as to the existence of four different types of penicillin designated in the United States as G, X, F and K. It was indicated that these were identifiable chemical compounds, distinguished from one another in the side groups attached to a common nuclear structure. Even before the appearance of this report, information had become available (by personal communication from various sources) that the penicillins of different manufacturers might differ in their relative proportions of fractions G, X, F and K, that the product of the same manufacturer might differ in this respect from time to time and that a considerable change in the relative proportions of these species present in commercial penicillin had actually occurred, probably as a gradual phenomenon during 1944. Prior to this time commercial penicillin was apparently predominantly penicillin G or a mixture of G and F. Subsequently the G content in the product of some, if not all, manufacturers decreased considerably, with a relative increase in fractions F and K, especially the latter. It is probable that penicillin X has been present only in small proportions, if at all, in most commercial penicillins at any time during the past three years, though some manufacturers apparently concentrated on attempting to attain 40 per cent or more X and marketed their products as such. These changes in the relative content of penicillin species have occurred because of the use in commercial production of various strains of Penicillium notatum or Penicillium chrysogenum and because of different technics observed in the growth of the mold and in the purification of the final product.

In addition to the change in the relative content of penicillin fractions there has also been a considerable change in the character of penicillin in the direction of increasing purity. The manufacturing producers have devoted great attention to the production of penicillin of increasing purity in units per milligram, with a corresponding decrease in the amount of impurities present. The penicillin that was originally available and employed in the nationwide syphilis study presently to be mentioned had an approximate potency of 200 units per milligram, which has gradually increased to the present level of 900-1 400 units per milligram.

Meanwhile, Dunham and Rake[2] had produced some evidence to indicate that commercial penicillin as available about two years ago contained impurities which might themselves possess treponemicidal properties. Their work suggested that the less pure the penicillin in terms of units per milligram the more effective it was in the prophylaxis of syphilis in experimental animals. Lewis[3] had likewise shown that impure penicillin exercised an inhibitory effect on the growth of sarcoma cells in tissue culture while no such effect was demonstrable with more highly purified products. Clowes[4] has observed a similar inhibition of development of sea urchin eggs or their actual destruction after exposure to a solution of "impurities" derived from commercial penicillin, whereas crystalline penicillin had no such effect. Hobby[5] has also noted that penicillins of low potency in units per milligram are apparently more effective in streptococcic infections of mice than are more purified products. These studies, suggesting but far from proving that impurities remaining in commercial penicillin after removal therefrom of all penicillin activity may be therapeutically effective, have not yet been verified.

Information has also begun to appear indicating that the several molecular species of penicillin vary significantly and unpredictably in their in vitro activity against a variety of bacteria,[6] and it is at least suggested that in certain infections in vitro activity may not be an adequate measure of in vivo activity. It is worth while pointing out that potency of penicillin is spoken of in terms of its in vitro activity against a special test strain of Staphylococcus aureus, that absorption and excretion studies are carried out by means of biologic assay against a variety of organisms, usually Staphylococcus aureus or Streptococcus pyogenes and that up to this point these two bits of information have been related to the possible activity of penicillin against other pathogenic organisms e g Treponema pallidum. This is certainly a non sequitur.

On Feb 6-7, 1946 there was held in Washington, under the joint auspices of the National Research Council and the United States Public Health Service, a conference of investigators who have been engaged in a study of the effect of penicillin in syphilis. Presented at that conference among other reports were the results of two years' study of the effect of various treatment

1 Committee on Medical Research, O S R D, Washington and Medical Research Council, London: Chemistry of Penicillin, Science **102**: 627, 1945.

2 Dunham, W B and Rake, G: The Relative Activity of Partially Purified Penicillin and Crystalline Penicillin G on Treponema Pallidum, Am J Syph, Gonor & Ven Dis **29**: 214, 1945.

3 Lewis, M R: Failure of Purified Penicillin to Restore Growth of Grafts of Sarcoma in Mice, Science **100**: 314, 1944.

4 Clowes, G H A: Personal communication to the authors.

5 Hobby, G: Personal communication to the authors.

6 Ory, E M, Meads, M, and Finland, M: Penicillin X: Comparison with Penicillin G with Respect to Sensitivity of Pathogenic Organisms and Serum Levels, J A M A **129**: 257 (Sept 22) 1945. Libby, R L and Holmberg, N L: The Activity of Penicillin G and X in Vitro, Science **102**: 303, 1945. Welch, H, Putnam, L E, Randall, W A and Herwick, R P: Penicillin X: Successful Treatment of Gonorrhea with a Single Intramuscular Injection

schedules in early acquired syphilis in man These data are recorded in factual fashion in this issue of THE JOURNAL

The relative activity in experimental syphilis in rabbits of penicillins G, F, X and K has been under organized investigation in several different laboratories

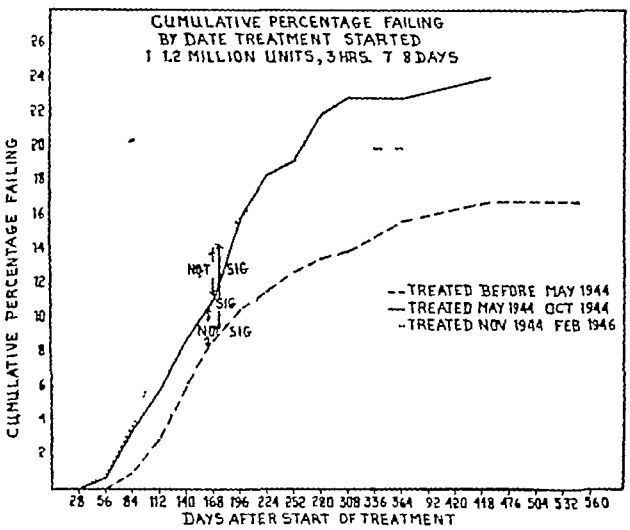



Chart 1 —Cumulated relapse rate in patients with early syphilis treated with an identical schedule (1 2 million units of penicillin in seven and one half days) at three different time periods sig' indicates statistical significance

under the direction of a subcommittee composed of Eagle (chairman), Chesney, Mahoney and Rake These studies, utilizing pure crystalline G and X and impure preparations of F and K (active material in each stated to consist of at least 90 per cent of F or K respectively) have been inaugurated at varying times within the past six months, depending on the availability of the products Each investigator has treated rabbits infected with the Nichols strain of T pallidum, treatment carried out six weeks after inoculation by a standard schedule comprising a total of twenty-four intramuscular injections given at four hour intervals over a four day period Each fraction has been tested within the dosage range 500-16,000 units per kilogram of body weight

Within a week after the February 6-7 penicillin conference, disturbing information became available as a personal communication from Chesney,[8] confirmed within a day or two by a similar personal communication from Mahoney and Arnold[9] Each of these investigators has studied penicillin K by the method outlined Each of them reported that in their laboratories clinical relapses had begun to appear within two to three months of treatment in a significant number of rabbits treated at all dosage levels, including the largest dose employed, namely 16,000 units per kilogram of body weight Meanwhile, information had been provided from the laboratories of Eagle,[10] Fleming[11] and Mahoney and Arnold[9] to indicate that the CD 50[12] of commercial penicillin in experimental rabbit syphilis, employed by an almost identical treatment system as was used with the purified penicillin species, was on the order of 1,500-2,000 units per kilogram of body weight Fleming,[11] who had been assigned the study of penicillin G, likewise reported by personal communication that the CD 50 and CD 95 of G closely approximated that of commercial penicillin manufactured about two years ago It was apparent therefore that there was at least a tenfold difference between the in vivo activity of penicillin G and penicillin K and that the latter penicillin species was at least relatively ineffective in rabbit syphilis

Within another few days Shaffer[13] of Detroit pointed out that in his hands, in early syphilis in man, a treatment schedule involving the administration of 2 4 million units of commercial penicillin in fifteen days (patients treated after December 1944) was less efficacious than 1 2 million units given in three and three-fourths or seven and one-half days (most of these treated prior to December 1944) In each of these three schedules employed by Shaffer, sodium penicillin was given intramuscularly in aqueous or saline solution every three hours day and night for the total time period specified

These two bits of information prompted an immediate examination of the results obtained with 2 4 million units of commercial penicillin in fifteen days at the Johns Hopkins Hospital[14] The results in 64 patients with early syphilis treated by this schedule during the time period November 1944-July 1945 were compared with those in 106 patients chosen at random from the nationwide material who were treated with 1 2 million units in seven and one-half days between June 1943 and March 1944 Although the 2 4 million units fifteen day schedule was favored because it had been in use for a shorter time than the 1 2 million units schedule, seven and one-half days, the results were distinctly poorer with the former, both in terms of relapse and in terms of seroresistance Also the composite curves of serologic response of the two series indicated

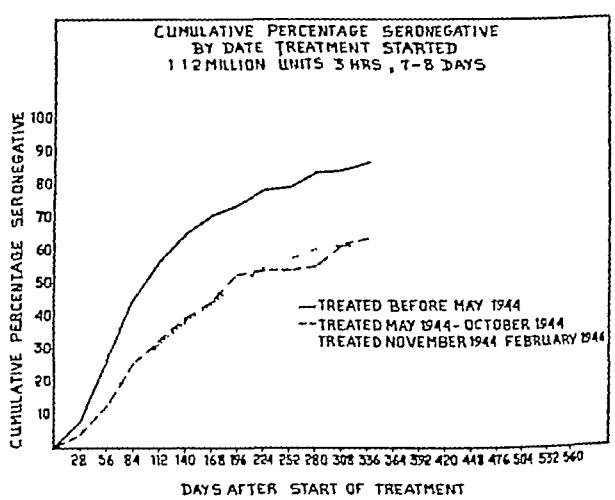



Chart 2 —Cumulated percentage of patients with early syphilis becoming seronegative after treatment with an identical schedule (1 2 million units of penicillin in seven and one half days) at three different time periods

that in this respect also 2 4 million units in fifteen days gave less satisfactory results than half the dose in half the time

Further to check this chemotherapeutic paradox, the Central Statistical Unit in the Johns Hopkins School of Hygiene and Public Health has determined on a nation-

7 Committee on Medical Research, O S R D and the U S Public Health Service The Treatment of Early Syphilis with Penicillin this issue, p 265

8 Chesney A N Personal communication to the authors

9 Mahoney J F., and Arnold R C Personal communication to the authors.

10 Eagle, H Personal communication to the authors.

11 Fleming W L. Personal communication to the authors

12. CD 50 and CD 95 = the dose required to cure 50 and 95 per cent respectively of the animals treated

13 Shaffer L W Personal communication to the authors

14 Moore J E Personal communication to the authors

wide basis and on a much larger scale the cumulated relapse rate and the cumulated rate of attained seronegativity in a large group of patients (1,280) with early syphilis treated with an identical schedule, 1 2 million units of commercial penicillin in seven and one-half days, over three time periods (*a*) from June 1943 to May 1944, (*b*) from May 1944 to October 1944 and (*c*) from November 1944 to February 1946 These data are presented in the accompanying charts In patients treated prior to May 1944 the relapse rate is significantly lower, and the proportion of patients becoming seronegative is significantly higher than in patients treated since that date

The less satisfactory clinical results obtained in early syphilis since May 1944 suggested several considerations

1 There has been a sudden change in the biology of syphilitic infection. This possibility seems fantastically improbable

2 There has developed a strain of T pallidum resistant to penicillin. This also seems improbable, since penicillin resistance, in the same sense as arsenic bismuth resistance, has not been convincingly demonstrated anywhere in the cooperating clinics scattered over the entire United States

3 There has been a change in the character of commercial penicillin

The last of these possibilities is known actually to have occurred The change has been, as indicated, in two directions

(*a*) A change in relative quantities of penicillin species with a probable substantial decrease in the amount of penicillin G and an equal compensatory increase in the amounts of penicillins F and K, especially the latter present in commercial penicillin.

(*b*) The increasing purity of penicillin in terms of units per milligram and a corresponding decrease of possibly therapeutically active impurities

The demonstration by Chesney and by Mahoney and Arnold of the inefficacy of penicillin K in experimental syphilis in rabbits has prompted further immediate studies of the pharmacologic behavior of various penicillins in the body The results of a number of such studies have now become available (from Eagle and Musselman,[15] McDermott and his co-workers[16] and Coghill and his associates[17]) These studies agree in indicating that penicillin K provides much lower and much less well sustained blood levels than penicillins G, F or X They also indicate that, on the basis of the amount of penicillin recoverable in the urine penicillin K, in contrast to the other three penicillins, is largely destroyed in the body Further in conformity with these observations, Eagle and Musselman[15] have shown that penicillin K is one-sixth to one-fifteenth as efficacious in pneumococcic and streptococcic infections in mice as penicillins G, F and X, and Hobby[5] using a different preparation and a different method of administration, has found K to be half as active as G in the treatment of streptococcic infections in mice.

The conclusion seems inescapable that certain commercial penicillins produced within recent months are less efficacious in the treatment of syphilis than were the preparations available two years ago It is probable that some of the decreased therapeutic effect is due to the increased amount of penicillin K which has been present in the commercial preparations of many manufacturers The existence of other factors, such as the decrease in the amount of possibly therapeutically active impurities, must also be considered These several factors are under further intensive study in a number of cooperating institutions The penicillin manufacturers are likewise aware of the situation, are cooperating in the study and are taking practical steps in production to correct the identifiable difficulties

15 Eagle H., and Musselman A D The Low Therapeutic Efficacy of Penicillin K Relative to F G and X and Its Pharmacologic Basis Science, to be published

16 McDermott W Personal communication to the authors

17 Coghill R D Personal communication to the authors

## SUGGESTIONS AS TO USE OF PENICILLIN IN SYPHILIS

In the meanwhile, and on the basis of the information provided as to the effect of penicillin in early syphilis in this and the preceding communication,[18] it is not as yet possible to outline the best method of use of penicillin in the treatment of early syphilis or of any other stage of the infection It is however possible to advance certain minimum suggestions for treatment on the basis of information at present available in the literature and shortly to be published, and to indicate a number of points to be avoided [18]

1 When sodium penicillin in aqueous solution is used for the treatment of syphilis in man, injections should be given by the intramuscular route every two to four hours preferably every two or three hours, day and night around the clock, for a minimum of seven and one-half to eight days The presence of penicillin K in commercial penicillin, probably in varying and unpredictable amounts for the next few months, should be compensated for by an increase in individual and total dosage and if possible by a decrease in the interval between individual injections from three to two hours

The minimum dose of previously produced and at present available commercial penicillin should be, for seronegative primary syphilis, not less than 3 6 million units (ninety injections of 40,000 units each given every two hours or sixty injections of 60,000 units each given every three hours), and for seropositive primary and early secondary syphilis not less than 5 4 million units (ninety injections of 60,000 units each or sixty injections of 90,000 units each)

For a first relapse (including reinfection, infectious or serologic relapse) of early syphilis after previous treatment of early syphilis this course should be repeated plus 360 mg of oxophenarsine hydrochloride (mapharsen) or an analogue given twice to three times weekly in six individual intravenous injections of 60 mg each plus 1,200 mg of bismuth subsalicylate given twice weekly in six individual intramuscular injections of 0 2 Gm each (see paragraphs 5 and 6 for a brief discussion of combined penicillin and metal therapy)

For a second relapse of early syphilis after previous penicillin treatment the patient should be transferred from penicillin entirely and placed on metal chemotherapy with arsenic and bismuth, preferably by the twenty-six week schedule employed by the Army and Navy (forty intravenous injections of oxophenarsine hydrochloride and sixteen intramuscular injections of bismuth subsalicylate)

(Evidence concerning the penicillin treatment of failures after previous penicillin therapy is not as yet satisfactory It is indicated that failure after previous failure is considerably more frequent than in patients never previously treated This may however be due only to the factor of duration of disease rather than to the existence of penicillin resistance of particular

18 The suggestions about to be given as to early and latent syphilis recapitulate recommendations made on April 16 1946 to the armed forces on request of the Surgeons General United States Army and Navy respectively by the Syphilis Study Section National Institute of Health

strains of organisms or of failure of the patient's own immune process.)

In later stages of syphilitic infection in adult (i.e. latent and late) syphilis the minimum dose should be not less than 3.6 million units, and in certain grave late manifestations of the disease, e.g. dementia paralytica, it should perhaps be as much as 10 million units, given over a minimum period of twelve to fifteen days.

2. In the treatment of infants, and in consideration of the gravity of infantile congenital syphilis, the minimum total dose should probably be greater than that advised for use in adults and should range between a total of 100,000 to 400,000 units per kilogram of body weight. In older children the dosage should be adjusted on a unit for weight basis with a minimum dose of 60,000 units per kilogram of body weight (corresponding to the minimum total of 3.6 million units for an adult).

3. Under no circumstances should penicillin in its at present available form be administered orally for the *treatment of syphilis*.

4. The only presently satisfactory method of absorption-delaying of penicillin is the administration of calcium penicillin in peanut oil-beeswax. Detailed information is not yet available as to the effects of this preparation in large series of patients with early syphilis or with any other stage of the disease. It is known, however, that a single intramuscular injection of 600,000 units will produce a therapeutically active blood level for from twenty to twenty-eight hours. If calcium penicillin in peanut oil-beeswax is used in any stage of syphilitic infection, the average daily dose for an adult should be 2 cc. (600,000 units) and the total duration of treatment from eight to fifteen days or longer, depending on the stage of the infection. For early syphilis a minimum total dose of 4.8 to 6.0 million units of this preparation is advised.

Calcium penicillin in peanut oil-beeswax should not be administered by the subcutaneous route, since under these circumstances the incidence of sensitizing reactions, with giant urticaria and angioneurotic edema, is excessively high.

5. There is evidence, both from the experimental laboratory[19] and from the clinic,[7] that the addition of arsenic (oxophenarsine hydrochloride) in subcurative dosage to a penicillin treatment schedule enhances the therapeutic effect of each drug. A suggested total dose of an arsenoxide for this purpose is 300 to 360 mg. administered in divided intravenous injections of 40 to 60 mg. each over a total time period of one to four weeks.

It is recognized that the administration of arsenic in this dosage introduces a risk of serious reactions or death in inverse proportion to the time interval of its administration. If 300 to 360 mg. is given within seven to nine days the expected mortality rate is approximately 13,000 to 14,000. If the same dosage is given over a total period of four weeks, this risk is reduced to about 130,000.

In view of this consideration, and of possible technical difficulties encountered in the administration of arsenic or in the mere prolongation of treatment necessitated thereby, opinion is divided as to the desirability of including this drug in a recommended penicillin treatment schedule. The majority opinion of a group of competent experts is that the results of penicillin alone, in the dosage and time recommended, would be satisfactory in a sufficiently large proportion of patients with early syphilis treated for the first time to justify eliminating arsenic from the original course of treatment, reserving its use for relapsing cases.

6. There is both clinical and experimental evidence to indicate that an insoluble bismuth salt administered intramuscularly in an oil suspension, e.g. bismuth subsalicylate, produces a slowly absorbed bismuth depot which continually releases small amounts of therapeutically effective bismuth for a period of from three to six months. There is likewise evidence to indicate that bismuth added to arsenic materially improves the results of mental chemotherapy. If bismuth is added to a penicillin or penicillin-arsenic schedule for early syphilis it may be anticipated that the incidence of infectious relapse within the first six to twelve months after treatment will be materially reduced. This is probably accomplished, for the first few months after treatment, by bismuth effect alone. Later relapse is perhaps prevented or minimized by the fact of development of the *patient's own immunity*. *Whether or not bismuth is of* value in effecting cure of the individual patient, it should nevertheless be of considerable aid in minimizing infectious relapse and thereby reducing the risk of spread of infection.

If bismuth is employed, the individual dose should be 0.2 Gm. (expressed as the subsalicylate, not as bismuth metal). A total of 1,000 mg. (five injections) given every other day for a total of nine days is unlikely to produce stomatitis except in patients with extremely bad oral hygiene, or renal damage in patients with previously undamaged kidneys. If the total dose is larger than 1,000 mg., injections should be given not oftener than twice weekly.

However, the opinion of a group of experts is also divided as to the desirability of including bismuth with the original course of penicillin in early syphilis. The majority believe, as for arsenic, that bismuth should be reserved for use in relapsing cases.

7. Commercial penicillin in the dosage and by the methods of administration suggested may be advantageously combined with fever therapy by means of induced tertian malaria in any form of neurosyphilis.

8. The use of sodium penicillin in aqueous solution is a hospital and not an office procedure. Injections of a few hundred thousand units given within one or a few days in a doctor's office are to be avoided.

It should be emphasized that these suggestions for the use of penicillin in syphilis represent a combination of medical desirability and expediency. They are based on information at present available, are only tentative, and are subject to revision within the next few months as further information accumulates.

It is also most vigorously to be emphasized that in the adoption of penicillin therapy for syphilis, the eventual value of which will not be determined for several years to come, the physician has a particular responsibility for careful follow-up and frequently repeated post-treatment observation on all patients so treated.

## SUMMARY

1. Penicillin as commercially distributed is not a single substance but a mixture of several. At least four different penicillin species which differ chemically in the side chains attached to the basic nuclear structure have been identified. These are known in the United States as penicillins G, X, F and K.

2. The relative content of these several penicillins *in commercial penicillin may vary from time to time*

19. Eagle H., Magnuson H. J. and Fleischman R.: The Synergistic Action of Penicillin and Mapharsen (Oxophenarsine Hydrochloride) in the Treatment of Experimental Syphilis, Ven. Dis. Inform. 27:1, 1946.

throughout the industry In recent months some commercial penicillins have contained a substantial proportion of penicillin K

3 The several penicillins vary in their in vitro and in vivo activity against a variety of bacteria

4 Penicillin K is relatively inefficacious against the several infections against which it has been experimentally studied Its inefficacy is apparently due to the fact that, unlike penicillins G, X and F, it is rapidly destroyed in the body

5 Commercial penicillin has also undergone a change in the direction of increasing purity (in units per milligram) with a consequent decrease in "impurities" which may possibly possess therapeutic activity

6 The changing character of commercial penicillin is reflected in the fact that the results of penicillin treatment of early syphilis have been less satisfactory since May 1944 than prior to that date

7 In view of these considerations, certain tentative plans have been adopted for the use of penicillin in the treatment of syphilis in man

8 The factors responsible for the apparent decrease in efficacy of commercial penicillin are under intensive cooperative study in laboratories and clinics working under the sponsorship of the National Institute of Health and by industry, and practical steps to meet the difficulty are in progress by industrial producers

## THE PROTECTIVE EFFECT OF VACCINATION AGAINST EPIDEMIC INFLUENZA B

THOMAS FRANCIS Jr, M D
JONAS E. SALK, M D
and
WILLIAM M BRACE M D
Ann Arbor Mich

### DISTRIBUTION OF INFLUENZA B IN 1945

The epidemiologic pattern of influenza B has not been well established In some years in certain areas it has presented the picture of a sharp short epidemic similar to that usually seen with influenza A This was the case in 1936 and 1940, the first epidemics identified as influenza B [1] Since 1940, however, several investigators have called attention to the fact that the disease may occur in a scattered manner during the respiratory disease season, independent of or interspersed with influenza A [2] In the past three years members of the Commission on Influenza of the Army Epidemiological Board have maintained a continuous alert for the detection of outbreaks of respiratory disease and their identification [3] This has consisted in serologic sampling of common respiratory infection in different service commands and prompt exploration of any increased prevalences The activities of the commission have also served to enlist the interest and aid of many medical officers who, knowing that the watch was kept, would report suggestive cases and furnish material to commission laboratories for diagnostic study or would seek to carry out the procedures in their own organizations Through these channels the pattern of influenza B during 1945 has become established

Influenza B was recognized in North America in the spring of 1943,[4] but between that time and the spring of 1945 no evidence of its occurrence was reported From March to November 1945, irregularly scattered, apparently localized upsurges of respiratory disease were identified as influenza B [5] They occurred throughout much of the United States, the Pacific Ocean area, Alaska and the Antilles department Civilian as well as military populations were affected The concentration of cases was extremely variable in different areas in Honolulu, a sharp civilian epidemic of 7,000-8,000 reported cases occurred, at certain military stations the disease seemed largely limited to European prisoners of war, in others, serologic tests on what seemed the normal run of respiratory disease revealed influenza B The disease was mild and varied from a large proportion of typical febrile illness of three to four days' duration, in some instances followed by pulmonary involvement, to transient indisposition and subclinical infection It is quite likely that much more of the disease in the civilian population was unrecognized and ignored However, the accumulated information identifies clearly a continued but shifting prevalence of influenza B for a period of eight months before its excess attracted attention in the general civilian population of the United States

The extensive distribution of the disease in the late spring and summer was considered to indicate the probable building up of a more definite epidemic wave during the latter part of the year This occurred, and in November and December identification of sharp civilian epidemics of the disease was made in this laboratory alone with material from the states of Michigan, Indiana, Illinois, Washington and Texas

### EFFECT OF VACCINATION AT THE UNIVERSITY OF MICHIGAN STUDY POPULATION

At the University of Michigan there were in residence for the fall term approximately 600 army forces who had been, with rare exceptions, subcutaneously vaccinated on Oct 16 1945 by United States Army authorities with combined, concentrated influenza A and B vaccine prepared from infected allantoic fluid [3] This was in accord with the general program adopted by the Surgeon General's Office The enrolment of another service unit averaged 1,100, and the civilian enrolment was about 10,000 The latter two groups were not vaccinated The two services were housed in university dormitories, the army group was divided in three dormitories, the other service unit occupied one large dormitory Sick call for the army

Miss Elva Minuse and Miss Hilda Kurtz assisted in the serologic and etiologic studies

From the Department of Epidemiology and Virus Laboratory School of Public Health and the Student Health Service University of Michigan

This study was conducted under the Commission on Influenza Board for the Investigation and Control of Influenza and other Epidemic Diseases in the Army Preventive Medicine Service Office of the Surgeon General United States Army

1 Francis T Jr New Type of Virus from Epidemic Influenza Science 92 405 (Nov) 1940 Epidemiological Studies in Influenza 1-

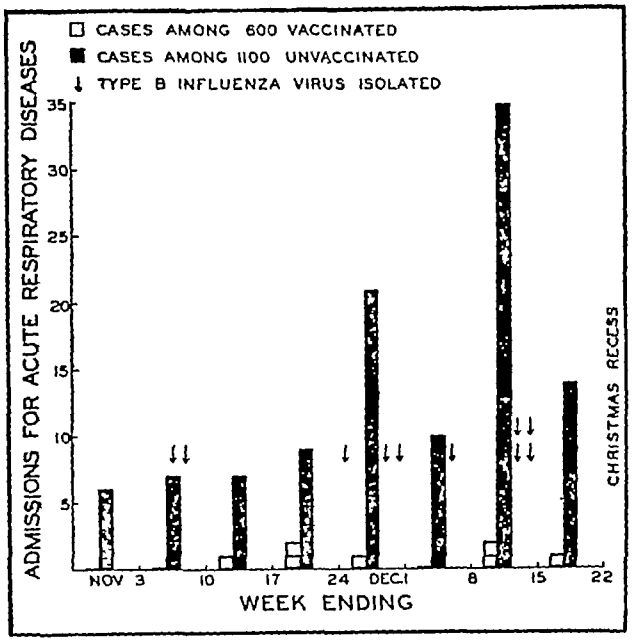
2 Lennette E H Rickard E R Hirst G K and Horsfall F L Jr The Diverse Etiology of Epidemic Influenza Pub Health Rep 56 1777 (Sept. 5) 1941 Lush D Stuart Harris C H and Andrewes C H The Occurrence of Influenza B in Southern England Brit. J Exper Path 22: 302 (Dec) 1941 Sordelli A Taylor R. M and Parodi S Estudio de los virus de la epidemia de influenza ocurrida en la Argentina durante el año 1940, Rev d Inst bact 10 265 (Dec) 1941 Taylor R M Parodi A S Fernández R B and Chialve R J Estudio sobre la etiologia de la influenza ocurrida en la Argentina durante 1941 ibid 11: 44 (Sept) 1942 Hare R, Hamilton, J and Feasby W R Influenza and Similar Respiratory Infections in a Military Camp Over a Period of Three Years Canad J Pub Health 34 453 (Oct) 1943 Beveridge, W I B and Williams S E Sporadic Occurrence of Influenza in Victoria During 1943 M J Australia 2 77 (July 22) 1944 Hare Stamatis and Jackson [4] Salk Pearson Brown Smyth and Francis.[5]

3 Francis, T Jr The Development of the 1943 Vaccination Study of the Commission on Influenza Am J Hyg 42: 1 (July) 1945

4 Hare R. Stamatis D M and Jackson J Influenza Amongst Immunized and Unimmunized Populations in 1943 Canad J Pub Health 34 442 (Oct.) 1943 Salk J E Pearson, H E Brown P N Smyth C. J and Francis T Jr Immunization Against Influenza with Observations During an Epidemic of Influenza A One Year After Vaccination Am J Hyg 42 307 (Nov) 1945

5 Reports from the Commission on Influenza to the Office of the Surgeon General U S Army Preventive Medicine Service Washington D C

group was held by an army medical officer at the University Health Service Patients with indications of upper respiratory infection and an oral temperature of 100 F were admitted as bed patients in the infirmary, where they were cared for by the University Health Service staff If the temperature was but 99 the patient




Influenza B among vaccinated and unvaccinated forces University of Michigan 1945

was usually sent to quarters but reported back the second day, if the temperature was 99 or more on the second day he was admitted

The second service unit held its own sick bay But all patients with oral temperatures as high as 100 F were sent to the Health Service Infirmary for admission The remainder were continued in quarters In general, then, cases of upper respiratory infection in the two groups were considered for admission to hospital beds on much the same basis

The civilian students were housed in a wide variety of establishments The conditions for their admission to the infirmary were much less uniform and less representative of illness in the entire civilian student body than in the other two groups Their data could not be properly compared with those of the service units

*Incidence in Vaccinated and Unvaccinated Military Units*—On Nov 7, 1945 at the Student Health Service, where a watch had been kept for changes in character or frequency of respiratory disease, a group suggestive of influenza was admitted as hospitalized patients to the infirmary Throat washings were obtained from 2 patients, and from 1 of these influenza virus type B was isolated in the virus laboratory on November 10, seventy-two hours after inoculation of throat washings and penicillin into the allantoic sac of fertile eggs Thereafter a continuous record of the admissions to the hospital for acute respiratory disease was maintained and once or twice weekly throat washings and blood were obtained from patients to provide a sample of cases in which etiologic studies could be carried out On December 22 Christmas recess began and extended furloughs and transfers took place, so that comparative data were no longer obtainable.

In the eight weeks from October 28 to December 22 inclusive there were 109 admissions for acute respiratory disease from the unvaccinated unit of 1,100 men—a rate for this period of 99 1 per thousand, while from the 600 men in the army unit there were but 7 admissions—a rate of 11 5 per thousand men (table 1 and chart)

Because of reasons stated, no comparison with civilian students is possible Nevertheless, material for study was obtained from samples of the 176 admitted cases

## ISOLATION OF VIRUS AND SEROLOGIC CHARACTERISTICS

During the period up to Dec 22, 1945 fresh or previously frozen but unfiltered throat washings from 29 patients were mixed with penicillin and inoculated into eggs in an effort to isolate virus From three to five passages were carried out before a negative result was recorded All twenty-nine were tested by the allantoic route,[6] and eight of these yielded strains which were established by egg passage, four of them on the first passage Thirteen throat washings were also tested by the amniotic route[7] with five strains established, two of them when allantoic passage was negative. The ten strains isolated were all identified as influenza virus type B Only one has been established in mice, and this strain was also maintained through fourteen passages in ferrets The turbinates of ferrets consistently presented a deep red congested appearance, but significant pulmonary lesions were uncommon

When tested in red cell agglutination reaction[8] against human acute and convalescent influenza B serum all strains were neutralized by the convalescent serum to titers four to sixteen times greater than those obtained with the acute stage serum, clearly characterizing them as type B The various strains were also tested with normal and convalescent serum of one ferret infected with the Lee strain and of another infected with one of the new strains (ALN) The former serum reacted characteristically with its homologous Lee strain but showed little demonstrable antibody to the new strains, while good inhibiting titers were found with the AL ferret serum against the fresh strains of virus and none

TABLE 1.—*Respiratory Disease Admissions During Epidemic of Influenza B, University of Michigan Health Service, 1945*

| Unit | Average Strength | Week Ended November 3 | 10 | 17 | 24 | December 1 | 8 | 15 | 22 | Total | Incidence per Cent |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Army (vaccinated) | 600 | 0 | 0 | 1 | 2 | 1 | 0 | 2 | 1 | 7 | 1 15 |
| Other forces (unvaccinated) | 1 100 | 6 | 7 | 7 | 9 | 21 | 10 | 35 | 14 | 109 | 9.91 |

to the Lee strain There was thus little reciprocal cross inhibition of agglutinins with serums of ferrets immune to the old and new strains (table 2)

When serums from individual rabbits immunized by single intraperitoneal inoculations of different strains

6 Rickard E. R Thigpen M and Crowley J H The Isolation of Influenza A Virus by Intra Allantoic Inoculation of Chick Embryos with Untreated Throat Washings J Immunol 49 263 (Nov) 1944

7 Burnet, F M. Influenza Virus Infections of the Chick Embryo Lung Brit. J Exper Path. 21: 147 (June) 1940 Hirst, G K. Direct Isolation of Influenza Virus in Chick Embryos Proc. Soc. Exper Biol. & Med. 58 155 (Feb) 1945

8 Hirst, G K The Quantitative Determination of Influenza Virus and Antibodies by Means of Red Cell Agglutination J Exper Med. 75 47 (Jan.) 1942 Salk J E. A Simplified Procedure for Titrating Hemagglutinating Capacity of Influenza Virus and the Corresponding Antibody J Immunol 49 87 (Aug) 1944

in 5 cc. of allantoic fluid were similarly tested against the Lee and new strains, it was found that the new strains elicited antibodies readily measurable by the Lee strain but that the same serums tested against new strains, with one exception, yielded indecisive results This is due to the fact that the virus antigens of new

TABLE 2—*Serologic Reactions of 1945 Type B Strains*

| Serum | Stage | Strains of Influenza Virus Type B | | | | |
|---|---|---|---|---|---|---|
| | | Lee (Old) | ALN (New) | PEK (New) | SKPT (New) | ORLBK (New) |
| Human B | Acute | 64 | 0 | 64 | 64 | 256 |
| | Conv | 2 048 | 512 | 1 024 | 1,024 | 2,048 |
| Ferret G87 | Norm | 0 | 0 | 64 | 128 | 64 |
| Lee | Conv | 4 096 | 0 | 128 | 256 | 128 |
| Ferret H1 | Norm | 0 | 0 | 128 | 32 | 128 |
| ALN | Conv | 0 | 1 024 | 2 048 | 512 | 2 048 |
| Rabbit M14 | Norm | 32 | 128 | 256 | 64 | 256 |
| Lee | Imm | 1 024+ | 128 | 256 | 64 | 256 |
| Rabbit M46 | Norm | 0 | 0 | 128 | 0 | 128 |
| ALN | Imm | 256 | 256 | 256 | 64 | 256 |
| Rabbit M47 | Norm | 0 | 64 | 256 | 0 | 256 |
| PEK | Imm | 256 | 64 | 512 | 64 | 512 |
| Rabbit M48 | Norm. | 32 | 128 | 256 | 32 | 256 |
| SKPT | Imm | 256 | 128 | 512 | 128 | 512 |
| Rabbit M49 | Norm | 32 | 128 | 256 | 0 | 256 |
| ORLBK | Imm. | 256 | 256 | 512 | 128 | 512 |

Numbers represent titers as determined by Salk s modification of Hirst s technic.

strains in allantoic fluid contain some substance which in the presence of normal serum interferes with the agglutination of erythrocytes by virus and gives the same effect in the agglutinin inhibition tests as antibody does The normal serum effect may then be so high as to obscure the true antibody titer

### SEROLOGIC STUDIES OF PATIENTS' SERUMS

Acute and convalescent serums were obtained from 26 of the unvaccinated service unit admitted between Nov 7 and Dec 14, 1945 The serums were tested for antibodies by agglutinin inhibition[8] against the PR8 strain of type A and the Lee strain of type B None showed an increase of titer to influenza A, while 21 of the 26 showed fourfold or greater increase to influenza B, and two others were high in both tests, thus indicating that 23 of the 26 in the sample group had suffered from influenza B

During the same period similar tests were done against the Lee strain with serums from 17 civilian patients Twelve of them were positive. In only 1 instance did paired serums negative to the Lee strain show a rise in titer with newly isolated strains In fact, serums which had been positive with Lee strain frequently failed to give positive results with new strains—again because of apparently high titers in the acute phase serums caused by interference of the antigen with agglutination of erythrocytes in the presence of serum Virus was isolated from 2 of 6 civilian patients from whom convalescent blood could not be obtained

Material was obtained from only 2 of the 7 army personnel admitted for respiratory disease No virus was isolated from their throat washings, and they were transferred before convalescent serum could be obtained[8a] In 2 other instances specimens were not taken since it seemed clear that their admissions were not related to acute illness It is of interest, however, that after the comparative study was terminated the 1 soldier who was known not to have been vaccinated was admitted on December 26, virus was recovered from his throat washings, and his serologic test was positive for influenza B

The evidence shows that the great bulk of admissions for acute respiratory disease during the period of study was influenza B, since serologic tests on patients sampled at intervals were definitely positive in 35, or 81 4 per cent, of the 43 unvaccinated persons studied The limitation of illness in the vaccinated units seems to be clearly due to the prevention of influenza B

Additional evidence of the different experience of the two groups is indicated by the statements of the patients coming from the two units For example, the unvaccinated patient from the army unit on December 26 stated that he knew of only 1 other member of his company who had been sick since October Repeatedly, however, men from the other unit stated that many of the men in their barracks were sick but not reporting

### SUBSEQUENT OBSERVATIONS

After the termination of the comparative study on Dec 22, 1945, sampling of cases admitted to the infirmary was continued The strengths of the service groups diminished decidedly and nearly all cases have been in civilian students Throat washings from 11 additional cases had been examined by Feb 6, 1946, and five strains of type B influenza virus were established by amniotic inoculation, only one of them was positive by the allantoic route Positive serologic tests have also been obtained over the same period. These results furnish evidence of the continued identification of influenza B in the United States for a period of twelve consecutive months

### COMMENT

The evidence points directly to the fact that vaccination of the army unit at the University of Michigan with vaccine containing influenza virus types A and B produced such effective protection during an epidemic of influenza B that only 7, or 1 15 per cent, of the 600 men were admitted to the hospital for respiratory infection during the epidemic period In contrast 109, or 9 91 per cent, of an unvaccinated service unit living and observed under similar conditions required hospitalization. Comment has already been made on the suggestion that the amount of nonreporting illness, or illness of insufficient severity to require hospitalization, was also greatly different The extent of the epidemic is indicated by the fact that the incidence of hospitalized disease in the unvaccinated population was 9 91 per cent, while in the 1943 epidemic of influenza A at the University of Michigan[9] it was 8 58 per cent, although the same criteria for hospitalization obtained in the two studies The comparative result is even sharper than that noted in 1943 It is in keeping with indications obtained by experimental infection that vaccination induces a stancher degree of resistance against influenza B than against influenza A[10]

The strains of virus recovered during the epidemic differed serologically from the Lee strain of type B according to tests with ferret serum On the other hand, using the acute and convalescent serums from the patients, the increases in titer, with the red cell inhibition test employed, were usually more distinct against the Lee strain than against the current strains More-

8a Serum was taken from 1 of these at Camp Upton on February 18 two months after the original bleeding An increase in titer was noted against Lee from 128 to 512 and against new strains of <32 to 256

9 Salk, J E. Menke W J Jr., and Francis T., Jr A Clinical Epidemiological and Immunological Evaluation of Vaccination Against Epidemic Influenza, Am J Hyg 42: 57 (July) 1945

10 Francis T Jr Salk J E. Pearson H E., and Brown P N Protective Effect of Vaccination Against Induced Influenza A J Clin Investigation 24: 536 (July) 1945 Salk, J E Pearson H E Brown P N and Francis T Jr Protective Effect of Vaccination Against Induced Influenza B, J Clin. Investigation 24 547 (July) 1945

over, serums produced in rabbits against the new strains reacted clearly with the Lee strain Hence there was sufficient evidence that the strains were type B, although certain differences from the standard Lee strain were found The differences were not sufficiently great as to evade the effect of vaccination of the human population with the Lee strain The impression has been repeatedly formed in this laboratory that, with newly isolated strains in allantoic fluid, tests conducted by the agglutinin inhibition technic tend to overemphasize strain differences This must be borne in mind in identification of new strains

Epidemiologically, demonstration of the continued presence of influenza B in this country for at least an entire year, March 1945 to February 1946 inclusive, is of great interest What might casually appear to be a series of unrelated, circumscribed episodes actually represents a widespread, smoldering disease incidence breaking into epidemics at various points as favoring conditions for their development or for their recognition occur In November and December its scope was sufficient to bring widespread realization that it was of epidemic proportions in large portions of the civilian population in much of the United States Several observers have commented on the manner in which cases of influenza B straggle through the usual respiratory disease season, perhaps for several months [2] But the past year's experience is a persistent ebb and flow, the recognition of which was in large part due to the extended observations by members of the Commission on Influenza and other army laboratories

The evidence tends to support the concept of influenza B as a disease with widely varied epidemiologic appearances [11] but one which behaves commonly as an endemic disease with epidemic peaks at intervals of four to five years This would conform to the exaggerated incidence of the disease in the younger population groups during an epidemic, as demonstrated in 1936,[12] suggested by the observations of Taylor, Petrilla and Dreguss [13] and frequently mentioned in press reports of the past winter

As with influenza A in 1943, the present epidemic period was preceded by a detectable prevalence of the virus well in advance If such observations can be continued they may be of value in recommending the time at which vaccine should be administered For during this season again it was demonstrated that vaccination in advance of an epidemic permits proper observation, while waiting until the onset of an outbreak in a locality invites the risk of being too late

### SUMMARY

During an epidemic of influenza B in November and December 1945 at the University of Michigan it was possible to compare the incidence of the disease in an army unit of 600 men which had been vaccinated against influenza and another service unit of 1,100 men which had not The incidence among the vaccinated was 1 15 per cent, in the unvaccinated, 9 91 per cent

The strains of virus encountered differed serologically from the Lee strain of type B influenza virus included in the vaccine, but this did not appear to prevent the prophylactic effect of the vaccine

The epidemiologic pattern exhibited by influenza B was a continuous prevalence for a period of at least twelve months, representing an endemic disease with numerous epidemic upsurges

The evidence clearly indicates that subcutaneous vaccination with inactivated influenza virus types A and B exerted a striking protective effect against epidemic influenza B

11 Francis T Jr Influenza Methods of Study and Control Bull. New York Acad Med 21: 337 (July) 1945

12 Francis T, Jr Epidemiological Studies in Influenza Am J Pub Health 27 211 (March) 1936

13 Taylor R M Petrilla A and Dreguss M Certain Broad Epidemiological Aspects of Influenza, J Infect. Dis 68 90 (Jan Feb) 1941

## CURARE IN THE TREATMENT OF ACUTE POLIOMYELITIS

MAX J FOX M D
Milwaukee

Medical science as yet has found no specific therapy for the treatment of poliomyelitis Many drugs have been used in the attempt to aid convalescence, but only a few have proved to be of any value in supportive treatment For the time being, hot fomentations and early muscle reeducation seem to be the procedures of choice This method of treatment is based on the assumption that the disease is self limited and that these procedures in therapy will bring about maximum return of function in the infected individual Since no specific serum or chemotherapy is available, it is quite evident that this disease will run its course from day to day despite the many known therapeutic measures which might be undertaken With this premise in mind, the available therapy must be thought of purely as a means of abating the illness and of preventing the development of deformities, subluxations and residual spasms

In a previous article Spankus and I [1] reported our results with the use of neostigmine during the acute stage of poliomyelitis but, not having found this to be the answer to the problem, we were encouraged by the favorable report of Ransohoff [2] in the treatment of 4 cases with curare The commercial physiologic assayed preparation of curare was administered to 34 of the 223 patients with poliomyelitis admitted to the Milwaukee Health Department's South View Hospital between July and November 1945 I believe that this series of 34 cases represents a fair trial of the drug, and certain deductive conclusions seem worthy of publication

### PROCEDURE

The 34 cases represent a wide range in age, extent of disease and clinical type As recommended in the literature, 0 9 mg of curare per kilogram of body weight was used as a basis for judging dosages However, because of the narrow margin of safety we used our own judgment as to the "safe" dose for each individual, depending somewhat on the age and size of the patient In all cases curare was given as early as possible after the diagnosis of poliomyelitis, but the time varied because of the difference between the date of onset of the disease and the date of admission to the hospital Because of the very narrow margin of safety, we were prepared, in all cases, to begin artificial respiration or transfer the patient to a mechanical respirator

### RESULTS

The results have been summarized on the accompanying table

Assistance in formulating these statistics was given by Dr Robert E. Votteler

From the Department of Clinical Medicine Marquette University School of Medicine and the South View Hospital of the Milwaukee Health Department

1 Fox M. J and Spankus W H The Value of Neostigmine in Acute Anterior Poliomyelitis J A M A 128: 720-722 (July 7) 1945

2 Ransohoff N S Curare in the Acute Stage of *Poliomyelitis* J A M A 129 129 130 (Sept 8) 1945

| Case | Sex | Age Years | Days from Onset | Clinical Type | Findings | Curare * Cc Im | Results: Subjective | Results: Objective |
|---|---|---|---|---|---|---|---|---|
| 1 | ♂ | 10 | 1 | Bulbar | Neck, back hamstring spasm cough gag reflex reduced slight difficulty swallowing | 1 0 | None at ½ 1 hr | Cough more reduced in force ½ 1 hr no other changes |
| 2 | ♂ | 9 | 2 | Bulbar | Neck back, spine muscle spasm nasal speech uvula deviated to left difficult swallowing | 1.25 | None at ½ 1 hr | None at ½ 1 hr |
| 3 | ♂ | 17 | 1 | Bulbar | Neck back hamstring spasm nasal speech palate deviated to right difficult swallowing | 2 0 | Felt much better at ½ 1 hr | Neck and back muscle spasm much decreased at ½ 1 hr |
| 4 | ♀ | 19 | 7 | Bulbar, spinal | Neck back hamstring spasm right lower extremity weak | 1 5 | Hot packs given immediately after curare course showed progressive paralysis placed in respirator died of atelectasis and pulmonary congestion | |
| 5 | ♂ | 8 | 3 | Bulbar spinal | Flaccid quadriplegia paralyzed thoracic muscles diaphragmatic and accessory muscles tug | 1.5 | Gradually became toxic and disoriented placed in respirator 7 hr later | Diaphragmatic tug and accessory sternocleidomastoid pull gradually became weaker and more irregular |
| 6 | ♂ | 7 | 7 | Spinal | Neck back hamstring spasm | 0 75 | Felt better at ½ 1 hr | None at ½ 1 hr |
| 7 | ♂ | 5 | 1 | Spinal | Neck back hamstring spasm | 0 5 | None at ½ 24 hr | Spasm slightly decreased at 1 24 hr |
| 8 | ♂ | 16 | 16 | Spinal | Neck, back, hamstring spasm | 1 0 | No change at ½ 1 24 hr | No change at ½ 1, 24 hr |
| 9 | ♂ | 8½ | 6 | Spinal | Neck, back, hamstring spasm | 0.5 | No change at ½ 1 hr | Spasm very slightly decreased at 1 hr |
| | | | 11 | | Spasm of back muscles | 0.5 | No change at ½, 1 hr | Slight reduction of spasm at 1 hr range of motion of back |
| | | | | | ½ hr later | 0 5 | Patient more comfortable at 24 hr | slightly increased at 24 hr |
| 10 | ♀ | 8 | 3 | Spinal | Neck, back hamstring spasm | 1 0 | Felt better at ½ 1 hr | Spasm reduced at ½ 1 hr |
| 11 | ♂ | 13 | 6 | Spinal | Neck, back hamstring spasm | 1.0 | None at ½ 1 hr | None at ½ 1 hr |
| 12 | ♂ | 14 | 9 | Spinal | Neck back, hamstring spasm | 1 0 | None at ½ 1 hr | No change at ½ 1 24 hr neck more flexible at 48 hr |
| 13 | ♂ | 10 | 3 | Spinal | Neck back hamstring spasm | 1 0 | Felt better at ½, hr regressed to previous condition at 1 hr | Slight increase in range of motion ½ hr movement similar to that before curare was given, 1 hr |
| 14 | ♀ | 8 | 4 | Spinal | Neck, back hamstring spasm | 0.5 | Felt better at ½ hr felt similar to before curare 1 hr | Less spasm at ½ hr., similar to before curare at 1 hr |
| 15 | ♀ | 6 | 4 | Spinal | Neck, back hamstring spasm | 1.0 | No change, ½ 1 2 hr | No change at ½ 1 2 hr |
| 16 | ♂ | 5 | 3 | Spinal paralytic | Neck back spasm left upper extremity paralyzed | 0 5 | Less pain ½ 1 hr | Spasm less evident range of motion increased at ½ 1 hr |
| 17 | ♂ | 13 | 2 | Spinal paralytic | Neck, back hamstring spasm, paralyzed left lower extremity weak right quadriceps | 1.5 | Felt much better at ½ 1 hr | Able to move paralyzed extremity more spasm much less evident |
| 18 | ♂ | 9 | 12 | Spinal paralytic | Neck back hamstring spasm right foot drop | 0.85 | Felt much better at ½ 1 hr | Spasm much decreased at ½ 1 hr |
| 19 | ♀ | 12 | 8 | Spinal paralytic | Neck, back hamstring spasm paralyzed right lower extremity | 1 0 | No change at ½ 1 hr | No change at ½ 1 hr |
| 20 | ♀ | 9 | 2 | Spinal paralytic | Neck back hamstring spasm paralyzed right quadriceps and anterior tibial groups | 1 0 | No change at ½, 1 hr | No change at ½ 1 hr |
| 21 | ♂ | 5 | 8 | Spinal paralytic | Neck back, hamstring spasm complete flaccid paralysis right lower extremity weak left lower extremity | 0 7 | No change at ½ 1 hr | No change at ½ 1 hr |
| 22 | ♂ | 11 | 13 | Spinal paralytic | Neck back, hamstring spasm dorsal scoliosis weak left quadriceps | 1 0 | No change in ½ 1 hr more pain 24 48 hr later | Left hamstring more relaxed at 1 hr spasm more evident 24 hr later pain in left calf in 48 hr |
| 23 | ♀ | 4½ | 9 | Spinal paralytic | Neck back hamstring spasm paralyzed left upper extremity | 0 5 | No change at ½, 1 24 hr | No change at ½ 1 or 24 hr |
| 24 | ♀ | 12 | 2 | Spinal paralytic | Neck back spasm | 1 0 | Less pain 1 hr later no improvement 24 hr later | Range of motion of left ankle greater 1 hr later spasm less pronounced no improvement 24 hr later |
| 25 | ♀ | 17 | 2 | Spinal paralytic | Neck back hamstring spasm upper extremities paralyzed intercostal expansion poor | 1 0 | No change in 1 hr | No change in 1 hr |
| 26 | ♀ | 10 | 9 | Spinal paralytic | Neck back hamstring spasm dosal scoliosis left foot drop weak left quadriceps | 1 0 | No change at ½, 1 48 hr | No change at ½ 1 hr spasm less at 1 hr no change at 48 hr |
| 27 | ♀ | 3 | 3 | Spinal paralytic | Neck back spasm paralyzed right upper extremity | 0.5 | No change at ½ or 1 hr | No change at ½ or 1 hr |
| 28 | ♀ | 13 | 5 | Spinal paralytic | Neck, back hamstring spasm paralyzed extremities more evident on left left eyelid tremor | 1 0 | No change at ½ or 1 hr | At ½ hour tremor disappeared spasm less paralysis unchanged no change in 1 hr |
| 29 | ♀ | 25 | 9 | Spinal paralytic | Neck, back hamstring spasm paralyzed left lower extremity right foot drop | 1 0 | No change | Range of motion of right foot increased at ½ hr spasm slightly less at 1 hr |
| 30 | ♀ | 9 | 5 | Spinal paralytic | Neck back hamstring spasm right foot drop quadriceps weak Kernig and Brudzinski signs + | 1 0 | No change at ½ 1 24 48 hr | No change at ½ 1 24 48 hr |
| 31 | ♀ | 13 | 6 | Spinal paralytic | Neck back hamstring spasm left arm weak | 1 0 | Felt better at ½ 1 24 48 hr | Range of motion of left upper extremity increased strength improved at ½ 1 24 48 hr |
| 32 | ♂ | 9 | 2 | Spinal paralytic | Neck back hamstring spasm tongue deviated to left weak right gastrocnemius | 1 0 | No change | No change |
| 33 | ♂ | 10 | 6 | Spinal paralytic | Neck, back, hamstring spasm paralyzed right lower extremity weak left rectus femoris and anterior tibial | 1 0 | Pain less feels better 24-48 hr | Range of motion of neck increased at 1 hr slightly more increased at 24-48 hr |
| 34 | ♂ | 8 | 3 | Spinal paralytic | Weak left upper and both lower extremities neck back hamstring spasm accentuated | 1 0 | Pain less, feels better at 1 hr | Range of motion of neck back hamstring slightly increased |
| | | | 4 | | Repeated in ¾ hr | 1 0 | No change at 1 hr | No change at 1 hr |

* Curare was administered on the basis of 0.9 mg per kilogram of body weight.

Only 12 of the patients noted improvement after curare was administered but the lack of permanence in this subjective sense of improvement did not merit continuation of the drug Furthermore, although 20 of the cases are reported on the charts as showing minor improvements, it must be added that, with the exception of 2 of these cases, there was no definite certainty in the relaxation of the muscle spasm

From the grouping of the cases according to clinical types, it can be noted that the bulbar and spinal-bulbar cases in general showed the least response to this medication, while the best results, if any, were seen in the spinal paralytic types

Typical of the patients having bulbar involvement (patient 5), a spinal bulbar poliomyelitis, was a boy aged 8 years who had difficulty in swallowing and an absent cough reflex at the time we gave him the regular dose of curare Within an hour's time the respiratory effort became more aggravated and cyanosis was quite pronounced, so that the patient was placed in a mechanical respirator He remained in the respirator for twenty-seven days at South View Hospital and was transferred to a private hospital as a possible permanent respirator patient This result and the result in case 4 may indicate possible dangers of using curare in any form of bulbar paralysis

Cases 9 and 34 represent attempts to get improvement with repeated smaller doses of curare The results show no significant advantage in this procedure

Although curare has merited a place in anesthesiology and certain types of spastic clinical entities, its use is not warranted during the acute phase of poliomyelitis Curare may prove to be of more benefit in the residual spastic conditions after the patients have been released from the quarantine period I am not in a position to comment on its value because I have not investigated its effects in such circumstances

This series of 34 cases is offered as a conservative observation on the use and effectiveness of curare in poliomyelitis I hesitate to recommend its routine usage in isolation hospitals for poliomyelitis cases It surely should not be adopted for home treatment because of the lack of proper supervision and necessary facilities in the event of harmful manifestations

### CONCLUSIONS

1 Curare has been tried in 34 cases of poliomyelitis

2 Although a few of the patients noted subjective improvement, the findings, objectively, were not encouraging

3 Bulbar cases did not respond to this treatment, and in 2 cases a rapid downward course necessitated the use of artificial respirators

4 Curare may be in some instances of temporary benefit, but it is a dangerous drug and is not to be encouraged for the treatment of the acute phase of poliomyelitis

324 East Wisconsin Avenue.

**Scientists and Politics**—Scientists are being urged to "knock at the door of politics" Scientists probably should do that, if in so doing we do not deviate from the path of science and continue to stick by the facts If, when "knocking at the door of politics," we follow current political mores, we injure science and render no service to society—Carlson, A J Is There "A Standard to Which the Wise and the Honest Can Repair?" *Science* **103** 377 (March 29) 1946

## EFFECT OF PARA-AMINOBENZOIC ACID IN TSUTSUGAMUSHI DISEASE

LIEUTENANT NICHOLAS A. TIERNEY (MC) U S N R.

Tsutsugamushi disease, or scrub typhus, is an acute infectious disease caused by Rickettsia orientalis and is transmitted to man by a larval trombiculid mite This has been one of the severest diseases encountered by the troops in the Pacific and Asiatic theaters of the war Figures for the case fatality rates according to the U S Army reports have varied from 1 to 28 per cent, but the majority ranged between 10 and 15 per cent, with an overall case fatality rate of about 5 to 7 per cent While the average period of disability in these cases has been approximately three months, many of the patients have been unfit for duty for a much longer time Many drugs have been tried on this disease, but until now no effective therapeutic agent has been found

The possible value of para-aminobenzoic acid as a therapeutic agent against a rickettsial disease was first suggested by Snyder, Maier and Anderson[1] They reported that 80 per cent of their mice inoculated with murine typhus survived when they were fed on a ration containing para-aminobenzoic acid, whereas only 20 per cent of the control mice recovered

Hamilton, Plotz and Smadel[2] noted that large amounts of para-aminobenzoic acid inhibited the growth of epidemic and murine rickettsias in the yolk sac of developing chick embryos

An independent discovery by Grieff, Pinkerton and Moragues[3] confirmed these results They found that para-aminobenzoic acid inhibited the growth of murine rickettsias in both mice and eggs

Yeomans, Snyder, Murray, Zarafonetis and Ecke[4] studied the effect of para-aminobenzoic acid in clinical louse borne typhus They reported a series of 20 treated cases and 44 controls The patients were given for an initial dose 4 to 8 Gm of para-aminobenzoic acid and 2 Gm every two hours in an effort to maintain a blood concentration of between 10 and 20 mg per hundred cubic centimeters These workers reported that the para-aminobenzoic acid had a good effect in decreasing both the severity of the disease and the case fatality rate

From the United States of America Typhus Commission War Department Washington 25 D C

These studies were carried out at the 20th General Hospital and at the 94th Indian General Hospital Ledo Assam India

Sergeants Ralph Fine and Morton Hookaylo of the 20th General Hospital determined the para aminobenzoic acid blood levels Other assistance was rendered by nurses corpsmen and technicians of the 20th General Hospital and the 94th Indian General Hospital

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the U S Navy The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the Navy Department.

Without the cooperation of the following persons this work would have been impossible Brig Gen I S Ravdin U S Army, Col Francis C. Wood M C A U S Col Thomas Mackie M C A U S Lieut. Col Justus Barnes M C A U S Lieut. Col Fred R Sloan M C U S Army Lieut. Col Louis B Ferraro M C A U S Lieut C H Uftring A N C Col J Palmer R. A M S and Lieut Col George A Kiloh R A M S

1 Snyder J C Maier J and Anderson C R Report to the Division of Medical Sciences National Research Council Dec 26 1942

2 Hamilton H L Plotz H and Smadel J E Effect of p-Aminobenzoic Acid on the Growth of Typhus Rickettsiae in the Yolk Sac of the Infected Chick Embryo Proc Soc Exper Biol & Med **58**: 255 262 1945

3 Grieff D Pinkerton H and Moragues V Effect of Enzyme Inhibitors and Activators on the Multiplication of Typhus Rickettsiae J Exper Med **80**: 561 574 1944

4 Yeomans, A. Snyder J C. Murray E S Zarafonetis C J D and Ecke R S The Therapeutic Effect of Para Aminobenzoic Acid in Louse Borne Typhus Fever, J A M A **126**: 349 356 (Oct 7) 1944

Snyder and Zarafonetis [5] and Murray, Zarafonetis and Snyder [6] reported that the oral and parenteral administration of the sodium salt of para-aminobenzoic acid to mice infected with scrub typhus definitely reduced the mortality of the experimental infection

Through the courtesy and cooperation of Brig Gen I S Ravdin, U S Army and Col Francis C Wood, M C, A U S, of the 20th General Hospital, and Col J Palmer and Lieut Col George A Kiloh, R A M S, of the 94th Indian General Hospital, an opportunity was afforded the United States of America Typhus Commission to conduct a study of para-aminobenzoic acid on patients with tsutsugamushi disease in these institutions

These hospitals were located at Ledo Assam, India, which marks the beginning of the Ledo Road This road was built through jungle territory in which tsutsugamushi infected mites abound It was from this area of northern India and Burma that most of our tsutsugamushi admissions came

The severity of the cases admitted to the 20th General Hospital and the 94th Indian General Hospital has varied from time to time As a result, any study to evaluate a therapeutic agent would have been worthless unless this agent was tried in alternate cases or in a large series of consecutive cases In view of the impossibility of the latter it was decided to treat alternate cases Those not receiving para-aminobenzoic acid received the best supportive treatment possible The disease appeared somewhat less severe in the Indians than in the Americans and consequently a separate alternate series was studied at the 94th Indian General Hospital All the cases were alternately treated except 2 One of these was a control who turned out not to have tsutsugamushi disease. In the other instance 2 patients were treated consecutively as at that time there were so few cases being admitted that it did not seem worth while to continue the study, but subsequent results encouraged us to carry on

## METHOD OF TREATMENT

The para-aminobenzoic acid was given orally as a powder partly neutralized by a sodium bicarbonate solution, which has a tendency to lessen gastric irritation [4] This was accomplished by mixing 10 cc. of a 5 per cent sodium bicarbonate solution with each gram of para-aminobenzoic acid powder At first 6 Gm of para-aminobenzoic acid was given as an initial dose, and then 2 Gm every two hours However, as the blood concentration of para-aminobenzoic acid was slow to rise, it was thought that valuable time was being lost by this procedure Therefore 8 Gm was given initially, and then 3 Gm every two hours On this regimen a blood concentration of 30 to 60 mg per hundred cubic centimeters was usually reached within two days This proved effective and was well tolerated by the patients Since the drug is rapidly excreted in the urine, it is necessary to give it every two hours

There is considerable variation from patient to patient in the ability to build up and maintain a satisfactory blood level of para-aminobenzoic acid Consequently it is highly important to determine the blood concentration of para-aminobenzoic acid in each patient each day It is only by this means that the proper amount of the drug can be administered The drug was usually continued in each case until the temperature had been normal for one week.

General supportive treatment of the highest possible quality was given all patients The following regimen was carried out at the 20th General Hospital Patients were placed in an air conditioned ward and had absolute bed rest A high protein, high caloric soft diet with supplementary vitamins and 4 Gm of added salt was provided If the patient was too ill to take the diet properly, Amigen [7] and glucose were given intravenously The fluid intake was maintained at 3 to 4 liters daily and the urine output was measured Oxygen was administered for dyspnea or cyanosis Blood transfusions and plasma were given for impending shock Paraldehyde was the drug of choice for extreme restlessness, and codeine for pain Bacterial complications were treated with penicillin Sulfonamides were considered contraindicated because of their antagonistic reaction to para-aminobenzoic acid

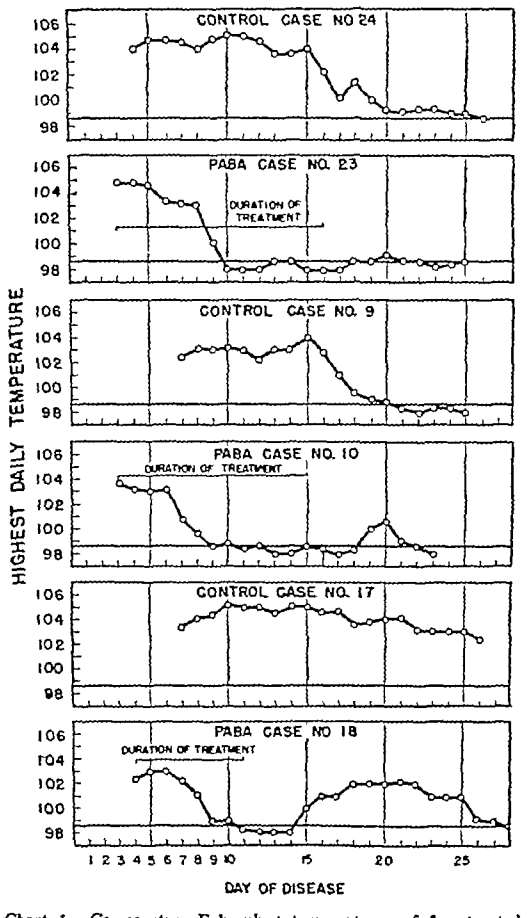



Chart 1.—Comparative Fahrenheit temperatures of 3 untreated control cases of scrub typhus and 3 cases treated with para-aminobenzoic acid (PABA) Duration of treatment is indicated in the charts

At the Indian General Hospital most of the preceding supportive measures were executed, with the exception of the air conditioning and the use of Amigen

## THE DETERMINATION OF PARA-AMINOBENZOIC ACID IN THE BLOOD

The method used for determining para-aminobenzoic acid in the blood was the same as that described by Marshall and Litchfield [8] for sulfanilamide with the

5 Snyder J C. and Zarafonetis C J D Effects of Para Amino benzoic Acid in Experimental Tsutsugamushi Disease Proc. Soc. Exper Biol & Med 60: 115 117 1945

6 Murray E S Zarafonetis, C J D and Snyder J C. Further Report on Effect of Para Aminobenzoic Acid in Experimental Tsutsugamushi Disease Proc Soc. Exper Biol & Med 60: 80-84 1945

7 A casein hydrolysate produced by Mead Johnson & Co

8 Marshall E T and Litchfield J T The Determination of Sulfanilamide Science 88 85-86 1938

exception that a standard solution of para-aminobenzoic acid was substituted for sulfanilamide For the blood levels in this series, a standard solution of para-aminobenzoic acid containing 30 mg of para-aminobenzoic acid per hundred cubic centimeters was found satisfactory In preparing the standard, the sodium salt of para-aminobenzoic acid was used because of its solubility

RESULTS

In this series there were 34 patients with definitely proved uncomplicated tsutsugamushi disease Of the 34, 16 were Americans, 16 Indians and 2 Chinese Twenty-six of them (76 per cent) had classic tsutsugamushi disease, which consisted of a typical history and physical findings, including the eschar Five patients had neither rash nor eschar, while 3 had rashes but no eschars, but these patients had all the other signs and symptoms of this disease including a confirmatory proteus OXK titer rise One patient a man aged 35, had malignant tertian malaria as well as classic tsutsugamushi disease Treatment with quinine and atabrine was begun shortly after admission and para-

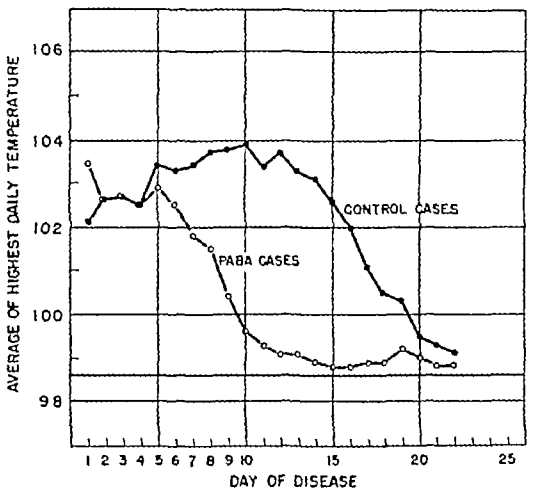



Chart 2 —Comparison of the average of the highest Fahrenheit temperature each day in 16 untreated control cases of scrub typhus and in 18 cases treated with para aminobenzoic acid (PABA)

aminobenzoic acid was started at the end of the sixth day of the disease There was no apparent response to therapy except for the disappearance of the malarial parasites from the peripheral blood smear after three days In spite of para-aminobenzoic blood levels that ranged between 20 and 40 mg per hundred cubic centimeters his condition became worse He developed an extensive bronchopneumonia and died on the fifteenth day of the acute illness This patient had all the clinical signs of tsutsugamushi disease, including a characteristic eschar The proteus OXK titer rose from 1 40 to 1 640 It appeared clinically that the cause of this patient's death was tsutsugamushi disease, but the microscopic examination failed to reveal any lesions characteristic of tsutsugamushi disease Smears of the brain and spleen were negative for malarial parasites The pathologic diagnosis was a bacterial bronchopneumonia Because of the complicated nature of this case, which prevented clear appraisal of the effect of treatment with para-aminobenzoic acid, the case is not included in the following statistics

*Effect of Para-Aminobenzoic Acid on Temperature* —The favorable response to para-aminobenzoic acid therapy seemed to be apparent After approximately two days of treatment the temperature started to fall by lysis, and after five to seven days it was normal in the majority of cases Although the change was striking in most of the individual cases, it was most impressive when one compared it to that seen in the untreated alternate controls (chart 1) The overall difference in the temperature courses is brought out by comparing the average of the highest temperature each day in all of the para-aminobenzoic acid cases to that in the controls (chart 2) There were ten more days of fever in the average of the control cases than in the average of the para-aminobenzoic acid cases

In case 27 (table 1) the temperature was coming down until the patient developed a nonspecific diarrhea which lasted for a week, and with this there was an exacerbation of his fever In cases 10 and 18 (fig 1) and 29 (table 1) after the para-aminobenzoic acid was discontinued there was a secondary rise in temperature Associated with this there was a mild recurrence of the previous symptoms, and, what was most impressive, the lymph nodes became enlarged again Despite a thorough search for complications to account for this secondary temperature rise, none were found The fever lasted from three to fourteen days, but the patients were not very ill and the para-aminobenzoic acid was not started again This secondary fever had all the characteristics of typhus and it was interpreted as a mild relapse It did not occur in the untreated cases of scrub typhus This also was noted by Yeomans and his associates[4] in louse borne typhus treated with para-aminobenzoic acid but not in the untreated cases

*Effect of Para-Aminobenzoic Acid on the General Symptoms* —Patients with severe tsutsugamushi disease appear toxic and apathetic, and they usually complain of a very disturbing headache The average duration of these symptoms is approximately two weeks, but in those who received para-aminobenzoic acid therapy there was an early change After two to three days the headache was either gone or much less severe, the patient was much more alert, and in a number of cases the appetite had returned These are observations which impressed every one who had close contact with the patients It was quite apparent that the disease process was altered, particularly when one compared it to that in the controls

Some of the most striking responses to therapy occurred in those patients who had a very high concentration of para-aminobenzoic acid (95 to 150 mg per hundred cubic centimeters) In 2 of these patients the pronounced generalized lymphadenopathy disappeared within three days (cases 10 and 12, table 1) In spite of the very high drug levels, the only toxic manifestation was slight confusion One patient (20) had two convulsions when he had a para-aminobenzoic acid blood level of 103 mg per hundred cubic centimeters, but at that time he was acutely ill and the convulsions were probably due to the disease rather than to the drug

*Effect of Para-Aminobenzoic Acid in Decreasing the Complicating Conditions* —In the 16 control cases there was severe bronchitis in 14 and mild bronchitis in 1, while in the 18 para-aminobenzoic acid cases there was bronchitis in only 4, and this was mild and of very short duration There was severe pneumonitis in 10 control cases but none in the para-aminobenzoic acid cases Severe delirium occurred in 4 control cases and in 1 para-aminobenzoic acid case Mild delirium occurred in 2 patients who had high para-aminobenzoic acid blood levels Stupor occurred in 4 controls and

in 1 para-aminobenzoic acid case, while coma was present in only 3 controls Convulsions were observed in only 1 case, and that was a para-aminobenzoic acid case

Two control patients had definitely abnormal electrocardiograms, with low voltage and inverted T waves, and 1 of these patients had a gallop rhythm One control patient developed a prothrombin level of 30 per cent of normal and had numerous subcutaneous hemorrhages Painful, persistent peripheral neuritis occurred in only 3 control cases, and partial deafness which lasted for several weeks in 2 control cases Bacterial complications occurred in only 2 para-aminobenzoic acid cases, 1 of these patients developed a parotitis, while the other had a recurrence of otitis media, but both of them

The difference between the degree of overall severity in the patients who received para-aminobenzoic acid and those who did not was striking The great majority of those receiving para-aminobenzoic acid had mild courses There were no deaths, and only 1 patient became gravely ill Of the patients who did not receive para-aminobenzoic acid 3 died and 7 were gravely ill The classification of the whole series according to the method just described is shown in table 2

*Effect of Para-Aminobenzoic Acid in Shortening the Period Needed for Convalescence*—There was a great difference in the general condition of the patients in the para-aminobenzoic acid series and in the control series during the period of convalescence As one

TABLE 1—*Summary of Data in Thirty-Four Patients* with Tsutsugamushi Disease, Eighteen of Whom Received Para-Aminobenzoic Acid*

| Case No | Age | Day of Disease Hospitalized | Day of Disease PABA Started | Total PABA Dose, Gm | Maximum PABA Blood Level Attained † | Days of Cont Fever | Days of Sec Fever | Eschar | Rash | Bronchitis | Pneumonitis | Other Complicating Conditions | Lowest White Blood Cell Count | Proteus OXK Titer Rise | Ultimate Severity of Case |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | [illegible] | 2 | 5 | 2[illegible]4 | 63 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 5 200 | Neg to 1/80 | Mild |
| 2 | 30 | 5 | | 0 | 0 | [illegible]4 | 0 | 0 | 0 | ++++ | ++++ | 0 | 2 500 | Neg to 1/160 | Grave |
| 3 | 22 | 3 | 3 | 2[illegible]4 | 52 | 7 | 0 | 0 | ++ | + | 0 | 0 | 4 600 | 1/40 to 1/640 | Mild |
| 4 | 21 | 8 | | 0 | 0 | [illegible]0 | 0 | + | 0 | ++ | 0 | 0 | 6 110 | Neg to 1/320 | Grave |
| 5 | 24 | 7 | 7 | 264 | 43 | 17 | 0 | + | ++ | 0 | 0 | Parotitis | 3,8[illegible]0 | Neg to 1/320 | Mild |
| 6 | 22 | 1 | | 0 | 0 | 17 | 0 | + | 0 | ++++ | 0 | 0 | 4 400 | Neg to 1/640 | Severe |
| 7 | 23 | 2 | 3 | 234 | 90 | 6 | 0 | + | 0 | + | 0 | 0 | 4,900 | Neg to 1/160 | Mild |
| 8 | 25 | 2 | 5 | 2[illegible]4 | 66 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8,210 | Neg to 1/80 | Mild |
| 9 | 28 | 7 | | 0 | 0 | 19 | 0 | 0 | 0 | ++++ | 0 | 0 | 8,300 | Neg to 1/160 | Grave |
| 10 | 4[illegible] | 3 | 3 | 246 | 152 | 8 | 3 | + | +++ | 0 | 0 | Confusion due to PABA | 4 700 | Neg to 1/80 | Mild |
| 11 | 26 | 6 | | 0 | 0 | 23 | 0 | + | ++++ | ++++ | ++++ | 0 | 4,800 | Neg to 1/160 | Severe |
| 12 | 36 | 6 | 6 | [illegible]91 | 155 | 11 | 0 | + | ++ | + | 0 | Confusion due to PABA | 6 900 | Neg to 1/80 | Mild |
| 13 | 20 | 5 | | 0 | 0 | 20 | 0 | 0 | ++++ | ++++ | | 0 | 6 400 | Neg to 1/320 | Grave |
| 14 | 40 | 6 | 6 | 357 | 5[illegible] | 15 | 0 | + | ++ | 0 | 0 | 0 | 3 450 | 1/40 to 1/640 | Moderate |
| 15 | 22 | 6 | | 0 | 0 | 18 | 0 | + | 0 | ++++ | ++++ | Delirium muscle twitchings | 10 000 | 1/80 to 1/1280 | Grave |
| 16 | 36 | 1 | 4 | 217 | 95 | 7 | 0 | + | 0 | 0 | 0 | 0 | 4 050 | Neg to 1/80 | Mild |
| 17 | 23 | 7 | | 0 | 0 | 79 | 0 | + | ++ | ++++ | ++++ | Stupor azotemia deafness myocarditis peripheral neuritis | 5 450 | Neg to 1/160 | Grave |
| 18 | 26 | 4 | 4 | 217 | 28 | 10 | 14 | + | ++ | 0 | 0 | 0 | 3,800 | Neg to 1/1280 | Mild |
| 19 | 29 | 1 | | 0 | 0 | 21 | 0 | + | ++ | ++++ | +++ | Delirium deafness peripheral neuritis | 4 400 | Neg to 1/3[illegible]0 | Grave |
| 20 | 32 | 4 | 5 | 250 | 103 | 13 | 0 | 0 | 0 | 0 | 0 | Convulsions | 6 400 | Neg to 1/80 | Moderate |
| 21 | 32 | 9 | | 0 | 0 | 15 | 0 | + | ++++ | ++++ | ++++ | Coma | 2,850 | Negative | Fatal |
| 22 | [illegible]8 | 6 | 6 | 330 | 60 | 11 | 0 | + | ++ | 0 | 0 | 0 | 4 000 | 1/40 to 1/40 | Mild |
| 23 | 22 | 3 | 3 | 357 | 56 | 9 | 0 | + | 0 | 0 | 0 | 0 | 3 0[illegible]0 | Neg to 1/320 | Mild |
| 24 | 37 | 4 | | 0 | 0 | 25 | 0 | + | 0 | ++++ | +++ | Muscle twitchings | 5 100 | 1/160 to 1/40 | Grave |
| 25 | 31 | 2 | 4 | 435 | 52 | 11 | 0 | + | + | + | 0 | 0 | 3 800 | Neg to 1/160 | Mild |
| 26 | 26 | 5 | | 0 | 0 | 15 | 0 | + | 0 | ++ | 0 | Stupor muscle twitchings | 4,450 | 1/40 to 1/40 | Grave |
| 27 | 24 | 7 | 7 | 419 | 52 | 19 | 0 | + | ++ | 0 | 0 | Diarrhea cause unknown | 2,200 | Neg to 1/640 | Moderate |
| 28 | 37 | 2 | | 0 | 0 | 17 | 0 | + | ++ | ++++ | ++++ | Coma | 5 000 | 1/[illegible]0 to 1/2,[illegible]60 | Fatal |
| 29 | 29 | 2 | 6 | 513 | 38 | 14 | 9 | + | ++ | 0 | 0 | Transient deafness | 4 0[illegible]0 | Neg to 1/80 | Moderate |
| [illegible]0 | 22 | 8 | | 0 | 0 | 19 | 0 | + | ++ | ++++ | ++++ | Coma | 10 300 | Neg to 1/[illegible]560 | Fatal |
| 31 | 24 | 4 | 4 | 466 | 3[illegible] | 11 | 0 | + | ++ | 0 | 0 | 0 | 3 600 | Neg to 1/40 | Mild |
| 32 | 26 | 3 | | 0 | 0 | 10 | 0 | 0 | + | 0 | 0 | 0 | 7 300 | Neg to 1/80 | Mild |
| 33 | 25 | 4 | 4 | 273 | 93 | 14 | 0 | 0 | +++ | 0 | 0 | Stupor recurrent otitis media | 1,500 | Neg to 1/80 | Grave |
| 34 | 26 | 3 | | 0 | 0 | 19 | 0 | + | + | + | 0 | 0 | 4 500 | Neg to 1/160 | Severe |

Patients 1 to 16 Indians 21 and 22 Chinese 17 to 20 and 23 to 34 Americans † Mg per 100 Cc PABA = para aminobenzoic acid

responded to penicillin therapy The foregoing data are presented in the general summary in table 1

An attempt was made to classify these cases according to the degree of severity in the following manner mild, moderate, severe, grave fatal The case was classified only when it was completed Duration of fever, duration and degree of toxicity and amount of pulmonary, cerebral or cardiac involvement were some of the factors considered If the patient's life was in jeopardy his case was called grave That is only those patients placed on the seriously ill list were classified as grave cases Many of the patients classified as being mildly ill appeared very toxic and severely ill on admission, but owing to their prompt response to treatment with a short febrile course and failure to develop severe complicating conditions they were placed in this category With this plan in mind an unprejudiced attempt was made to relate the degree of severity of the case with the treatment received

would expect, it conformed to the degree of severity of the disease The majority of the patients who received para-aminobenzoic acid required a much shorter period of convalescence than the control cases

TABLE 2—*The Ultimate Severity of the Disease With and Without Para-Aminobenzoic Acid Therapy*

| | Mild | Moderate | Severe | Grave | Fatal |
|---|---|---|---|---|---|
| Para aminobenzoic acid cases | 1[illegible] | 5 | 0 | 1 | 0 |
| Control cases | 1 | 1 | 4 | 7 | 3 |

*Effect of Para-Aminobenzoic Acid on the White Blood Cell Count*—It was noted by Yeomans and his associates [4] that there was a tendency for the total white blood cell count to drop during para-aminobenzoic acid treatment, but no change was observed in the differential count In the patients with tsutsugamushi

disease receiving para-aminobenzoic acid therapy 2 developed white blood cell counts below 3,000 per cubic millimeter. One of these patients had a count of 1,500 with 18 per cent granulocytes, the other a count of 2,200 with 8 per cent granulocytes. A third patient had a white blood cell count of 3,600 with 20 per cent granulocytes, and a fourth patient had a 4,050 white cell blood count with 20 per cent granulocytes. This leukopenia developed at the end of the course of treatment. As a result, in no case was it necessary to discontinue the drug during the acute stage of the disease, and in no case was there a relationship noted between the para-aminobenzoic acid blood level and the degree of leukopenia. In all these patients the white blood cell count started to rise within four to five days after the para-aminobenzoic acid was stopped. The regeneration in the lymphocytes preceded that in the granulocytes by three to four days. At the time of discharge the white blood cell counts were normal in all the cases. No change was noted in the red blood cell count at any time which could be attributed to para-aminobenzoic acid.

### IMPORTANCE OF EARLY TREATMENT

Treatment with para-aminobenzoic acid was instituted in these cases not later than the end of the seventh day of disease. It is obvious that the earlier the treatment is begun the better, but it is not known just how late para-aminobenzoic acid may be started and still be effective. It should be worth trying even though it may be late in the case.

### THE OPTIMUM AMOUNT OF PARA-AMINOBENZOIC ACID THERAPY

The high blood concentrations of para-aminobenzoic acid appeared to have a more abrupt therapeutic effect than the lower ones, but they also caused slight delirium. The patients who had para-aminobenzoic acid levels between 30 and 60 mg. per hundred cubic centimeters improved almost as quickly and had no mental reactions, so it seemed preferable to maintain the blood concentration of para-aminobenzoic acid within that range. After the patient became afebrile, the para-aminobenzoic acid concentration was frequently reduced to 10 to 20 mg. per hundred cubic centimeters without any relapse taking place.

Para-aminobenzoic acid was continued for a week after the temperature had been normal in an attempt to eliminate the secondary temperature rise. This procedure was started after the prolonged secondary fever occurred in case 18. Despite this there was a nine day secondary fever in case 29, but there was no prolonged secondary temperature rise in any of the other cases. If the drug is well tolerated by the patient, it is probably wise to continue the treatment in the manner just mentioned even though it may not be necessary.

### PRECAUTIONS TO BE TAKEN DURING PARA-AMINOBENZOIC ACID THERAPY

Although no serious toxic reactions have been attributed to para-aminobenzoic acid, one cannot be careless in its use. The total white blood cell count should be determined at least every second day, and if it is below 4,000 a differential count should be done. If the percentage of granulocytes is below 30, discontinuation of the drug should be strongly considered. A total white blood cell count which has fallen below 3,000 during treatment is also a good indication for discontinuing para-aminobenzoic acid.

A complete blood count should be carried out weekly and frequent urine examinations should be made. The fluid intake and output should be followed and regulated properly and the urine kept alkaline. The para-aminobenzoic acid blood concentration should be followed closely, and if it is above 60 mg. per hundred cubic centimeters the omission of a dose and the reduction of the maintenance dose should bring about the proper correction.

### COMMENT

By considering the severity of the disease in the control cases in which the case fatality rate was 19 per cent, it was apparent that in general, we were dealing with very severe tsutsugamushi. Many of the para-aminobenzoic acid patients were very toxic toward the end of the first week of the disease when treatment was being started. If the disease ran the usual course, as was seen in the controls, one would have expected them to have become more severely ill during the second week, as the second week is usually the worst in tsutsugamushi disease. This did not happen. Instead of the disease growing worse, there was improvement. After two to three days the temperature started to fall by lysis and there was definite symptomatic improvement. In 2 patients we observed the disappearance of a pronounced lymphadenopathy after three days of para-aminobenzoic acid therapy. There were few complicating conditions in the para-aminobenzoic acid cases and many in the controls. The usual course of disease seemed to be definitely altered and made much milder by para-aminobenzoic acid.

The secondary temperature rise which occurred in 3 patients after para-aminobenzoic acid had been discontinued was associated with a recurrence of the generalized lymphadenopathy and a return of some of the original symptoms. It resembled mild tsutsugamushi disease and, since nothing else could be found to account for it, we regarded it as a mild relapse. As it occurred after the para-aminobenzoic acid had been discontinued, and after the patient had been afebrile for several days (except in case 29), it seemed to be added evidence that para-aminobenzoic acid had had a definite suppressive action on the tsutsugamushi disease. These patients probably were not able to develop sufficient immunity to the disease to prevent a relapse after para-aminobenzoic acid was discontinued.

Although the number of cases treated in this series is not large, the results indicate that para-aminobenzoic acid has been decidedly effective and should be used in all cases of tsutsugamushi disease.

Since all the rickettsial diseases conform to the same basic pattern, it is not unlikely that para-aminobenzoic acid may prove to be a general antirickettsial agent. The work of Anigstein and Bader[9] showing that para-aminobenzoic acid had a protective action on guinea pigs inoculated with spotted fever, and the report by Rose and his associates[10] on the clinical case of spotted fever treated with para-aminobenzoic acid suggest that the drug may be effective against this disease also. Thus para-aminobenzoic acid appears to be widening the field of chemotherapy by attacking a new group of diseases for which there has been no cure.

9. Anigstein, L. and Bader, M. N.: Para-Aminobenzoic Acid—Its Effectiveness in Spotted Fever in Guinea Pigs, Science **101**: 591-592, 1945.

10. Rose, H. M., Duane, R. B. and Fischel, E. E.: The Treatment of Spotted Fever with Para-Aminobenzoic Acid, J. A. M. A. **129**: 1160-1161 (Dec. 22) 1945.

SUMMARY

1 Eighteen patients with tsutsugamushi disease were treated with large doses of para-aminobenzoic acid, and their clinical courses were compared to 16 alternate controls who received the standard treatment

2 The difference between the course of the disease in the para-aminobenzoic acid cases and the controls was striking The patients who were given para-aminobenzoic acid had fewer days of fever, less severe symptoms and complicating conditions, a shorter period of convalescence and a lower case fatality rate

3 It is concluded that para-aminobenzoic acid administered in the first week of disease is an effective therapeutic agent against tsutsugamushi disease -

# Clinical Notes, Suggestions and New Instruments

## THE USE OF NEOSTIGMINE IN THE TREATMENT OF THE GUILLAIN BARRÉ SYNDROME

J ORDIE SHAFFER M D
Minneapolis

The Guillain-Barre syndrome has recently received increasing attention and is more frequently being differentiated as a distinct entity from similar conditions such as poliomyelitis The use of neostigmine by Kabat and Knapp [1] in the treatment of poliomyelitis prompted the use of neostigmine in this case of the Guillain-Barre syndrome.

Neostigmine methylsulfate (1 2,000 solution) was given hypodermically in dosages varying from 2 to 8 cc daily, with an average of 5 to 6 cc. being given in divided doses of 1 to 2 cc. (0.5 to 1 mg) at two to three hour intervals The action occurs rapidly, so that within fifteen minutes muscle spasm and incoordination are measurably reduced. The decrease in "proprioceptive reflex hyperirritability' enables a wider range of passive motion, as shown by the Kernig test, and the decrease in 'skeletal muscle hypertonus" permits the patient a wider range of active motion [1] The therapy also enables a more coordinated active movement. Atropine sulfate was given in a dosage of 1/300 to 1/150 grain (0.2 to 0 1 mg) intermittently in the beginning of the therapy with the purpose of offsetting any possible undesirable effects of the neostigmine. No change in the efficacy of the neostigmine therapy was produced by the atropine, but no undesirable side actions were observed from the neostigmine after the atropine was discontinued The former tends to confirm Kabat and Knapp's belief that the action of neostigmine depends on the alteration of function of synapses in the spinal cord rather than in the myoneural junction [1]

Although Guillain felt that this disease was always benign,[2] there is ample evidence in the literature now that this is not the case. Various authors have reported mortality rates of from 8 to 30 per cent in their series, and late residual complications have been reported in as high as 31 per cent (5 cases) of a small series of 16 cases with one death in the same series of Taylor and McDonald [3] Bradford, Bashford and Wilson [4] reported 8 deaths in 30 cases (26 per cent) and Gilpin, Moersch and Kernohan [5] recorded a 20 per cent mortality rate in their series while Baker [6] reported a 10 per cent mortality rate (3 cases) in his series of 33 cases These facts all tend to encourage one to use an active course of therapy rather than a course of expectant observation with only supportive therapy, and it is hoped that the present proposed neostigmine therapy will fulfil this aim

REPORT OF CASE

*History*—T S, a white boy aged 8 years, had enjoyed good health except for chickenpox and whooping cough, which were experienced without residuals at 6 years of age. The child's parents and 2 older siblings also were healthy The remainder of the past history was noncontributory

*Present Illness*—The child's first difficulty developed on Feb 14, 1944, when a symmetrical paresis of the legs began This slowly increased in severity and progressed upward during the next three days, finally involving his back and arm muscles Concomitantly with this he had paresthesias and radicular pains in his legs On February 18 he developed a severe headache and the muscular involvement spread to the neck and the muscles of deglutition, causing difficulty in swallowing The paresis progressed into a complete paralysis until on February 23 he was totally paralyzed except for the muscles of facial expression and some slight rotatory movement of the neck In spite of the severe symptomatology there were no mental symptoms or findings suggestive of a septic process On February 23 the patient was admitted to the Philadelphia Hospital for Contagious Diseases as a case of possible poliomyelitis

*Physical Examination*—On admission the child appeared asthenic and weighed 70 pounds (32 Kg) His temperature was 98 6 F, the pulse rate was 80 and the respiratory rate was 18 Complete paralysis was present except as mentioned. There was a generalized depression of all reflexes The abdominal reflexes and the knee and ankle jerks were completely absent bilaterally Both the Kernig and Brudzinski tests were positive bilaterally The inability to swallow or extrude saliva caused frequent accumulation of saliva in the patient s throat, which made oral suctioning necessary Urinary and bowel incontinence were also present. The remainder of the physical examination was negative

*Laboratory Examination*—Data on admission and subsequent determinations are listed in the accompanying table.

A spinal tap revealed the acellular hyperalbuminosis or cell protein dissociation in the spinal fluid characteristic of the Guillain-Barre syndrome The protein was elevated to 365 mg per hundred cubic centimeters whereas the cell count was within normal limits (3 lymphocytes per cubic millimeter) Both blood and spinal fluid cultures were sterile

The treatment consisted in intravenous glucose feedings and supplemental doses of thiamine hydrochloride daily The patient improved slowly, and by February 28 he was able to swallow again but continued to have pain and paresthesias of itching and tingling in his legs On February 29 he was able to move his arms and legs a slight amount in a very slow incoordinate manner Improvement occurred during the next three days in the control of his hands and arms, and he was able to lift his head up slightly on March 4 Severe pain in the muscles of his legs continued, and at times he cried out in pain On March 6 he was transferred to the Philadelphia General Hospital

On admission he was afebrile but his pulse was 120 per minute and respirations were 22 per minute Neurologic examination revealed that his eyes were normal aside from slight lateral nystagmus The base of the uvula deviated slightly to the right on elevation A slight rigidity of the neck was present. Alleviation of the paralysis was occurring with most pronounced recovery in the cephalid portion of the body, where slight movements of the hands and arms were possible, although poorly coordinated Slight flexion and extension of the thighs were possible, but movement of the lower legs was almost imperceptible (— 3), abdominals and cremasteric reflexes were present, but knee and ankle jerks were absent. Babinski tests were normal Deep muscle and tendon pain were increased in all extremities, but sense position was normal The Kernig sign was positive bilaterally with a motion of

1 Kabat H and Knapp M E The Use of Prostigmine in the Treatment of Poliomyelitis, J A. M. A. **122** 989 995 (Aug 7) 1943

2 Guillain G Radiculoneuritis with Acellular Hyperalbuminosis of the Cerebrospinal Fluid Arch Neurol & Psychiat **36**: 975-990 (Nov) 1936.

3 Taylor E W., and McDonald C A Syndrome of Polyneuritis with Facial Diplegia Arch. Neurol & Psychiat. **27**: 79 112 (Jan) 1932

4 Bradford J R Bashford E. S and Wilson J A Acute Infective Polyneuritis, Quart. J Med. **12**: 88-126 1918-1919

5 Gilpin S F Moersch F P and Kernohan J W Polyneuritis A Clinical and Pathological Study of a Special Group of Cases Frequently Referred to as Instances of Neuronitis Arch Neurol & Psychiat **35** 937 963 (May) 1936

6 Baker A B Guillain Barré's Disease, Journal Lancet **63**: 384-398 (Dec) 1943

55 degrees possible on the left and 45 degrees on the right The spinal tap revealed water clear cerebrospinal fluid Pressure was not measured but appeared to be low Cell protein dissociation was still present with 10 lymphocytes per cubic millimeter and a protein determination of 436 mg per hundred cubic centimeters Supportive treatment including a high vitamin diet was continued The degree of active and passive motion possible in the joints of the lower extremity was tested periodically, but only slight improvement occurred, so that on March 11 neostigmine therapy was started on the patient.

Neostigmine methylsulfate (1 2,000) was given hypodermically at two to three hour intervals, and the tests on the degree of active and passive motion possible were continued. Atropine sulfate was given concomitantly at first to offset any possible reactions such as abdominal cramps or bradycardia, but later it was discontinued, as already mentioned Measurements of the degree of motion were done by means of a goniometer in which the error in measurement is about 2 5 degrees The measurements of passive motion of the knee joints were done by using the Kernig test with the patient in the supine position, and the thigh as nearly perpendicular to the body as possible.

*Laboratory Examination*

| | 2/23 | 3/6 | 3/13 | 4/1 | 4/14 |
|---|---|---|---|---|---|
| Spinal fluid | | | | | |
| Cells | 3 | 10 | | 5 | 4 |
| Differential | All lympho cytes | All lympho cytes | | All poly morpho nucleurs | |
| Erythrocytes | | | | Occasional | Occasional |
| Protein | 360 mg per 100 cc | 436 mg per 100 cc | | 166 mg per 100 cc | 228 mg per 100 cc |
| Sugar | | 58 mg per 100 cc | | 63 mg per 100 cc. | 63 mg per 100 cc. |
| Chlorides | | 730 mg per 100 cc | | | 732 mg per 100 cc |
| Kolmer | | Negative | | Negative | |
| Colloidal gold | | 4444321000 | | 5444443210 | |
| Culture | Sterile | | | Sterile | |
| Hemoglobin | 11 Gm | | 14 Gm | | |
| Erythrocytes | 4,570 000 | | 4 820 000 | | |
| Leukocytes | 15 500 | | 8 000 | | |
| Differential | | | | | |
| Neutrophils | 82% | | 24% | | |
| Lymphocytes | 16% | | 76% | | |
| Monocytes | 2% | | 0% | | |
| Eosinophils | 0% | | 0% | | |
| Basophils | 0% | | 0% | | |
| Urinalysis | Normal | | Normal | | |

The lower part of the leg was moved in an arc until pain was first elicited and measurement of passive motion was taken at this point. The greatest mean daily improvement over a five day period on supportive therapy was only 18 degrees, as shown in chart 1 One single injection of neostigmine caused a mean improvement of 50 degrees, representing more improvement in two hours than he had shown in the five days previously Measurements of active motion were done on each of the three major joints of the lower extremity The tests on the ankle were done with the knee placed in partial flexion. Chart 2 demonstrates the rapid improvement in active motion which occurred after the start of neostigmine therapy on March 11, as contrasted to the previous period The improvement in coordination similarly paralleled the improvement in motion

With rapid improvement on neostigmine therapy the patient was able to be up in a walker by March 16, moving his legs as he was pushed along Three days later, on March 19, he was able to move well with his own power On March 25 he walked short distances with aid and on the following day walked alone. Further improvement continued, and before his discharge from the hospital on April 19, 1944 he was able to run rapidly with no discernible difference from a normal child except that he fatigued more easily The child's endurance further improved but was not entirely equal to that prior to his illness until six months after his hospital discharge. He also continued to have a slight generalized depression of all his reflexes until October 1944, by which time all returned to within normal limits He was rechecked again in November 1945 (nineteen months after hospital discharge) and was found to be neurologically normal with no discernible evidence of residual abnormality such as muscle spasm or atrophy He has no difficulties of any kind at present and is in excellent health.

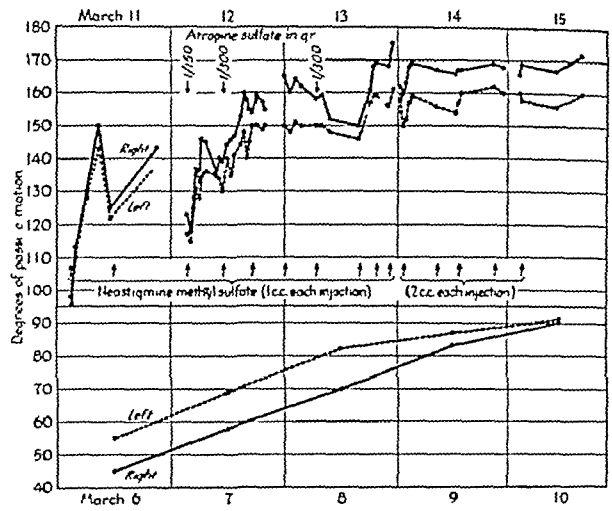



Chart 1 —Degrees of passive motion possible in knees as evidenced by the Kernig test over five day periods before and after neostigmine therapy

## SUMMARY AND CONCLUSIONS

1 Neostigmine, when used in the treatment of a case of the Guillain-Barre syndrome of the myelitic type, significantly increased both the active and passive range of motion and decreased the incoordination of movement.

2 The suggested dosage of neostigmine methylsulfate (1 2000 concentration) for a 70 to 75 pound (32 to 34 Kg ) person is 2 cc. given hypodermically every three hours for three to four doses daily, to be continued until the maximum expected improvement has occurred Atropine sulfate 1/300 grain (0.2 mg ) may be given concomitantly with the neostigmine to offset

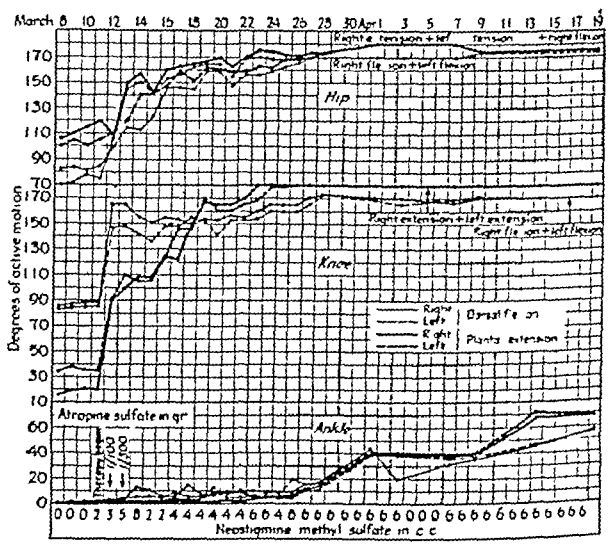



Chart 2 —Degrees of active motion possible in the joints of the lower extremities.

any undesirable effects and later given intermittently or discontinued at the clinician's discretion

3 It is hoped that this initial report on the use of neostigmine in the therapy of the Guillain-Barre syndrome will act as an impetus to clinicians to study further and continue this active method of therapy in order to reduce the mortality rate and morbidity rate of late complications in this syndrome.

# Council on Pharmacy and Chemistry

## REPORT OF THE COUNCIL

*The Council has authorized publication of the following statement* AUSTIN SMITH, M D, *Secretary*

## POTENCIES OF VITAMIN A PREPARATIONS ACCEPTED BY THE COUNCIL

From time to time the Council office has received inquiries from manufacturers as to the acceptability of vitamin A preparations in dosages of potency ranging from 50 000 units to 150,000 units or more. The Council has previously accepted no dosage of potency higher than 25,000 units The Council believes that this policy should be continued In reaching this conclusion, the Council is not concerned with toxic effects of vitamin A from the administration of capsules of higher potency This view is based on the fact that to encourage the use of very large doses of vitamin A would not be in the interest of good medical practice If those interested in doing investigational work desire to experiment with daily dosages of the order of 50,000 to 150,000 or more units they may use multiples of a 25,000 unit dosage. The Council finds no justification for routine administration of doses in excess of 25,000 units per day

## NEW AND NONOFFICIAL REMEDIES

*The following articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies A copy of the rules on which the Council bases its action will be sent on application*

AUSTIN SMITH, M D, *Secretary*

**THROMBIN, TOPICAL**—Thrombin—A preparation of thrombin, isolated from bovine plasma It complies with the requirements of the National Institute of Health of the United States Public Health Service.

*Actions and Uses*—Thrombin is intended as a hemostatic for topical application to control capillary bleeding in operative procedures It may be applied as a dry powder or dissolved in sterile, isotonic saline solution *It should never be injected*

*Dosage*—As a dry powder or in solutions containing 1,000 to 2,000 thrombin units

*Preparation and Tests*—

Thrombin may be prepared by the method of Seegers et al (*J Biol Chem* **146** 511 1942) Oxalated bovine plasma is diluted fifteen fold with water and acidified with acetic acid to a *ph* of about 5 1 to obtain a prothrombin concentrate by isoelectric precipitation This precipitate is suspended in oxalated saline solution dissolved by the addition of tenth normal sodium hydroxide to *ph* of about 6 4 and the prothrombin is adsorbed on a magnesium hydroxide cream The prothrombin is eluted by decomposing the magnesium hydroxide with carbon dioxide and the magnesium salts are then removed by crystallization filtration and dialysis The purified prothrombin is again concentrated by isoelectric precipitation and is then redissolved in isotonic saline solution Optimum amounts of calcium nitrate and lung extract are added The resulting concentrated solution of thrombin is sterilized by suitable filtration standardized for potency placed in ampuls and dried

The lung extract used in the preparation of thrombin is prepared from fresh ground bovine lung tissue

Thrombin topical is standardized to possess at least 10 units of thrombin per milligram of total solids The unit of thrombin has the power to clot 1 0 cc. of fibrinogen solution in $15 \pm 0.5$ seconds at $28 \pm 1$ C when tested by the method described by the National Institute of Health

Thrombin topical a mixture of thrombin and sucrose is a white powder completely soluble in water or isotonic solution of sodium chloride It contains not more than 1 mg of protein nitrogen per 300 units of thrombin When dried over phosphorus pentoxide under vacuum for forty-eight hours at room temperature the loss in weight is not greater than 1 per cent The ash content of thrombin topical, is not more than 5 mg per thousand units of thrombin When heated in an oven at 50 C for two weeks, thrombin topical shows no loss in activity

PARKE, DAVIS & CO, DETROIT

**Thrombin (Bovine) Topical** 5,000 units Each ampul contains 5,000 units of thrombin packaged with a 5 cc. vial of sterile isotonic saline solution preserved with phemerol 1 50,000

**PROCAINE HYDROCHLORIDE** (See New and Nonofficial Remedies, 1945, p 97)

The following additional dosage form has been accepted

WINTHROP CHEMICAL CO, INC, NEW YORK

**Novocain Solution 2 per cent** 30 cc bottles Each cubic centimeter contains procaine hydrochloride 20 mg, sodium chloride 3 5 mg, sodium bisulfite 2 mg and chlorobutanol 2 5 mg as a preservative

**PENICILLIN** (See New and Nonofficial Remedies, 1945, p 214)

The following dosage form has been accepted

PREMO PHARMACEUTICAL LABORATORIES, INC, NEW YORK

**Penicillin Sodium** Vials containing 100,000 Oxford units

# Council on Physical Medicine

*The Council on Physical Medicine has authorized publication of the following report* HOWARD A CARTER *Secretary*

## EYE DISCOMFORT CAUSED BY IMPROPERLY SHIELDED BLACK LIGHT ULTRAVIOLET LAMPS

The fluorescence excited by filtered ultraviolet radiation is finding a wide variety of uses by amateurs and by professional workers in examining minerals, documents and other objects, also in the examination and diagnosis and as a guide in the treatment of ringworm infection of the scalp The source of ultraviolet rays is a high vapor pressure, 'hot," mercury arc lamp In the commercial so-called "black light' lamps the filter enclosure consists of a red purple glass that transmits principally the powerful emission line of wavelength 3 663 angstroms (often written 3,650 A) and a small amount of the less intense visible (violet) emission line of wavelength 4,055 angstroms Depending on the manner of operation of the lamp (especially the high powered, 250 watt lamps) both of these lines excite a hazy bluish white fluorescence ('fog") in the eye media that interferes with clear vision and fatigues the eye, causing discomfort and sometimes headache if the examination is too prolonged But apparently no permanent damage ensues

Goggles suitable to wear when working under high powered black light lamps should be made of glass that absorbs completely the emission line of wavelength 3 663 angstroms and preferably also (at least 90 per cent of) the line of wavelength 4,055 angstroms To insure good visibility of the ringworm infected parts (for example the minute, fluorescing dots where hairs have fractured at the surface of the skin) such a glass should transmit not less than 85 per cent of the bluish to greenish fluorescent radiation (5,200 to 5,800 angstroms) emitted under 'black light" irradiation Such a glass may have a faintly yellowish tint, and any colloidal matter in the glass should not emit a strong fluorescence

In the preliminary tests, using promising glasses the samples of "Cruxite-A" transmitted too much 'black light,' and the colloidal matter in the samples of "Noviol O and A" fluoresced too much to view objects clearly through them. An uncolored glass containing sufficient cerium oxide to absorb completely the 3 663 angstrom line and samples of 'gold plate" met all the requirements

Evidently the remedy is to place the lamp in a suitable housing and to wear suitable goggles when making prolonged examination of objects excited to fluorescence by means of high powered "black light" ultraviolet lamps However it would be unfortunate if this information should be seized on for the sales promotion of sun glasses for outdoors wear

Looking directly at the sun through a blue-purple glass (Corning 986, which transmitted some 70 per cent of all wavelengths from 2,900 to 3,700 angstroms) showed no appreciable fluorescence of the eye media, such as is produced by the 3,663 angstrom emission line of the high powered "black light" lamps Hence there appears to be no need of wearing special sun glasses to eliminate these rays in sunlight

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - - Chicago 10, Ill

Cable Address "Medic, Chicago

Subscription price : : : : Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY, MAY 25, 1946

## THE SAN FRANCISCO SESSION

After a lapse of several years the first complete annual session of the American Medical Association since 1942 is to be held in San Francisco, Calif, during the week of July 1 to 5 In this issue of The Journal appear the call for the meeting, pertinent data regarding the convention city and the arrangements, the programs of the general scientific meetings, the scientific sections, the Scientific Exhibit, the motion pictures and the Technical Exhibits Together they constitute one of the greatest postgraduate assemblies available under the auspices of any medical organization

Already the reservations that have been made with the subcommittee on hotels indicate a capacity attendance The local committee on arrangements, which includes most of the leaders of medicine in San Francisco, are doing everything possible to assure comfort and convenience for all those who attend Many of the leading medical fraternities and medical schools are planning special reunions of their members and alumni during the session The Woman's Auxiliary has outlined a program which will give its members opportunity to participate not only in the advancement of the organization but also in many social, sight-seeing and similar functions The American Medical Golfing Association, after a lapse of several years will now hold its thirtieth tournament at the Olympic Club, which offers one of the finest golf courses in America

Attention is called particularly to the special exhibit on physical medicine including rehabilitation, to the magnificent demonstrations by the U S Army and Navy medical corps of their work and to the comprehensive program of motion pictures which will be available in six motion picture theaters operating continuously throughout the week

Significant of the contribution to postgraduate medical education made by the annual session are the General Scientific Meetings, which occupy most of the first two days of the session Special credit for arranging one of the most comprehensive, up to date and interesting programs in the history of these meetings must be given to Dr Edward L Bortz of Philadelphia, who made this a special project His experience in conducting the Wartime Medical Assemblies served him well in securing the cooperation of many investigators and teachers of demonstrated ability in presenting their subjects

At the San Francisco session also will be inaugurated for the first time meetings of the new Section on General Practice of Medicine This program is designed particularly for the general practitioners who are brought into contact at the annual session of the American Medical Association with progress made in the various specialties

The House of Delegates will be concerned at the San Francisco session with many of the problems that continue from previous meetings as well as some phases of medical legislation that have developed since the meeting in December 1945 The progress of the Association in developing Associated Medical Care Plans, Inc, the recommendations of President Truman for consolidation of federal agencies interested in health and the current versions of the Wagner-Murray-Dingell and the Taft-Smith-Ball bills are of special interest to the House of Delegates The progress made by the various states in meeting the requirements of the Veterans Administration for medical care to veterans is also likely to have consideration

Because of the tremendous demand on space available in The Journal for material related to the annual session some of the departments that appear regularly in The Journal are condensed and others have been eliminated The hearings before the Committee on Education and Labor of the U S Senate will be continued in forthcoming issues of The Journal until their completion The strike of the coal miners, the threatened strike of railroad employees and difficulties in securing personnel in the printing establishment of the Association have raised serious problems of publication Our readers will, we hope, bear with us in the emergency

## PRESIDENT TRUMAN REVAMPS THE FEDERAL SECURITY AGENCY

On May 16 President Harry S Truman transmitted to the Congress of the United States a reorganization plan for federal agencies which concerns particularly those in the fields of education, health and welfare In transmitting his plan to the Congress, President Truman pointed out that conservation and development of the human resources of the nation under our system of government is a joint responsibility of the federal, state and local governments "Through its research, advice, stimulation and financial aid," said President Truman, "the federal government contributes greatly to progress and to the equalization of standards in the fields of education, health and welfare"

"The Federal Security Agency has as its basic purpose the conservation and development of the human resources of the nation Therefore child care and development, education, health, social insurance, welfare—in the sense of care of the needy and the defective —and recreation are its special functions" President Truman indicated, for example, that the development of day care centers for children involved joint planning and service by specialists of the Children's Bureau, the Office of Education, the Public Health Service and several other agencies "As a step in producing coordination, increasing efficiency, reducing expenditures and eliminating overlapping and duplication of effort" the President transferred to the Federal Security Administrator the functions of the Children's Bureau "except those relating to child labor under the Fair Labor Standards Act" In proposing this transfer the President pointed out that state welfare departments now depend on both the Bureau of Public Assistance in the Federal Security Agency and the Children's Bureau in the Labor Department for funds in child care activity Similarly the state health departments obtain grants from the Public Health Service for general public health work and from the Children's Bureau for child and maternal health activities Unless the plan is rejected by the Congress within sixty days, President Truman by taking this action has made effective a recommendation which has been made by the House of Delegates of the American Medical Association for a good many years Incidentally the hearings before the Senate Committee on Education and Labor now going on in Washington have also brought out the great desirability of the step now taken by the President

The reorganization plan of the President also involved transfer of the vital statistics functions of the Census Bureau to the Federal Security Administrator In making this transfer the President pointed out that in every state but one the state health department is in charge of vital statistics

President Truman points out that the reorganization plan which created the Federal Security Agency in 1939 "provided that the Federal Security Administrator should direct and supervise the Social Security Board and that he might assign administrative duties to the chairman of the board rather than to the boards as a whole" The President believes that "a full time board in charge of a group of bureaus in an agency is, at best, an anomaly" In order to obtain more expeditious and effective direction for the Social Security program and to further the development of the Federal Security Agency, the President transferred the functions of the Social Security Board to the Federal Security Administrator and provided for not more than two new assistant heads of the agency for the administration of the program The exact significance of this action is not clear It does, however, eliminate the Social Security Board as a directing agency and places the complete responsibility for the conduct of the social security functions directly on the administrator

Finally President Truman says that the time is at hand when the conservation and development of human resources should be the function of an executive department of our federal government

> The size and scope of the Federal Security Agency and the importance of its functions clearly call for departmental status and a permanent place in the President's Cabinet In number of personnel and volume of expenditures the agency exceeds several of the existing departments Much more important, the fundamental character of its functions—education, health welfare, social insurance—and their significance for the future of the country demand for it the highest level of administrative leadership and a voice in the central councils of the Executive Branch
>
> Accordingly, I shall soon recommend to the Congress that legislation be promptly enacted making the Federal Security Agency an executive department, defining its basic purpose and authorizing the President to transfer to it such units and activities as come within that definition

Thus we would seem to be well on the way toward the development of a cabinet position in which medicine and welfare will find representation in the highest councils of the nation Obviously the medical profession will be greatly concerned with the type of leadership chosen by the President for this important position

## THE TAFT-SMITH-BALL NATIONAL HEALTH BILL

Senator Taft of Ohio introduced into the Senate early in May a program for health which was promptly hailed by the press as an opposition measure to the Wagner-Murray-Dingell bill The measure introduced by Senator Taft emphasized the creation of a national health agency under which all health functions of the federal government would be administered This agency would be directed by an administrator for whom the Surgeon General of the United States Public Health Service would substitute when necessary The main portion of the bill would appropriate two hundred million dollars annually for the next five years to be allocated to the individual states in order that they might be encouraged to provide hospital, surgical and medical service for those in need or those able to pay only in part The plans developed in the individual states would require approval by the Surgeon General of the United States Public Health Service, but, on failure to approve, the state agency could appeal to a National Health Council This council would consist of the Surgeon General ex officio as chairman and eight members appointed by the administrator Five of these would be persons well known in the health field, and at least three would be doctors of medicine The other three would be persons familiar with the needs for medical care

Another section of the bill would provide dental health service through allocation to the individual states and would also provide for research, including particularly neuropsychiatric research

Finally the measure would permit government employees to allow deductions from their salaries for participation in health insurance plans

The measure proposed by Senator Taft obviously does not aim at the nationwide inclusiveness of the Wagner-Murray-Dingell bill Neither does it require nationalization of the medical profession From the point of view of a scientific attempt to move forward along the lines of extending medical services, it would not revolutionize medical care The bill is therefore preferable to the measure it opposes

Neither the Board of Trustees of the American Medical Association nor the House of Delegates nor the Council on Medical Service and Public Relations has yet had opportunity to consider in detail various aspects of the Taft-Smith-Ball National Health Bill Elsewhere in this issue THE JOURNAL presents an analysis of the measure by the Bureau of Legal Medicine and Legislation When the bill was introduced it was referred to the Senate Committee on Education and Labor, which is now conducting hearings on the current Wagner-Murray-Dingell bill Perhaps when the Senate committee makes its report it will indicate as well its point of view regarding the Taft proposals Since it is unlikely that final action on any of these measures can occur before the House of Delegates of the American Medical Association meets in San Francisco early in July, the medical profession will probably have ample opportunity during the ensuing months of 1946 to crystallize its opinion on present trends in health legislation

## Current Comment

### NATIONAL EMERGENCY MEDICAL SERVICE

At its last meeting the House of Delegates authorized the Board of Trustees of the American Medical Association to appoint a committee of seven for the purpose of studying the communications received from members who were in the armed forces as well as the suggestions made by them for improvement in the service This committee was authorized to undertake a thorough study of the proper apportionment and utilization of physicians in military and civilian capacities in time of a grave national emergency The resolution directed that the Association undertake a critical study of the duties of medical officers during the war just finished, with particular reference to (1) the actual treatment of the injured and the ill and the prosecution of research projects, (2) rotation of medical assignment and (3) the quasi-medical duties for which technicians and specially trained enlisted personnel could readily replace physicians The Board of Trustees has appointed a committee on national emergency medical service and instructed it to undertake the study as described in the action of the House of Delegates This committee is a fact finding board and will offer its studies and recommendations to the House of Delegates from time to time Since its creation the committee has had two meetings an organization meeting at which a general program for studying the problem was outlined and recently, a conference with the Surgeons General and a representative of the Veterans Administration The committee has drawn up a questionnaire, a thousand copies of which have been sent out for the purpose of a pilot survey Medical officers of the reserve corps are asked to give frank expressions of opinion of their assignment and the work which they carried on and other duties which they performed while in military service At a later date a more comprehensive questionnaire will be drawn up and sent to all medical officers who were in military service during the war Each state medical society has been requested by the Board of Trustees to appoint appropriate state committees for the prosecution of studies in their areas Furthermore, appropriate subcommittees will be formed from time to time The committee will make a progress report to the House of Delegates at its next meeting in July

### FOLIC ACID THERAPY

Successful treatment of macrocytic anemia of infancy with synthetic folic acid (Lactobacillus casei factor) has been accomplished by Zuelzer and his associates[1] of the Children's Hospital, Detroit The genesis of this anemia is still obscure All 4 patients treated by Zuelzer were infants from 2 to 12 months of age who had received good diets supplemented by cod liver oil and orange juice in adequate amounts All had a short history of vomiting, anorexia and pallor preceded by signs of upper respiratory infection and fever Three had a mild diarrhea The significant symptom was pallor, usually with slight cardiac enlargement and a soft systolic murmur The spleen was moderately enlarged and firm Blood examinations revealed severe macrocytic anemia accompanied by moderate to severe diminution in blood platelet counts A few nucleated red blood cells were demonstrable in blood smears The bone marrow was characterized by a megaloblastic type of erythropoiesis and changes in the granulocytes resembling those in pernicious anemia Five mg of folic acid concentrate was given daily by mouth The response to this therapy was in all cases a rise in the reticulocyte count on the third and fourth day, reaching a maximum on the sixth or seventh day This was followed by a steady rise in hemoglobin values and red blood cell counts The hemoglobin reached its normal level in approximately three weeks The platelets became plentiful within one week Characteristic changes in the bone marrow took place as early as the fourth day With improvement in the blood picture, the clinical symptoms disappeared From these encouraging results, Zuelzer concludes that synthetic folic acid is specific for this type of anemia in infants As reported by previous investigators,[2] it is also effective in the nutritional macrocytic anemias of adults

1 Zuelzer W W, and Ogden F N Proc Soc. Exper Biol & Med. **61** 176 (Feb) 1946

2 Moore C V Vilter R. Minnich V and Spies T D J Lab & Clin Med **29** *1226* (Dec.) 1944 Spies T D Vilter C S Koch Mary B and Caldwell Margaret H South M J **38** 707 (Nov) 1945

# THE SAN FRANCISCO SESSION

## AMERICAN MEDICAL ASSOCIATION, NINETY FIFTH ANNUAL SESSION
## SAN FRANCISCO, CALIF, JULY 1 5, 1946

## OFFICIAL CALL

### TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The ninety-fifth annual session of the American Medical Association will be held in San Francisco, July 1-5, 1946

The House of Delegates will convene at 10 a. m Monday, July 1 In the House the representation of the various constituent associations for 1944, 1945 and 1946 is as follows

| | | | |
|---|---|---|---|
| Alabama | 2 | New Hampshire | 1 |
| Arizona | 1 | New Jersey | 5 |
| Arkansas | 2 | New Mexico | 1 |
| California | 8 | New York | 20 |
| Colorado | 2 | North Carolina | 2 |
| Connecticut | 3 | North Dakota | 1 |
| Delaware | 1 | Ohio | 8 |
| District of Columbia | 1 | Oklahoma | 2 |
| Florida | 2 | Oregon | 1 |
| Georgia | 3 | Pennsylvania | 11 |
| Idaho | 1 | Rhode Island | 1 |
| Illinois | 9 | South Carolina | 1 |
| Indiana | 4 | South Dakota | 1 |
| Iowa | 3 | Tennessee | 2 |
| Kansas | 2 | Texas | 5 |
| Kentucky | 2 | Utah | 1 |
| Louisiana | 2 | Vermont | 1 |
| Maine | 1 | Virginia | 2 |
| Maryland | 2 | Washington | 2 |
| Massachusetts | 6 | West Virginia | 2 |
| Michigan | 5 | Wisconsin | 3 |
| Minnesota | 4 | Wyoming | 1 |
| Mississippi | 2 | Alaska | 1 |
| Missouri | 4 | Hawaii | 1 |
| Montana | 1 | Isthmian Canal Zone | 1 |
| Nebraska | 2 | Philippine Islands | 2 |
| Nevada | 1 | Puerto Rico | 1 |

The scientific sections of the American Medical Association, the Medical Corps of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each

The Scientific Assembly of the Association will open with the general meeting, to be held at 8 p m Tuesday, July 2 The sections will meet Wednesday, Thursday and Friday, July 3 4 and 5, as follows

| CONVENING AT 9 A. M. THE SECTIONS ON | CONVENING AT 2 P M. THE SECTIONS ON |
|---|---|
| Pediatrics | Internal Medicine |
| Surgery, General and Abdominal | Obstetrics and Gynecology |
| Ophthalmology | Laryngology, Otology and Rhinology |
| Experimental Medicine and Therapeutics | Pathology and Physiology |
| Nervous and Mental Diseases | Preventive and Industrial Medicine and Public Health |
| Dermatology and Syphilology | Urology |
| Gastro-Enterology and Proctology | Orthopedic Surgery |
| Radiology | Anesthesiology |
| General Practice of Medicine. | |

The Registration Bureau, which will be located on the Second Floor, Civic Auditorium, will be open from 8 30 a m until 5 30 p m. Monday Tuesday Wednesday and Thursday July 1, 2, 3 and 4 and from 8 30 a. m. to 12 noon Friday July 5

ROGER I LEE, President.
ROY W FOUTS, Speaker, House of Delegates
GEORGE F LULL, Secretary

## MEMBERS OF THE HOUSE OF DELEGATES

### A Preliminary Roster of the Legislative Body of The American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover members of the House of Delegates and of the newly elected members who have been reported to the Secretary in time to be included

### *STATE DELEGATES*

ALABAMA
A A Walker, Birmingham
Lloyd Noland Fairfield

ARIZONA
J D Hamer Phoenix

ARKANSAS
William R Brooksher Fort Smith
L. J Kosminsky Texarkana

CALIFORNIA
H Gordon MacLean Oakland
E Vincent Askey Los Angeles
John W Cline San Francisco
Donald Cass Los Angeles
Robertson Ward San Francisco
Samuel J McClendon San Diego
Lowell S Goin Los Angeles

COLORADO
George H Curfman Denver
W T H Baker Pueblo

CONNECTICUT
Thomas P Murdock Meriden
Joseph H Howard Bridgeport.
Creighton Barker New Haven

DELAWARE
James Beebe Lewes

DISTRICT OF COLUMBIA
C B Conklin Washington

FLORIDA
H L Pearson Jr Miami
Edward Jelks Jacksonville.

GEORGIA
Allen H Bunce Atlanta
B H Minchew Wayross
Olin H Weaver Macon

IDAHO
Edward N Roberts Pocatello

ILLINOIS
Edwin S Hamilton Kankakee
Mather Pfeiffenberger Alton
Willis I. Lewis Herrin
George C McGinnis, Warren
Rollo K. Packard Chicago
G Henry Mundt Chicago
Robert H. Hayes Chicago
Fred H Muller Chicago.
Charles H Phifer Chicago

INDIANA
H G Hamer Indianapolis
Alfred S Giordano South Bend
Don F Cameron Fort Wayne.
F S Crockett La Fayette.

IOWA
James E. Reeder Sioux City
Thomas F Thornton Waterloo.
George Braunlich Davenport.

KANSAS
J F Hassig Kansas City
Forrest L Loveland Topeka.

KENTUCKY
J B Lukins Louisville
Clark Bailey Harlan

LOUISIANA
C L Peacock New Orleans
James Q Graves Monroe.

MAINE
Thomas A Foster Portland

MARYLAND
Louis H Douglass Baltimore
Alfred T Gundry Baltimore.

MASSACHUSETTS
Charles J Kickham Brookline
Leland S McKittrick Boston
Charles E Mongan Somerville
Dwight O Hara Boston
Walter G Phippen Salem
David D Scannell Boston

MICHIGAN
Henry A Luce Detroit.
T K Gruber Eloise
Claude R Keyport Grayling
Leo G Christian Lansing
Frank E Reeder Flint.

MINNESOTA
W A Coventry Duluth
A W Adson Rochester
Francis J Savage St Paul
E W Hansen Minneapolis

MISSISSIPPI
F J Underwood Jackson
J P Wall Jackson

MISSOURI
Arthur R McComas Sturgeon
Warren L. Allee Eldon
Robert E Schlueter St Louis
James R McVay Kansas City

MONTANA
J H Irwin Great Falls

NEBRASKA
Karl S J Hohlen Lincoln
Joseph D McCarthy Omaha

NEVADA
M J Thorpe Reno

NEW HAMPSHIRE
Deering G Smith Nashua

NEW JERSEY
Wells P Eagleton Newark.
Hilton S Read Atlantic City
Thomas K. Lewis Camden
Lucius F Donohoe, Bayonne.

NEW MEXICO
H A Miller Clovis

NEW YORK
Herbert H Bauckus Buffalo
James R Reuling Jr Bayside.
Thomas M Brennan Brooklyn
Oliver W H Mitchell Syracuse
Walter P Anderton New York.
Albert A Gartner Buffalo
Albert F R Andresen Brooklyn
Floyd S Winslow Rochester
Clarence G Bandler New York
Walter G Frey Jr Forest Hills Gardens
Thomas A McGoldrick Brooklyn
John J Masterson Brooklyn
Stephen R Monteith Nyack
J Stanley Kenney New York
George W Kosmak New York
F Leslie Sullivan Scotia
James M Flynn Rochester
Thomas M D Angelo Jackson Heights
Scott Lord Smith Poughkeepsie
Walter W Mott White Plains

NORTH CAROLINA
Roscoe D McMillan Red Springs
C F Strosnider Goldsboro

NORTH DAKOTA
A P Nachtwey, Dickinson

OHIO
Barney J Hein Toledo
L Howard Schriver Cincinnati
William M Skipp Youngstown
C C Sherburne Columbus
Edgar P McNamee, Cleveland
D J Slosser Defiance
George A Woodhouse Pleasant Hill
Carl A Lincke Carrollton

OKLAHOMA
Charles R. Rountree Oklahoma City
James Stevenson Tulsa

OREGON
Frank R Mount, Portland

PENNSYLVANIA
Walter F Donaldson Pittsburgh
E Roger Samuel Mount Carmel
William Bates Philadelphia
Charles L Shafer Kingston
Francis F Borzell Philadelphia
R N Alexander Reading
William L Estes Jr Bethlehem
Lewis T Buckman Wilkes-Barre
James Z Appel Lancaster
Elmer Hess, Erie

RHODE ISLAND
Alex M Burgess, Providence

SOUTH CAROLINA
Hugh P Smith Greenville

TENNESSEE
E G Wood Knoxville
H B Everett Memphis

TEXAS
Holman Taylor Fort Worth
F J L Blasingame Wharton
H R Dudgeon Waco
B E Pickett Sr Carrizo Springs
E H Cary Dallas

UTAH
James P Kerby, Salt Lake City

VERMONT
Benjamin F Cook Rutland

VIRGINIA
J Morrison Hutcheson Richmond
Henry B Mulholland, Charlottesville

WASHINGTON
R L Zech Seattle
John H O Shea Spokane

WEST VIRGINIA
Walter E Vest Huntington
Ivan Fawcett, Wheeling

WISCONSIN
Stephen E Gavin, Fond du Lac.
James C Sargent, Milwaukee.
William D Stovall Madison.

WYOMING
George P Johnston, Cheyenne.

ALASKA
Arthur N Wilson Ketchikan.

ISTHMIAN CANAL ZONE
Lewis B Bates Ancon

PUERTO RICO
Jose Nicolas Gandara Santurce

## *DELEGATES FROM THE SECTIONS AND GOVERNMENT SERVICES*

INTERNAL MEDICINE
Charles T Stone Galveston Texas

SURGERY GENERAL AND ABDOMINAL
Grover C Penberthy, Detroit

OBSTETRICS AND GYNECOLOGY
Jean Paul Pratt, Detroit

OPHTHALMOLOGY
Arthur J Bedell Albany N Y

LARYNGOLOGY OTOLOGY AND RHINOLOGY
Burt R Shurly Detroit

PEDIATRICS
William Weston, Columbia, S C

EXPERIMENTAL MEDICINE AND THERAPEUTICS
Edgar V Allen, Rochester Minn

PATHOLOGY AND PHYSIOLOGY
L W Larson Bismarck N D

NERVOUS AND MENTAL DISEASES
Henry R Viets Boston

DERMATOLOGY AND SYPHILOLOGY
Cornelius F Lehmann San Antonio, Texas

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH
Stanley H Osborn, Hartford Conn

UROLOGY
Roy B Henline, New York

ORTHOPEDIC SURGERY
J Archer O'Reilly, St. Louis

GASTRO-ENTEROLOGY AND PROCTOLOGY
Louis A Buie, Rochester, Minn.

RADIOLOGY
B R Kirklin, Rochester Minn.

ANESTHESIOLOGY
H S Ruth, Haverford Pa

UNITED STATES ARMY
Arden Freer

UNITED STATES NAVY
John Harper

UNITED STATES PUBLIC HEALTH SERVICE
Warren F Draper

## OFFICERS OF THE AMERICAN MEDICAL ASSOCIATION, 1945 1946

PRESIDENT—Roger I Lee Boston.

PRESIDENT ELECT — Harrison H. Shoulders Nashville Tenn

VICE PRESIDENT—William R Molony Sr Los Angeles

SECRETARY AND GENERAL MANAGER—George F Lull Chicago

TREASURER—J J Moore Chicago

SPEAKER HOUSE OF DELEGATES—R W Fouts Omaha

VICE SPEAKER HOUSE OF DELEGATES—F F Borzell Philadelphia

EDITOR—Morris Fishbein Chicago

ASSOCIATE EDITOR—Edwin P Jordan Chicago

BUSINESS MANAGER—Thomas R. Gardiner Chicago

BOARD OF TRUSTEES—C W Roberts Atlanta Ga 1946 Dwight H Murray Napa, Calif 1947 R L Sensenich Chairman South Bend Ind 1947 William F Braasch Rochester Minn 1948 Ernest E Irons Secretary Chicago 1948 Louis H Bauer Hempstead N Y 1949 E L Henderson Louisville Ky 1949 John H Fitzgibbon Portland Ore 1950 James R Miller Hartford, Conn, 1950

JUDICIAL COUNCIL—Walter F Donaldson Pittsburgh 1946 Lloyd Noland Fairfield, Ala 1947 John H O Shea Spokane Wash, 1948 Edward R Cunniffe Chairman New York, 1949, Louis A Buie Rochester Minn 1950

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS—Ray Lyman Wilbur Chairman Stanford University Calif 1946 John H Musser New Orleans 1947 Harvey B Stone Baltimore 1948 Reginald Fitz Boston 1949 Russell L Haden Cleveland 1950 Charles Gordon Heyd New York 1951 H G Weiskotten Syracuse N Y 1952 Victor Johnson Secretary Chicago

COUNCIL ON SCIENTIFIC ASSEMBLY—Frederick A. Coller Ann Arbor Mich 1946 Clyde L Cummer Cleveland 1947 Edward L Bortz Chairman Philadelphia 1948 Charles H Phifer Chicago 1949 Henry R Viets Boston, 1950 and ex officio the President Elect the Editor and the Secretary of the Association

COUNCIL ON MEDICAL SERVICE AND PUBLIC RELATIONS — E J McCormick Chairman, Toledo Ohio 1946 Thomas A McGoldrick Brooklyn, 1946 R. L Zech Seattle 1947, James R McVay Kansas City Mo, 1947 A. W Adson Rochester Minn 1948 Walter B Martin Norfolk Va 1948 Herman L Kretschmer Chicago Roger I Lee Boston, Louis H Bauer Hempstead N Y Thomas A Hendricks, Secretary, Chicago

COUNCIL ON PHARMACY AND CHEMISTRY (Standing Committee of Board of Trustees)—E. M K Geiling Chicago 1947 W W Palmer, New York 1947 S W Clausen Rochester N Y 1947 R P Herwick Washington D C, 1948 C S Keefer Boston 1948 Stuart Mudd Philadelphia 1948 James P Leake Washington D C 1949 David P Barr New York 1949 W Barry Wood Jr St Louis 1949 Morris Fishbein Chicago 1950 G W McCoy New Orleans 1950 Perrin H Long Baltimore 1950 Elmer M Nelson Washington D C 1950 Torald Sollmann, Chairman Cleveland 1951 Isaac Starr Philadelphia 1951 Robert F Loeb New York 1951 Austin E Smith Secretary Chicago

COUNCIL ON PHYSICAL MEDICINE (Standing Committee of Board of Trustees)—W E. Garrey Nashville Tenn. 1947 W W Coblentz, Washington D C 1947 John S Coulter Chairman Chicago 1947 Eben J Carey Milwaukee 1948 Frank R Ober Boston 1948 Frank D Dickson Kansas City Mo 1948 A U Desjardins Rochester Minn 1950 H B Williams New York 1950 Frank H Krusen Rochester Minn 1950 Anthony C Cipollaro New York 1951 M A Bowie Bryn Mawr Pa 1951 G M Piersol Philadelphia 1951 Morris Fishbein ex officio Chicago Howard A Carter Secretary Chicago

COUNCIL ON FOODS AND NUTRITION (Standing Committee of Board of Trustees)—Philip C Jeans Iowa City 1947 C A. Elvehjem Madison Wis 1947 Lydia J Roberts, Chicago 1948 George R Cowgill New Haven, Conn. 1948 C S Ladd Washington D C 1949 John B Youmans Nashville Tenn. 1949 A. A Weech Cincinnati 1950 Morris Fishbein Chicago 1950 R. M Wilder Rochester Minn, 1951 Howard B Lewis, Ann Arbor Mich, 1951 J S McLester Chairman Birmingham, Ala, 1951 James R. Wilson, Secretary Chicago

COUNCIL ON INDUSTRIAL HEALTH (Standing Committee of Board of Trustees)—L. D Bristol New York, 1947 Paul B Magnuson Chicago, 1947, Stanley J Seeger Chairman Texarkana Texas 1947 Harvey Bartle, Philadelphia 1948 W A. Sawyer Rochester N Y 1948 James S Simmons Washington D C, 1948 Leroy U Gardner Saranac Lake N Y 1949 A J Lanza, New York 1949 C D Selby Detroit 1949 Warren F Draper Washington D C 1950 Raymond Hussey Detroit 1950 Henry H Kessler, Newark N J 1950 C M Peterson Secretary Chicago

COMMITTEE ON SCIENTIFIC EXHIBIT—C. W Roberts Chairman Atlanta Ga. Louis H Bauer Hempstead N Y Dwight H Murray Napa Calif Thomas G Hull Director Chicago. Advisory Committee—George Blumer Pasadena Calif Paul J Hanzlik, San Francisco Ludvig Hektoen Chicago Urban Maes New Orleans Eben J Carey Milwaukee James P Leake Washington D C.

BUREAU OF LEGAL MEDICINE AND LEGISLATION —J W Holloway Jr Director Chicago

BUREAU OF HEALTH EDUCATION—W W Bauer Director Chicago

BUREAU OF INVESTIGATION—Bliss O Halling, Acting Director Chicago.

BUREAU OF MEDICAL ECONOMICS

LABORATORY—Albert E Sidwell Jr Director Chicago

LIBRARY—Marjorie Hutchins Moore Librarian Chicago.

# SAN FRANCISCO 1946—CALIFORNIA INVITES YOU

She laughed upon her hills out there
Beside her bays of misty blue,
The gayest hearts, the sweetest air
That any city ever knew

*—Wallace Irwin*

Such words as "cosmopolitan" 'picturesque' and "romantic" seem somehow trite when applied to San Francisco says 'Californians, Inc" 'The city is not easy to describe You might say it has a champagne atmosphere—a bubbling, effervescent quality in the air Its dramatic setting between sea and bay resembles Sydney Its soaring buildings and mighty bridges recall New York. Its Chinatown might be in Canton its Fisherman s Wharf in Naples

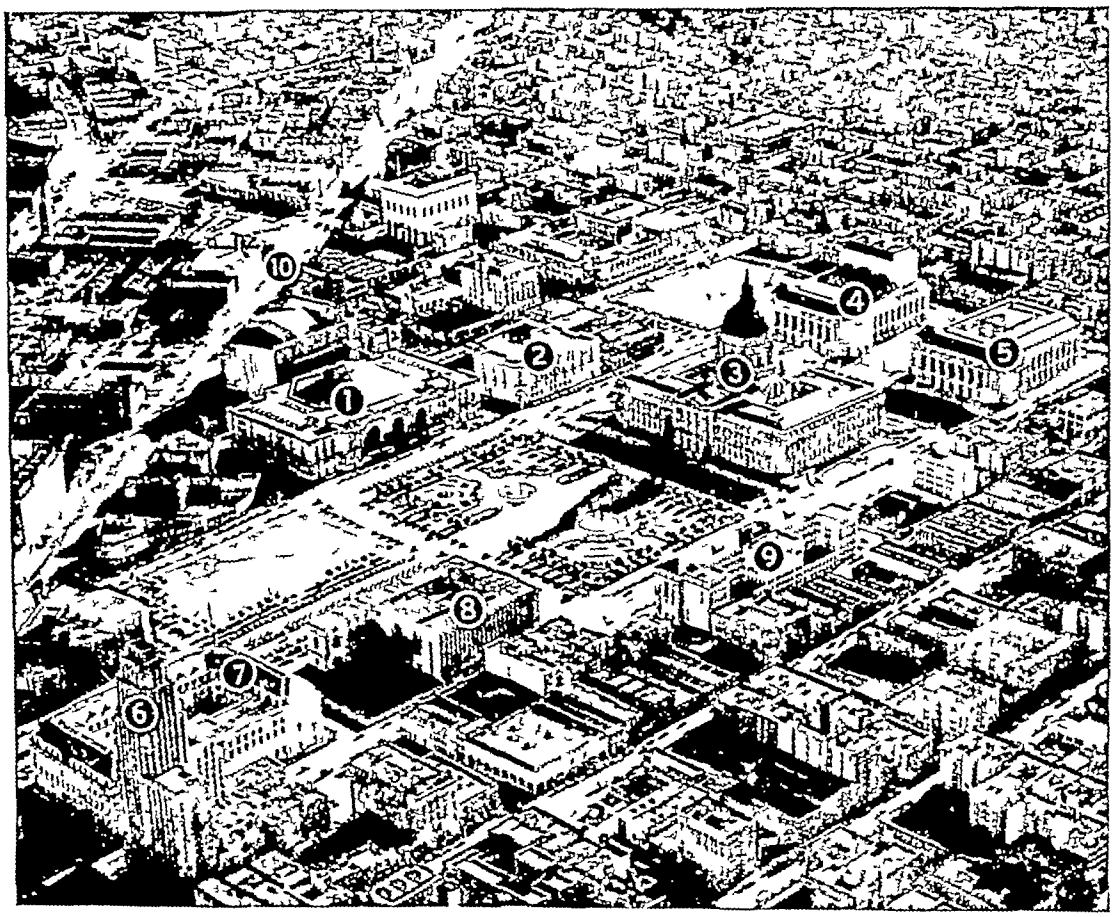
the world might study with profit. That is why people of all nationalities live harmoniously together on these hills, why there are many foreign quarters but no 'foreigners'

Perhaps this is also why travelers from everywhere instinctively feel at home in San Francisco"

THE SAN FRANCISCO COUNTY MEDICAL SOCIETY

The medical profession of San Francisco revolves around its progressive county medical society, its fine hospitals with two of the leading university medical schools in the United States and an exceptional public health department.

The seventy-seven year old San Francisco County Medical Society is one of the pioneer organizations in the state Predecessor organizations go back to 1850 in the fabulous Gold Rush




AIR VIEW OF SAN FRANCISCO'S CIVIC CENTER AND ENVIRONS

1 AUDITORIUM
2 BOARD OF HEALTH BUILDING
3 CITY HALL
4 OPERA HOUSE
5 VETERANS BUILDING
6 EMPIRE HOTEL
7 FEDERAL BUILDING
8 LIBRARY
9 STATE BUILDING
10 SOUTH MARKET STREET

"Actually, San Francisco isn't 'like' any other city in the world.

'Nowhere is there a city so compact yet so free with imposing views of sea and bay and sky The steep streets, the great terraces of hotels, homes and apartments stepping up the hillsides, the vast harbor spread beneath you like a map the breeze through the Golden Gate these give San Francisco a personality all its own

Each chapter in San Francisco s storybook past added something to the city s flavor Here lingers the gracious courtliness of Spanish Dons, the rough and ready humor of the Forty-Niners the expansive hospitality of the Bonanza kings

If we had to describe San Francisco with a word that word would be tolerant' Here is a spirit of live and let live that

period At present the society numbers approximately thirteen hundred San Francisco doctors, with a membership at the highest point in its long history It is housed in a mansion which was constructed at the turn of the century and is a fine example of exterior architecture and interior beauty

THE CALIFORNIA MEDICAL ASSOCIATION

San Francisco is also the headquarters of the California Medical Association with a membership of more than eight thousand, representing 80 per cent of the state s licensed physicians It is the fourth largest state unit of the American Medical Association

The forty county units of the association are centered in the headquarters at 450 Sutter Street.



HOME OF THE SAN FRANCISCO COUNTY MEDICAL SOCIETY



GRAND STAIRCASE—
SAN FRANCISCO MEDICAL SOCIETY



ADMINISTRATIVE OFFICES—
SAN FRANCISCO COUNTY MEDICAL SOCIETY

STANFORD UNIVERSITY SCHOOL OF MEDICINE

The first medical college on the Pacific Coast was founded in 1858 in San Francisco It was discontinued in 1864 but was reorganized six years later It subsequently was transferred to Leland Stanford University in October 1938 and established as a school for training medical students The School of Medicine is an integral part of the University

The main buildings in San Francisco are the Clinical and Laboratory Building, a Research Laboratory, Lane Hospital, with a capacity of 180 beds, and Stanford University Hospital, with a capacity of about 130 beds

The Lane Medical Library contains more than 102 000 volumes The present medical history section contains about 5 000 books and pamphlets and has received favorable notice from many distinguished scholars in this field

At present the School of Medicine controls about 500 beds in the San Francisco Hospital, averaging about 6 000 patients a year This hospital is one of the finest and most complete structures of its kind in America. In addition to the main group of buildings for surgical and medical cases there are separate buildings for the care of contagious diseases and tuberculosis This provides a great variety of clinical material

The Medical School building contains an outpatient clinic staffed by members of the faculties of the Medical School and house officers About 9,000 new patients were received during the past year, with a total number of visits of some 110,000

PROPOSED UNIVERSITY OF CALIFORNIA MEDICAL CENTER

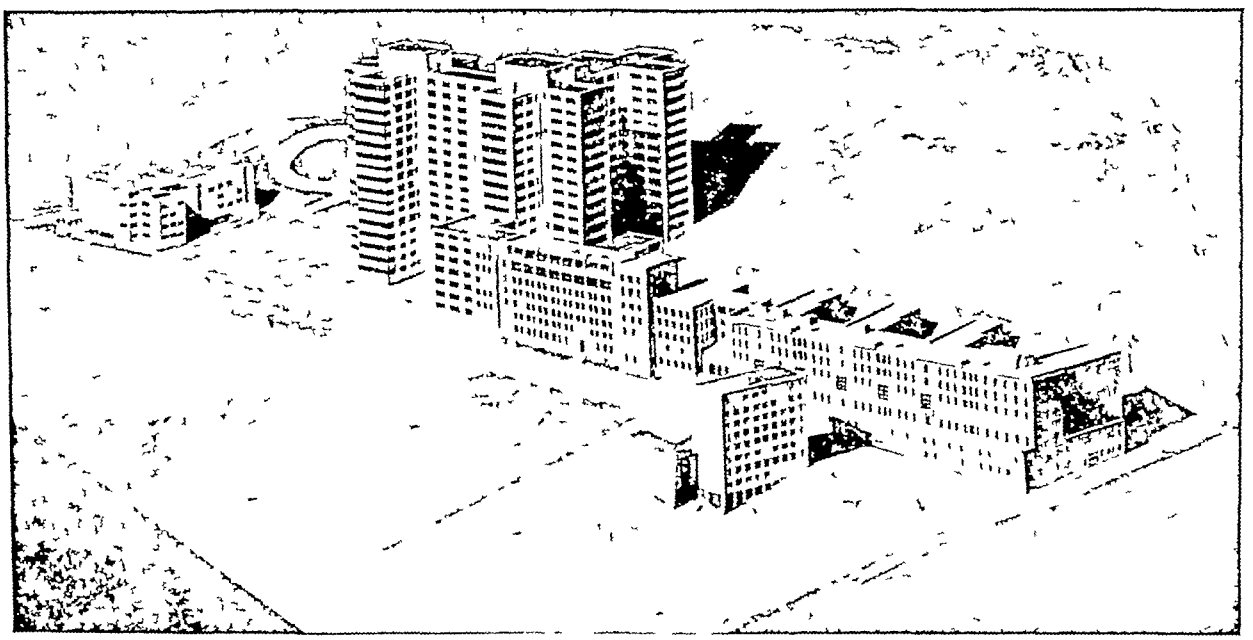
Immediate plans for the expansion of the University of California Medical Center, made possible by the appropriation of state funds of an amount in excess of eleven million dollars provide for a 500 bed Teaching Hospital a Sciences Building for the Medical School and Colleges of Pharmacy and Dentistry and a School of Nursing These will be in virtually a single building with the various school departments properly related to their beds on the various floors of the Teaching Hospital Other developments in separate structures immediately contemplated are the nurses' dormitory and interns quarters Also under discussion are a new Students Union Building and the plot plans provide for ultimate future expansion to include a private hospital immediately adjacent to the teaching hospital, for chronic diseases, medical office building and automobile parking facilities

The availability of funds for the removal of the existing medical school and the College of Pharmacy and Dentistry has made possible the adoption of plans for the development of a teaching unit which in all its departments will provide a proper relationship between hospital, school and clinic with a minimum amount of travel and lost time and with visitors staff, students and patients all confined within the areas belonging to them yet properly related to one another so that intercommunication is on the simplest basis

THE SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

The San Francisco Department of Public Health carries on all the activities normally found in a large city health department It is responsible for the administration of the San Francisco Hospital (including a general hospital of some 675 beds a tuberculosis unit with 380 beds, an isolation unit of 34 beds and a psychiatric unit of 52 beds

The average qualifications of training and experience of the professional personnel have been described as superior to the average found in most health departments



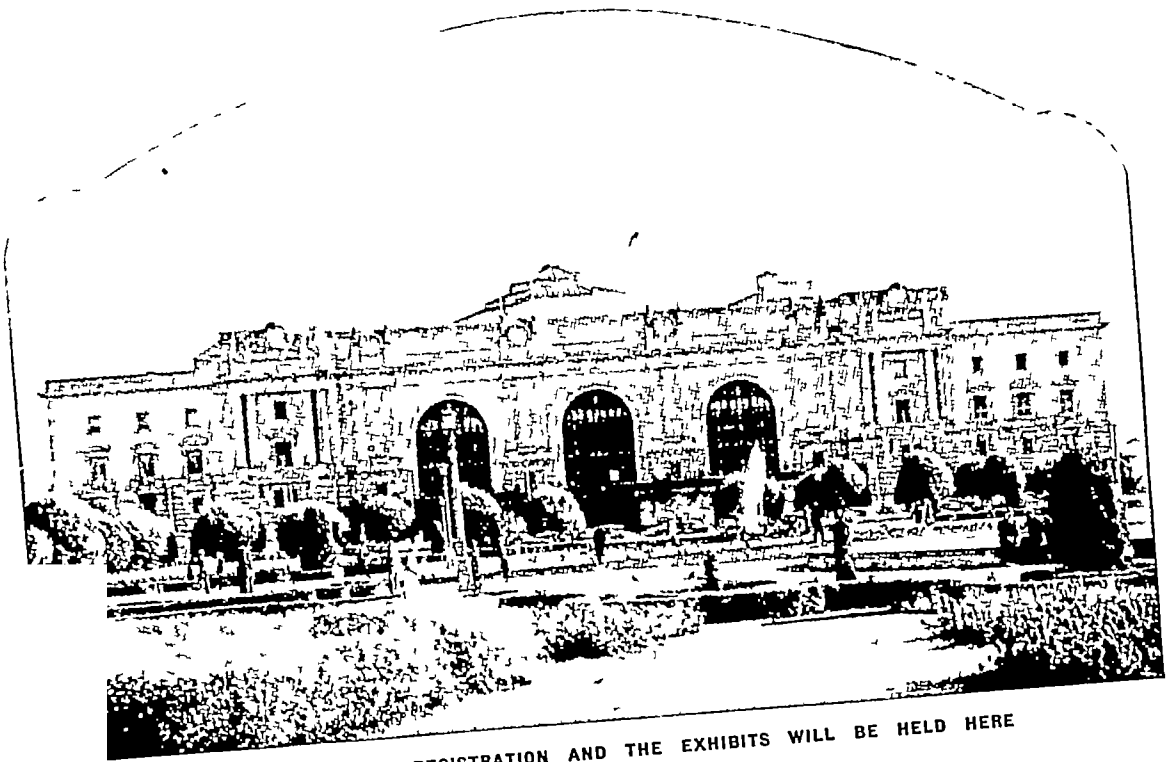
PROPOSED UNIVERSITY OF CALIFORNIA MEDICAL CENTER FROM MODEL THROUGH COURTESY OF MR TIMOTHY PFLUEGER ARCHITECT OF NEW BUILDINGS FOR UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL IN MEDICAL CENTER AT SAN FRANCISCO THE LARGE GROUP IN THE CENTER IS THE NEW TEACHING HOSPITAL AND SCIENCES BUILDING (TO BE ERECTED) AND IMMEDIATELY IN FRONT OF THAT IS A LOW STRUCTURE WHICH IS PART OF THE SCIENCES BUILDING JUST TO THE RIGHT OF THE SCIENCES BUILDING IS THE EXISTING CLINIC BUILDING THEN THE PRESENT HOSPITAL AND IMMEDIATELY IN FRONT OF THE PRESENT HOSPITAL IS THE EXISTING NURSES HOME. IN THE DISTANCE TO THE LEFT IS THE LANGLEY PORTER CLINIC THE SITE FOR A FUTURE PRIVATE HOSPITAL LIES BETWEEN THE TEACHING HOSPITAL AND THE LANGLEY PORTER CLINIC

The Emergency Hospital service with its six hospitals and accompanying ambulance service has been termed one of the most comprehensive and elaborate services of the kind in the United States

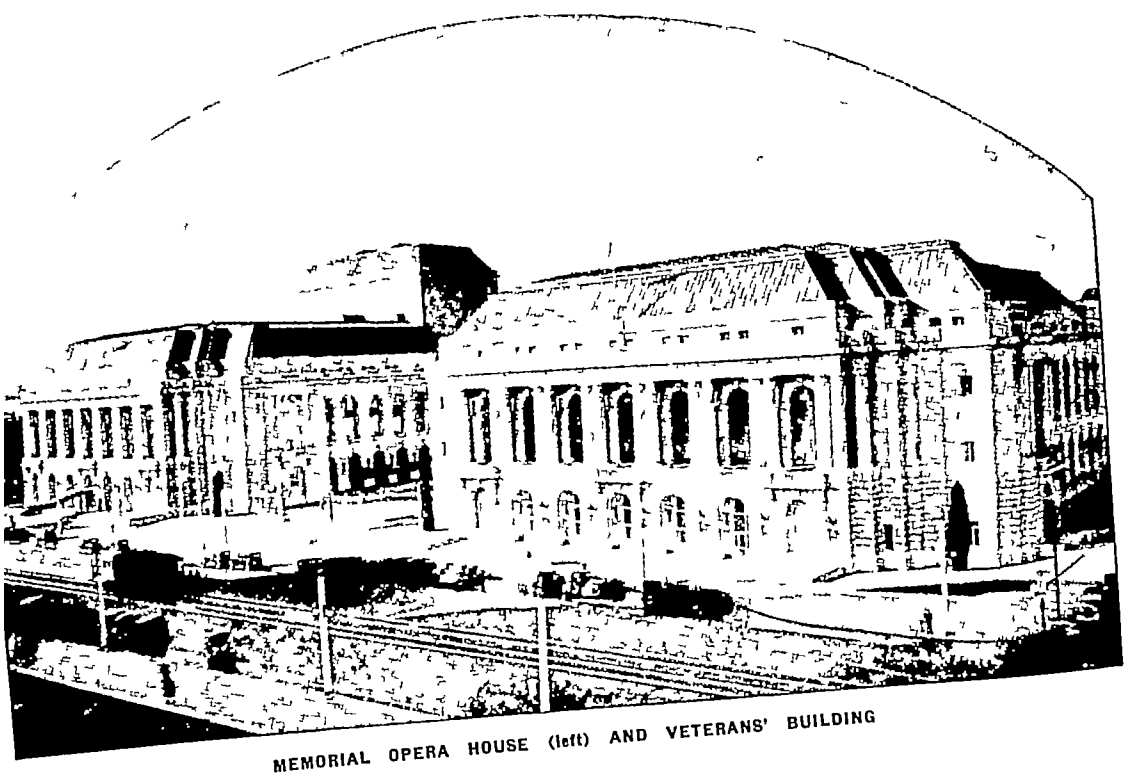
The Department of Public Health also operates the Laguna Honda Home a home for the aged housing some 1,200 ambulatory patients and an infirmary or chronic disease hospital of about 786 beds

The Hassler Health Home is a tuberculosis sanatorium with 268 beds

Other functions of the Department of Public Health are administration statistics laboratories communicable disease control including acute communicable diseases, tuberculosis and the venereal diseases, child welfare, mental hygiene, public health dentistry, public health nursing and environmental sanitation, including food and sanitation, milk and meat supervision and plumbing



CIVIC AUDITORIUM—REGISTRATION AND THE EXHIBITS WILL BE HELD HERE



MEMORIAL OPERA HOUSE (left) AND VETERANS' BUILDING

# REGISTRATION

The Bureau of Registration will be located on the second floor of the Civic Auditorium A branch postoffice in charge of government postoffice officials will be available for visitors, and an information bureau will be operated in connection with the Bureau of Registration

### Who May Register

Only Fellows, Affiliate, Associate and Honorary Fellows and Invited Guests may register and take part in the work of the sections Fellows of the Scientific Assembly are those who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL and paid their Fellowship dues for the current year Fellowship dues and subscription to THE JOURNAL are included in the one annual payment of $8, which is the regular subscription price of THE JOURNAL. Fellowship cards are sent to all Fellows after payment of annual dues, and these cards should be presented at the registration window Any who have not received cards for 1946 should secure them at once by writing to the American Medical Association 535 North Dearborn Street, Chicago 10

### Members in Good Standing Eligible to Apply for Fellowship in the Association

Members in good standing in the American Medical Association are those members of component county medical societies and of constituent state and territorial medical associations whoses names are officially reported for enrolment to the Secretary of the American Medical Association by the secretaries of the constituent medical associations All members in good standing may apply for Fellowship in the Scientific Assembly and are urged to qualify as Fellows before leaving home in order that pocket cards may be secured and brought to San Francisco so that registration can be more easily and more promptly effected.

Application forms may be had on request

Those subscribers to THE JOURNAL who have not received pocket cards for 1946 should write to the American Medical Association in order to obtain application blanks and information as to further requirements

### Register Early

Fellows living in San Francisco, as well as all other Fellows who are in San Francisco on Monday and Tuesday, should register as early as possible.

The names and local addresses of those who register will be included in the issue of the *Daily Bulletin* appearing the next day, and this will enable visiting physicians to find friends who have registered.

### Suggestions That Will Facilitate Registration

Fellows should fill out completely the spaces on both sections of the front of the *white* registration card, which will be found on the tables in front of the Registration Bureau

Physicians who desire to qualify as Fellows should fill out completely the spaces on both sections of the front of the *blue* registration card and sign the application on the back These cards will be found on the tables

Entries on the registration card should be written plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*, which appears on Tuesday, Wednesday, Thursday and Friday mornings during the week of the session

Fellows who have their pocket cards with them can be registered with little or no delay They should present the filled out *white* registration card together with the pocket card at one of the windows marked "Registration by Pocket Card" There the clerk will compare the two cards, stamp the pocket card and return it and supply the Fellow with a badge, a copy of the official program and other printed matter of interest to those attending the annual session

As previously stated, it will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago 10, so that their Fellowship may be entered not later than June 10 Any applications that are received later than June 10 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time for him to register at the San Francisco session.

It will be possible for members of the organization to qualify as Fellows at San Francisco In order to do this, applicants for Fellowship will be required to fill out both sections of the front of the *blue* registration card and to sign the formal application that is printed on the reverse side of the card. It is suggested that those members who apply for Fellowship at San Francisco bring with them their state membership cards for the year 1946 The state membership card should be presented along with the filled in *blue* registration card at the window in the booth marked "Applicants for Fellowship and Invited Guests"

As already stated, registration can be effected more easily and more promptly if members will qualify as Fellows before leaving home

### Registration for General Officers and Delegates at the St Francis Hotel

General Officers of the American Medical Association and members of the House of Delegates may register for the Scientific Assembly outside the foyer of the Colonial Room of the St Francis Hotel This arrangement is made for the convenience of the members of the House of Delegates, which will convene on Monday morning at 10 o'clock in the Colonial Room of the St. Francis Hotel Delegates are requested to register for the Scientific Assembly before presenting credentials to the Reference Committee on Credentials of the House of Delegates Registration of delegates for the Scientific Assembly will begin at 8 o'clock Monday morning, July 1, and delegates are urged to register early so that all members of the House of Delegates may be seated in time for the opening session of the House

# TRANSPORTATION

It is suggested that those Fellows who contemplate traveling to San Francisco to attend the annual session of the Association secure information concerning railroad and airplane travel directly from their local ticket agents, who are in a position to give them information regarding train or plane schedules and fares Transcontinental railroads to San Francisco terminate in Oakland Mole, and ferries then transport passengers across the Bay to Market Street Ferry Depot.

# WEATHER CONDITIONS IN SAN FRANCISCO

With regard to temperature conditions of the San Francisco Bay Region in the month of July it is well to keep in mind that, while the weather will probably be consistently warm it is also possible that there may be cold breezes Clothing for the occurrence of such a condition should therefore be taken to San Francisco

# SAN FRANCISCO HOTELS

A list of San Francisco hotels is presented for the benefit of those who expect to attend the annual session of the American Medical Association, July 1-5 Dr M Laurence Montgomery is chairman of the Subcommittee on Hotels and may be addressed at 200 Civic Auditorium, San Francisco, Calif The advertising announcement and a coupon to be used for making reservations appear on advertising page 48 of this issue.

Since reservations are cleared through the subcommittee on hotels, it will greatly expedite matters if requests for reservations are addressed directly to Dr Montgomery

## Schedule of Rates

| Hotel | Single | Double | |
|---|---|---|---|
| | | Double Beds | Twin Beds |
| ALEXANDER HAMILTON 620 O Farrell | $3 00 to $5 00 | $4 00 to $6 00 | $4 50 to $7 00 |
| AMBASSADOR 55 Mason | | 2 50 to 3 00 | 3 50 to 4 00 |
| BELLEVUE Geary and Taylor | 3 00 to 4 00 | 4 00 to 5 00 | 4 50 to 6 00 |
| BILTMORE 735 Taylor | 2 00 | 2 50 | 3 00 |
| BRAYTON 50 Turk | 2 00 to 2 50 | 2 50 to 3 00 | 4 00 |
| CALIFORNIAN 405 Taylor | 2 50 to 3 00 | 3 50 to 4 50 | 4 00 to 4 50 |
| CANTERBURY 750 Sutter | 2 50 to 3 00 | 3 50 to 4 50 | 4 00 to 6 00 |
| CARLTON 1075 Sutter | 2 50 | 3 00 to 3 50 | 3 50 to 4 50 |
| CECIL 545 Post | 2 00 to 2 50 | 3 00 to 3 50 | 3 50 to 4 00 |
| CHANCELLOR 433 Powell | 2 50 to 3 00 | 3 50 to 4 00 | 4 00 to 4 50 |
| CLIFT Geary at Taylor | 4 00 to 6 00 | 6 00 to 8 00 | 7 00 to 10 00 |
| COLONIAL 650 Bush | 2 25 to 2 50 | 3 00 to 3 50 | 4 00 |
| DRAKE WILTSHIRE 340 Stockton | 2 00 to 3 00 | 3 00 to 4 00 | 4 50 to 5 00 |
| EMBASSY 610 Polk | 2 25 | 2 75 | 3 50 |
| FAIRMONT 950 Mason | 4 00 to 8 00 | 6 00 to 12 00 | 7 00 to 12 00 |
| FEDERAL 1087 Market | | | 2 50 to 3 50 |
| FIELDING Geary and Mason | 2 50 to 3 50 | 3 50 to 4 50 | 4 00 to 6 00 |
| GAYLORD 620 Jones | 2 50 to 3 00 | 3 50 to 5 00 | 4 00 to 5 00 |
| GOLDEN STATE 114 Powell | 2 50 | 2 00 to 3 50 | 3 50 to 5 00 |
| GRANADA 1000 Sutter | | 2 00 to 3 50 | 3 00 to 3 50 |
| GRAND 57 Taylor | 2 00 to 3 00 | 2 50 to 3 50 | |
| LA SALLE 225 Hyde | 2 00 to 3 00 | 2 50 to 3 50 | 4 00 |
| MANX 225 Powell | 2 50 to 3 00 | 3 50 to 4 00 | 5 00 |
| MARK HOPKINS 999 California | 5 00 to 8 00 | 7 00 to 10 00 | 7 00 to 12 00 |
| MARK TWAIN 345 Taylor | 2 00 to 2 50 | 2 50 to 3 50 | 4 00 |
| MAURICE 761 Post | 2 50 to 3 50 | 3 50 to 5 00 | 4 50 to 5 00 |
| NEW ALDEN 333 Fulton | 2 00 | 2 00 to 2 50 | 3 50 |
| OLYMPIC 230 Eddy | 2 00 to 3 00 | 2 50 to 3 50 | 3 50 to 4 00 |
| OXFORD Market and Mason | 2 00 to 3 00 | 3 00 to 3 50 | 4 00 |
| PALACE Market and New Montgomery | 4 00 to 7 00 | 6 00 to 10 00 | 7 00 to 10 00 |
| PLAZA Post and Stockton | 3 00 to 4 00 | 4 00 to 5 00 | 4 50 to 6 50 |
| POWELL 17 Powell | 2 00 to 2 50 | 2 50 to 3 00 | 3 00 to 3 50 |
| ROOSEVELT Jones and Eddy | 2 50 | 2 50 to 3 00 | 3 00 to 4 00 |
| ST FRANCIS Powell and Ceary | 4 00 to 8 00 | 6 00 to 10 00 | 7 00 to 12 00 |
| SIR FRANCIS DRAKE Sutter and Powell | 4 00 to 7 00 | 6 00 to 9 00 | 7 00 to 10 00 |
| SENATE 467 Turk | | 2 50 to 3 00 | 3 00 to 4 00 |
| SENATOR 619 Ellis | 1 50 to 2 50 | 2 00 to 3 00 | 3 00 to 4 00 |
| SHAW Market and McAllister | | 3 50 to 4 00 | 4 00 to 5 00 |
| STATES 556 California | | 2 50 | |
| STEWART 353 Geary | 2 00 to 2 50 | 3 00 to 4 50 | 4 00 to 6 00 |
| VICTORIA 590 Bush | 2 00 to 2 50 | 3 00 | 3 50 |
| WASHINGTON Grant at Bush | 2 00 to 2 50 | 2 50 to 3 00 | 4 00 |
| WHITCOMB 1231 Market | 3 00 up | 4 00 to 7 00<br>2 room suite | 4 00 to 7 00<br>9 00 to 12 00 |
| WORTH 641 Post Apartments | 2 00 to 2 50 | 2 50 to 3 00 | 3 50 |
| ALEXANDER HAMILTON 620 O Farrell Motels | | 6 00 to 16 00 | |
| MARINA 2576 Lombard | 2 50 to 4 00 per day | | 16 50 to 24 00 per week |

# MEETING PLACES

HOUSE OF DELEGATES Colonial Room, St Francis Hotel Powell and Geary streets

OPENING GENERAL MEETING War Memorial Opera House Auditorium, Civic Center

GENERAL SCIENTIFIC MEETINGS War Memorial Opera House Auditorium, Civic Center

SCIENTIFIC EXHIBIT Auditorium Civic Center

GENERAL HEADQUARTERS, REGISTRATION BUREAU, TECHNICAL EXHIBITS, INFORMATION BUREAU AND BRANCH POSTOFFICE Auditorium, Civic Center

### SECTIONS OF SCIENTIFIC ASSEMBLY

INTERNAL MEDICINE High School of Commerce Auditorium, Franklin and Hayes streets

SURGERY, GENERAL AND ABDOMINAL War Memorial Opera House Auditorium, Civic Center

OBSTETRICS AND GYNECOLOGY War Memorial Opera House Auditorium, Civic Center

OPHTHALMOLOGY War Memorial Veterans Building Auditorium Civic Center

LARYNGOLOGY, OTOLOGY AND RHINOLOGY War Memorial Veterans Building Auditorium, Civic Center

PEDIATRICS High School of Commerce Auditorium Franklin and Hayes streets

EXPERIMENTAL MEDICINE AND THERAPEUTICS High School of Commerce Boys' Gymnasium, Franklin and Hayes streets.

PATHOLOGY AND PHYSIOLOGY High School of Commerce, Boys' Gymnasium, Franklin and Hayes streets

NERVOUS AND MENTAL DISEASES War Memorial Opera House, Buffet, Civic Center

DERMATOLOGY AND SYPHILOLOGY War Memorial Veterans Building, Room 1, Civic Center

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH High School of Commerce, Girls' Gymnasium, Van Ness Avenue and Hayes street

UROLOGY War Memorial Veterans Building, Room 1, Civic Center

ORTHOPEDIC SURGERY War Memorial Opera House, Buffet, Civic Center

GASTRO-ENTEROLOGY AND PROCTOLOGY High School of Commerce, Girls' Gymnasium, Van Ness Avenue and Hayes Street

RADIOLOGY War Memorial Veterans Building, Room 223

ANESTHESIOLOGY War Memorial Veterans Building, Room 223

GENERAL PRACTICE OF MEDICINE Masonic Temple Auditorium, Van Ness Avenue and Market street

# LOCAL COMMITTEE ON ARRANGEMENTS

### San Francisco County Medical Society

CHESTER L. COOLEY President

ROBERTSON WARD Secretary

### General Committee

JOHN W CLINE, Chairman

STANLEY H MENTZER, Vice Chairman

FRANK J KIHM, Secretary

WARREN B ALLEN
HANS BARKAN
EDWIN L BRUCK
LOREN R. CHANDLER
LAMBERT B COBLENTZ
GLENN F CUSHMAN
CHESTER L COOLEY
G DANIEL DELPRAT
CHARLES A FERNISH
KENNETH D GARDNER
PHILIP K GILMAN
LOGAN GRAY
JOHN W GREEN
ALLEN T HINMAN
T HENSHAW KELLY
ALSON R KILGORE
LLOYD E KINDALL
R STANLEY KNEESHAW
FREDERICK W KROLL
SALVATORE P LUCIA
H GORDON MACLEAN
ROBERT C MARTIN
ALEX MILLER
PAUL D MICHELSON JR
M LAURENCE MONTGOMERY
JAMES W MORGAN
THOMAS F MULLEN
DWIGHT H MURRAY
SIDNEY J SHIPMAN
F S SMYTH
DWIGHT L WILBUR

### Subcommittee on Sections and Section Work

INTERNAL MEDICINE
WALTER BECKH, Chairman
ROBERTO F ESCAMILLA — R EMMETT ALLEN

SURGERY GENERAL AND ABDOMINAL
H GLENN BELL, Chairman
CARLETON MATHEWSON JR. — FRANKLIN I HARRIS

OBSTETRICS AND GYNECOLOGY
HERBERT F TRAUT, Chairman
C FREDERIC FLUHMAN — ALBERT M VOLLMER

OPHTHALMOLOGY
GEORGE N HOSFORD, Chairman
C. ALLEN DICKEY — SAMUEL F BOYLE

LARYNGOLOGY OTOLOGY AND RHINOLOGY
LEWIS F MORRISON, Chairman
FRANK B HAND — SIGURD VON CHRISTIERSON

PEDIATRICS
CLAIN F GELSTON Chairman
A CRAWFORD BOST — CHARLES W LEACH

EXPERIMENTAL MEDICINE AND THERAPEUTICS
MAYO H SOLEY, Chairman
DONALD A CARSON — FRANCIS L CHAMBERLAIN

PATHOLOGY AND PHYSIOLOGY
DAVID A WOOD Chairman
KARL B EICHORN — JAMES F RINEHART

NERVOUS AND MENTAL DISEASES
GEORGE S JOHNSON Chairman
KARL M BOWMAN — EDMUND J MORRISSEY

DERMATOLOGY AND SYPHILOLOGY
JOHN M GRAVES, Chairman
NORMAN N EPSTEIN — ARNE E INGELS

PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH
J C GEIGER Chairman
RODNEY R. BEARD — NELSON J HOWARD

UROLOGY
CLARK M JOHNSON, Chairman
WILLIAM A SUMNER — MORRELL E VECKI

ORTHOPEDIC SURGERY
FREDERICK C. BOST, Chairman
PORTER FORCADE — DONALD E KING

GASTRO-ENTEROLOGY AND PROCTOLOGY
HUGH ROSE JR, Chairman
CHARLES A NOBLE JR — ROBERT A SCARBOROUGH

RADIOLOGY
LEO HENRY GARLAND Chairman
ALEXANDER PETRILLI — A JUSTIN WILLIAMS

ANESTHESIOLOGY
WILLIAM B NEFF, Chairman
HUBERT R HATHAWAY — WALTER LAWRENCE

GENERAL PRACTICE OF MEDICINE
CLYDE D HORNER Chairman
IVAN C HERON — WESLEY E SCOTT

### Subcommittee on Registration

ALLEN T HINMAN Chairman
CLARENCE W ADAMS — GUNTHER W NAGEL
CHARLES E H BATES — JAMES OWNBY JR.
DUDLEY W BENNETT — THOMAS H ROBERTS
HARRY M BLACKFIELD — ANTHONY J J ROURKE
KATHLEEN M MAHONEY — MAXINE M SEHRING
JOY L MCCLURE — GRACE M TALBOT

### Subcommittee on Scientific Exhibit

DWIGHT L WILBUR Chairman
OTTO BARKAN — JOHN J LOUTZENHEISER
ARTHUR L BLOOMFIELD — EARL R MILLER
HAROLD BRUNN — HIRAM E. MILLER
EDWARD C BULL — HERBERT C. MOFFITT
JESSE L CARR — DANIEL G MORTON
ALVIN J COX JR — HOWARD C NAFFZIGER
ALBERT D DAVIS — ROBERT R. NEWELL
LUDWIG A EMGE — GEORGE WARREN PIERCE
HAROLD K FABER — DOHRMANN K PISCHEL
FRANK HINMAN — AUBREY G RAWLINS
EMILE F HOLMAN — FREDERICK L REICHERT
MATTHEW N HOSMER — LLOYD R REYNOLDS
WILLIAM J KERR — JOHN B DE C. M SAUNDERS
EDWARD B SHAW

### Subcommittee on Finance

G DANIEL DELPRAT Chairman
LOIS H BROCK — HAROLD A HILL
A LINCOLN BROWN — RAY H KISTLER
HOWARD A BROWN — HENRY A R KREUTZMANN
EVERETT CARLSON — HAROLD H MARQUIS
ZACH B COBLENTZ — JAMES J MCGINNIS
WILLIAM C DEAMER — DOROTHY L MORSE
DONALD W DE CARLE — ROBERT R NEWELL
ANTHONY B DIEPENBROCK — THOMAS H O'CONNOR
HOWARD M ENGLE — WILLIAM REILLY
FREDERICK S FOOTE — VICTOR RICHARDS
HENRY L GARDNER — VANCE M STRANGE
LEON GOLDMAN — HULDA E THELANDER
JOHN O HAMAN — WILLIAM F WAGNER
CARL D WINTERNITZ

### Subcommittee on Hotels

M LAURENCE MONTGOMERY, Chairman
DONALD M CAMPBELL — MARLOW B HARRISON
WILLIAM A CARROLL — CLAYTON D MOTE
GARNETT CHENEY — MARY B OLNEY
DONALD A. DALLAS — EMMET L. RIXFORD

### Subcommittee on Information

KENNETH D GARDNER, Chairman

ROBERT B AIRD
ALICE C BEPLER
CHARLES EDWIN COOPER
R GLEN CRAIG
VICTOR M DILLON
F GRAHAM EVERS
RANDOLPH G FLOOD
ELLIS D HARMON
JOHN E KISTLER
FREDERICK O SHUMATE

### Subcommittee on Publicity and Printing

LAMBERT B COBLENTZ, Chairman

DOROTHY W ATKINSON
CHESTER L COOLEY
PHILIP K. GILMAN
JOHN HUNTON
FRANK J KIHM
GEORGE H KRESS
HAROLD H LINDNER
MARY E MATHES
ROBERTSON WARD
ROLLEN W WATERSON

### Subcommittee on Transportation

GLENN F CUSHMAN, Chairman
PAUL D MICHELSON JR

ELMER C BRICCA
DOROTHY P DANNO
HENRY CLARKE DAVIS
PAUL L DE SILVA
LEONARD DOBSON
L PERRY DOUGLASS
FRANK L A GERBODE
LEE JAMES HAND
DAVID O HARRINGTON
JOHN M MOORE
EDGAR J MUNTER
FRANK NORRIS
ELWOOD R OLSEN
WALTER W PORT
ELLSWORTH F QUINLAN
FRANCIS J ROCHEA
WILLIAM H RUSTAD
RALPH E SCOVEL
ROGER G SIMPSON
GREGORY SMITH
SEYMOUR P E SMITH

### Subcommittee on Entertainment

T HENSHAW KELLY, Chairman
PHILIP K GILMAN, Vice Chairman

PHILIP H ARNOT
HANS BARKAN
BRADFORD F DEARING
GERTRUDE F JONES
ALSON R KILGORE
FRERERICK W KROLL
SALVATORE P LUCIA
ROBERT C MARTIN
JAMES W MORGAN
THOMAS F MULLEN
J MARION READ
W D HORNER

### Subcommittee on House of Delegates Dinner

SALVATORE P LUCIA Chairman
WARREN D HORNER, Vice Chairman

PHILIP H ARNOT
REA E ASHLEY
BRADFORD F DEARING
C ALLEN DICKEY
T HENSHAW KELLY
HANS LISSER
CHARLES P MATHE
JOHN M RECTOR
ALFRED C REED
KARL L SCHAUPP
ROBERTSON WARD

### Subcommittee on President's Reception

ALSON R KILGORE, Chairman
J MARION READ, Vice Chairman

WILLIAM L BENDER
LEROY H BRIGGS
E BUTLER
M LEE COHN
FREDERICK C CORDES
GEORGE E EBRIGHT
JOHN H GRAVES
PHILLIPS JOHNSON
JOHN PHILIP STRICKLER
WILLIAM W WASHBURN

### Subcommittee on Opening General Meeting

HANS BARKAN, Chairman
THOMAS F MULLEN, Vice Chairman

GEORGE H BECKER
MARTIN W DEBENHAM
W WALLACE GREENE
JOSEPH L MCCOOL
ROLAND D PINKHAM
WILLIAM C VOORSANGER

### Subcommittee on Golf

JAMES W MORGAN, Chairman
BRADFORD F DEARING, Vice Chairman

JAMES EAVES
WALTER F SCHALLER
HENRY H SEARLES
H CLARE SHEPARDSON

### Subcommittee on Clubs

FREDRICK W KROLL, Chairman
ROBERT C MARTIN, Vice Chairman

ELBRIDGE J BEST
C ALLEN DICKEY
HAROLD E FRASER
PHILIP K. GILMAN
FRANKLIN I HARRIS
FREDERICK G LINDE
J MINTON MEHERIN
WILLIAM G MOORE
CHARLES A NOBLE JR
FREDERICK H RODENBAUGH
WILLIAM L ROGERS
H BRODIE STEPHENS
WILLIAM C VOORSANGER
ROBERTSON WARD
ALANSON WEEKS

# ENTERTAINMENT

### Dinner for Delegates

A dinner is being arranged by the Local Committee on Arrangements for Monday, July 1, for members of the House of Delegates and officers of the American Medical Association at the Palace Hotel Complete information concerning the dinner will be available at the first meeting of the House of Delegates on Monday morning, July 1

### Luncheon for Delegates

A luncheon for the members of the House of Delegates and the officers of the American Medical Association is being planned for Tuesday noon, July 2, between the morning and afternoon sessions of the House of Delegates at the St. Francis Hotel

### Opening General Meeting

The Opening General Meeting will be held on Tuesday evening, July 2, in the War Memorial Opera House Auditorium, Civic Center The program will begin at 8 o clock

### President's Reception and Ball

The President of the Association will be honored with a reception and ball to be held Thursday evening July 4, at 9 o'clock at the Palace Hotel

### Luncheons and Dinners

ALPHA KAPPA KAPPA, Luncheon, Wednesday, July 3, at Sir Francis Drake.

ALPHA OMEGA ALPHA, Dinner, Thursday, July 4, Palace Hotel, 6 30 p m. The William W Root Lecture will be presented by Robert A. Millikan.

AMERICAN PHYSICIANS ART ASSOCIATION, Dinner, Tuesday, July 2, Whitcomb Hotel

CANADIAN MEDICAL SCHOOLS GRADUATES, Dinner, Wednesday, July 3, University Club

COLLEGE OF MEDICAL EVANGELISTS, Alumni Banquet, Wednesday, July 3, Banquet Hall, Furniture Mart.

CREIGHTON UNIVERSITY ALUMNI, Dinner, Wednesday, July 3, Mark Hopkins Hotel

HARVARD MEDICAL ALUMNI ASSOCIATION, banquet, Wednesday, July 3, Sir Francis Drake.

JEFFERSON ALUMNI banquet, Wednesday, July 3, Palace Hotel

JOHNS HOPKINS MEDICAL SCHOOL ALUMNI, banquet, Wednesday, July 3, Palace Hotel

LOYOLA UNIVERSITY ALUMNI, banquet, Wednesday, July 3 Palace Hotel

PHI BETA PI FRATERNITY, luncheon, Wednesday, July 3 Mark Hopkins Hotel

PHI DELTA EPSILON SORORITY, tea, Monday, July 1, Mark Hopkins Hotel

PHILIP MORRIS, hosts to members of House of Delegates and Board of Trustees, cocktail party, Tuesday, July 2, St. Francis Hotel

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY, banquet, Wednesday, July 3, at 7 p m, Whitcomb Hotel

TESTIMONIAL dinner to Mr Will C Braun by Mead-Johnson, Wednesday, July 3, St. Francis Hotel

VICE PRESIDENTS breakfast, given by Dr L H South, Tuesday, July 2, Mark Hopkins Hotel

# WOMAN'S AUXILIARY

### Message of the General Chairman

MRS CLIFFORD LONG

It is a great honor and also a great pleasure for San Francisco as well as California to have the American Medical Association and Woman's Auxiliary to the American Medical Association here in session, July 1 to July 5, 1946 I extend a most sincere invitation to all members of the Woman's Auxiliary to the American Medical Association to attend this the national auxiliary's twenty-third annual meeting

Wives and guests of doctors attending the session who are not members of the Auxiliary are cordially invited to attend the general sessions and to take part in all social events A friendly welcome will be given every one We are all anxious to see that you will get the greatest benefit from the meeting The Local Committee has planned many events and it is our hope that you will avail yourself of all the activities offered

The Auxiliary Headquarters will be at the Fairmont Hotel, where all the meetings and most of the events will be held

Please register early and obtain your badge and complete program, also purchase all tickets as soon after arrival as possible They will be sold only at Auxiliary Headquarters, Fairmont Hotel

Members of the Hospitality Committee will be at the hotels to assist you in every way

The registration hours are Sunday 12 m to 4 p m, Monday 9 a m. to 4 p m, Tuesday 9 a m. to 4 p m, Wednesday 9 30 a m to 4 p m and Thursday 9 30 a m to 4 p m

### Hostesses

The Woman's Auxiliary to the San Francisco County Medical Society and the Woman's Auxiliary to the California Medical Association

### Preconvention Committee Meetings

SUNDAY, JUNE 30

Tea, honoring Mrs David W Thomas, President of Woman's Auxiliary, given by the Woman's Auxiliary to the California Medical Association at the Gold Ball Room, Fairmont Hotel, 4 to 6 p m

MONDAY, JULY 1

8 a. m Breakfast on Nob Hill, radio broadcast, prizes, at the Birch Room, Fairmont Hotel, fee $1 10

9 a m. to 4 p m National Board Meeting, Parlor Suite, Fairmont Hotel

2 p m. City sight seeing trip fee $2

6 p m. National Board Dinner Green Room, Fairmont Hotel

8 p m Suggested sight seeing trip through Chinatown and Fisherman's Wharf, fee $1.25

### General Meeting

TUESDAY, JULY 2

9 a m Formal opening of convention, house of delegates meeting, Gold Room, Fairmont Hotel

12 30 p m Luncheon in honor of past presidents of Woman's Auxiliary, Peacock Court, Hotel Mark Hopkins

8 p m Opening General Meeting of the American Medical Association, War Memorial Opera House

WEDNESDAY, JULY 3

9 a m General Session, Red Room, Fairmont Hotel

12 30 p m Auxiliary Luncheon honoring Mrs David W Thomas, President, and Mrs Jesse Hamer, President Elect, Gold Room, Fairmont Hotel

2 30 p m. Sight seeing trip to Stanford University, fee $2 90

Evening free for alumni gatherings

THURSDAY, JULY 4

9 a m Board of Directors' Meeting, Empire Room, Fairmont Hotel

1 p m Choice of sightseeing trips (*a*) Over Bay Bridge to University of California campus (*b*) Over Golden Gate Bridge into Marin County to Muir Woods

7 p m Annual Auxiliary Dinner for members, husbands and guests, Gold Room, Fairmont Hotel

9 p m Reception and Ball in honor of the President of the American Medical Association, Palace Hotel

FRIDAY, JULY 5

Open for shopping

### Golf, Tennis, Swimming

Golf Monday, July 1, 9 30 a. m., Course of Presidio Golf Club available, green fee $2, Wednesday, July 3, 9 30 a m. Course of Presidio Golf Club available, green fee $2

Tennis The courts of the Katherine Delmar Burke School available Make arrangements to play by phoning Mrs L H Garland, Fi 5112

Swimming Pool of the Woman's Athletic Club available. Obtain Guest Card for all departments of club, fee $1 Call Mrs Edmund Morrissey, Fi 0284

Airplane sightseeing, by courtesy of the United Air Lines Call Miss Grace Norton, Yu 0818 Tour of Radio City to be arranged

# GOLF TOURNAMENT

The American Medical Golfing Association will hold its thirtieth tournament at the Olympic Club using the Lakeside Golf Course in San Francisco, on Monday, July 1

TROPHIES AND PRIZES

Trophies will be awarded for the Association Championship, the Will Walter Trophy, the Association Handicap Championship the Detroit Trophy, Championship Flight, First Gross, the St Louis Trophy, Championship Flight, First Net, the President's Trophy, donated by D A Williams of Kansas City, Eighteen Hole Championship, the Golden State Trophy, Eighteen Hole Handicap Championship the Ben Thomas Trophy and the Atlantic City Trophy Maturity Event, the Minneapolis Trophy, and the Oldguard Championship, the Wendell Phillips Trophy

In addition to these, approximately fifty other prizes will be in competition

CHAMPIONSHIP COURSE

Lakeside, a thirty-six-hole championship course on the shores of the blue Pacific, is one of the finest courses in America. It is ideal for experts and a treat for dubs and beginners The beautiful club house has every facility, including a large locker room and an indoor swimming pool The San Francisco committee has provided a layout fit for kings, including the golfers' banquet at Monaco Theatre Restaurant, International Settlement Old Barbary Coast a fascinating place in a historical setting long to be remembered Transportation to and from the golf course to the restaurant will be provided

SAN FRANCISCO COMMITTEE ON ARRANGEMENTS

The San Francisco Committee on Arrangements is under the chairmanship of A M G A Past-President James Eaves, 410 Hawthorne Avenue, Oakland, Calif The Executive Committee is composed of A M G A Past Presidents Walter F

Schaller, James W Morgan and Frank Sheehy Others on the committee are Bradford F Dearing, vice chairman, Henry H Searls and H Clare Shepardson.

APPLICATION FOR MEMBERSHIP

This Victory Postwar Tournament will be a celebratory event. Old and new fellows have the opportunity to enjoy a wonderful day of golf, to win a nice prize and to join in the good fellowship of the A M G A

All male fellows of the American Medical Association are cordially invited to become members of the American Medical Golfing Association Write Executive Secretary Bill Burns, 2020 Olds Tower, Lansing 8, Mich, for application blank

Participants in the tournament are required to present their home club handicap, signed by the club secretary, or to accept a handicap set by the A. M G A handicap committee. No handicap over 30 is allowed A Fellow absent from the annual banquet following the tournament forfeits his rights to a trophy or prize.

A M G A OFFICERS

D A Williams of Kansas City is President, Charles E Shannon of Chicago and W C Speidel of Seattle are Vice Presidents of the A M G A President Williams anticipates that over 200 Fellows of the A M G A will visit Olympic July 1 to enjoy the A M G A's Victory Postwar Tournament

# SYMPOSIUM ON HEALTH PROBLEMS IN EDUCATION

**High School of Commerce Auditorium**

**Tuesday, July 2—2 p m**

THEME How Can School Health Examinations Be Made Most Effectively and Efficiently?

I School Health Examinations

(*a*) The Role of the Administrator
(*b*) The Role of the Teacher
(*c*) The Role of the Nurse
(*d*) The Role of Physicians and Dentists
Speakers to be announced

II Panel Discussion "Periodic Health Examinations versus Examinations on Referral"
Chairman and panel to be announced.

III Open Discussion from the Floor, including Symposium Papers and Panel Topic
Discussion leaders to be announced.

# PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

## GENERAL SCIENTIFIC MEETINGS

**War Memorial Opera House Auditorium, Civic Center**

MONDAY, JULY 1—2 P M

EDWARD L BORTZ, Chairman, Council on Scientific Assembly Presiding

The Present Status of Penicillin and Streptomycin
ARTHUR L BLOOMFIELD, San Francisco

The Anemias Types and Principles of Treatment.
CHARLES AUSTIN DOAN, Columbus Ohio

Blood Derivatives CHARLES A JANEWAY Boston

Intermission

3 30 P M

WILLIAM R MOLONY SR., Vice President, American Medical Association, Presiding

Thrombosis and Embolism ALTON OCHSNER, New Orleans

Dichlorodiphenyltrichloroethane (DDT)
COLONEL WILLIAM STONE, Medical Corps, Army of the United States

The Treatment of Bacterial Infections of the Skin
DONALD PILLSBURY, Philadelphia

TUESDAY, JULY 2—9 30 A M

FREDERICK A COLLER, Member, Council on Scientific Assembly, Presiding

Modern Concepts of the Neuroses
KARL M BOWMAN, San Francisco

Neurotropic Virus Diseases THOMAS RIVERS, New York.

Virus Infections of the Respiratory Tract Their Prevention and Treatment HOBART A REIMANN Philadelphia

Intermission

11 A. M

CLYDE L CUMMER Member, Council on Scientific Assembly, Presiding

Rheumatic Fever Its Recognition and Treatment
GEORGE C GRIFFITH, Los Angeles

The Malaria Problem Today
CAPTAIN J J SAPERO (MC), U S N

Peptic Ulcer ANDREW C IVY Chicago

TUESDAY, JULY 2—2 P M

CHARLES H PHIFER Member Council on Scientific Assembly, Presiding

The Modern Treatment of Syphilis
PAUL A O'LEARY, Rochester, Minn.

The Adequate Treatment of Gonorrhea
J R HELLER JR, U S P H S

The Use of Insulin in the Treatment of Diabetes
LESTER PALMER, Seattle.

Intermission

3 30 P M

HENRY R VIETS, Member, Council on Scientific Assembly, Presiding

The Relationship of Physical Medicine to General Practice.
GEORGE MORRIS PIERSOL, Philadelphia

The Use of Isotopes in Medical Research
JOHN H LAWRENCE, Berkeley, Calif

Uses and Abuses of the Male Sex Hormones
WILLARD OWEN THOMPSON, Chicago

## THE OPENING GENERAL MEETING

**War Memorial Opera House Auditorium, Civic Center**

TUESDAY, JULY 2—8 00 P M

Music

Call to Order by PRESIDENT ROGER I LEE.

Invocation.

Music

Introduction and Installation of President-Elect H H SHOULDERS

Address H H SHOULDERS, President

Music

Presentation of Medal to Retiring President ROGER I LEE. R. L SENSENICH, Chairman of the Board of Trustees

Presentation of Distinguished Service Medal, H H SHOULDERS President

Music

# THE PROGRAMS OF THE SECTIONS

## Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections The order here is not necessarily the order that will be followed in the Official Program nor is the list complete The Official Program will be similar to the programs issued in previous years and will contain the final program of each section with abstracts of the papers, as well as lists of committees, program of the Opening General Meeting, list of entertainments and other information To prevent misunderstandings and protect the interest of advertisers it is here announced that this Official Program will contain no advertisements It is copyrighted by the American Medical Association and will not be distributed before the session A copy will be given to each Fellow on registration

## SECTION ON INTERNAL MEDICINE

MEETS IN HIGH SCHOOL OF COMMERCE AUDITORIUM

### OFFICERS OF SECTION

Chairman—WILLIAM D STROUD, Philadelphia
Vice Chairman—W O THOMPSON, Chicago
Secretary—CECIL J WATSON Minneapolis
Executive Committee—ROY W SCOTT Cleveland BURRELL O RAULSTON, Los Angeles, WILLIAM D STROUD Philadelphia

### Wednesday, July 3—2 p m.

Treatment of Hyperthyroidism with Radioactive Iodine (Lantern Demonstration) E M CHAPMAN, Boston
Discussion to be opened by MAYO H SOLEY, JOSEPH G HAMILTON and EARL R MILLER San Francisco

A Consideration of Some of the Newer Antimalarials (Lantern Demonstration) JAMES A SHANNON, New York
Discussion to be opened by FRANCIS R DIEUAIDE New York

The Frank Billings Lecture The Problem of Ketosis
R T WOODYATT Chicago

Newer Concepts of the Endocrine Regulation of Carbohydrate Metabolism (Lantern Demonstration)
DEWITT STETTEN JR New York
Discussion to be opened by LIEUTENANT LAURANCE W KINSELL (MC) U S N R

The Antianemic Activity of Lactobacillus Casei Factor ("Folic Acid") (Lantern Demonstration)
CARL V MOORE, St. Louis
Discussion to be opened by M M WINTROBE Salt Lake City

### Thursday, July 4—2 p m

Election of Officers

Physical Sequelae of the Atomic Bomb Explosion (Lantern Demonstration) GEORGE V LEROY Chicago
Discussion to be opened by VERNE R MASON Los Angeles

The Low Sodium Diet in Congestive Heart Failure (Lantern Demonstration)
PAUL D WHITE WILLIAM B BRIDGES and EDWIN O WHEELER, Boston

Studies on the Pathogenesis of Peripheral Edema in Congestive Heart Failure (Lantern Demonstration)
FRANCIS REICHSMAN HAROLD GRANT and T R HARRISON Dallas Texas
Discussion on papers of DRS WHITE BRIDGES and WHEELER and DRS REICHSMAN GRANT and HARRISON to be opened by JAMES V WARREN, Medical Corps Army of the United States and T R SCHEMM Great Falls Mont

Chairman's Address Optimism in Medicine.
WILLIAM D STROUD Philadelphia

Penicillin Aerosolization in the Treatment of Lobar Pneumonia Bronchiectasis and Lung Abscess (Lantern Demonstration) MAURICE S SEGAL Boston
Discussion to be opened by ALVAN L BARACH, New York.

Fungous Diseases Encountered in a General Hospital Practice (Lantern Demonstration) D T SMITH Durham N C
Discussion to be opened by C E SMITH San Francisco JOHN F KESSEL, Los Angeles and RALPH G RIGDY, Chicago

Streptomycin Its Clinical Uses and Limitations (Lantern Demonstration) D R NICHOLS, Rochester Minn

### Friday, July 5—9 a m

JOINT MEETING WITH SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS IN HIGH SCHOOL OF COMMERCE, BOYS' GYMNASIUM

The Use of Streptomycin in Clinical Practice (Lantern Demonstration) HUGH J MORGAN Nashville Tenn
Discussion on papers of DR. NICHOLS (presented in Section on Internal Medicine on Thursday July 4) and DR MORGAN to be opened by HOBART A REIMANN Philadelphia, and COL. MICHAEL E DEBAKEY, Medical Corps Army of the United States

Recent Studies on Hepatitis (Lantern Demonstration)
JOSEPH STOKES JR, JOHN R NEFFE J G REINHOLD and SIDNEY GELLIS, Philadelphia
Discussion to be opened by ALBERT M SNELL, Rochester, Minn and DAVID A WOOD San Francisco

*PANEL DISCUSSION ON THERAPEUTIC INFORMATION PLEASE*

JAMES A PAULLIN Atlanta Ga, Moderator

What's New in Hematology C C STURGIS Ann Arbor Mich
What's New in Tropical Medicine (Lantern Demonstration) ERNEST C FAUST New Orleans
What's New in Gastroenterology WALTER C ALVAREZ Rochester Minn
What's New in Infectious Diseases HOBART A REIMANN, Philadelphia
What's New in Endocrinology EDWARD H RYNEARSON Rochester, Minn
What's New in Virus Diseases E W SCHULTZ Stanford University, Calif
What's New in Cancer FRANK E ADAIR New York
What's New in Arthritis PHILIP S HENCH Rochester Minn

## SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN WAR MEMORIAL OPERA HOUSE AUDITORIUM

### OFFICERS OF SECTION

Chairman—DANIEL C. ELKIN Atlanta Ga
Vice Chairman—WILLIAM D ANDRUS New York
Secretary—ALTON OCHSNER New Orleans
Executive Committee—ARTHUR W ALLEN Boston FREDERICK A COLLER, Ann Arbor Mich DANIEL C ELKIN Atlanta, Ga

### Wednesday, July 3—9 a m.

The Problem of Phlebothrombosis and Thrombophlebitis
THOMAS B AYCOCK and JAMES W HENDRICK Baltimore
Discussion to be opened by J Ross VEAL Washington, D C and ALTON OCHSNER New Orleans

Heparin in the Treatment of Thromboembolic Disease
LEO LOEWE and EDWARD HIRSCH Brooklyn
Discussion to be opened by F W BANCROFT and ARTHUR H BLAKEMORE New York

Venous Thrombosis and Pulmonary Embolism (Lantern and Motion Picture Demonstration)
ARTHUR W ALLEN ROBERT R LINTON and GORDON A DONALDSON Boston
Discussion to be opened by GEZA DE TAKATS Chicago and ALTON OCHSNER, New Orleans

Sympathectomy for Peripheral Vascular Sclerosis
GEZA DE TAKATS Chicago
Discussion to be opened by FELIX PEARL San Francisco and ALTON OCHSNER, New Orleans

The Evaluation of Operative Procedures for Repair of Arteriovenous Fistulas Statistical Analysis of 53 Cases (Lantern Demonstration)
E CRAIG HERINGMAN JAMES D RIVES and HARRY A DAVIS New Orleans
Discussion to be opened by EMILE F HOLMAN and MAJOR NORMAN FREEMAN Medical Corps Army of the United States

Newer Concepts in the Mechanism and Management of Head Injury (Lantern Demonstration)
E S GURDJIAN and J E WEBSTER Detroit.
Discussion to be opened by HOWARD C NAFFZIGER San Francisco

Herniation of Subfascial Fat as a Cause of Low Back Pain Results of Surgical Treatment (Lantern Demonstration) RALPH HERZ, Cleveland
Discussion to be opened by PHILIP S HENCH, Rochester Minn, and C LEE GRABER, Cleveland

**Thursday, July 4—9 a m**

**Election of Officers**

Chairman's Address Exposure of Blood Vessels (Lantern Demonstration) DANIEL C ELKIN, Atlanta Ga

Transdiaphragmatic Vagus Resection in Peptic Ulcer Physiologic Effects and Early Results (Lantern Demonstration)
FRANCIS D MOORE, WILLIAM P CHAPMAN, CHESTER M JONES and MILFORD D SCHULZ, Boston
Discussion to be opened by LELAND S MCKITTRICK, Boston, and LESTER R DRAGSTEDT, Chicago

Benign Strictures of the Bile Ducts (Lantern Demonstration) RICHARD B CATTELL, Boston

The Early Recognition and Management of Intestinal Strangulation (Lantern Demonstration) EVERETT I EVANS Richmond, Va
Discussion to be opened by LELAND S MCKITTRICK, Boston

Abdominoperineal Proctosigmoidectomy for Rectal Cancer and the Management of Associated Vesical Dysfunction (Lantern Demonstration)
HARRY E BACON and LOWRAIN E MCCREA, Philadelphia
Discussion to be opened by CURTICE ROSSER, Dallas, Texas, and ROGER W BARNES, Los Angeles

Unique Behavior of the Healing Open Pilonidal Wound and Clinical Complications (Lantern Demonstration) PAUL C BLAISDELL, Pasadena, Calif
Discussion to be opened by CURTICE ROSSER, Dallas, Texas, and CLAUDE C TUCKER, Wichita, Kan

**Friday, July 5—9 a. m.**

*SYMPOSIUM ON WOUND MANAGEMENT*

Wound Shock (Lantern Demonstration) JOHN D STEWART, Buffalo

Bacteriology of Open Wounds ROBERT RUSTIGIAN, United States Army Sanitary Corps

Blood Replacement in Wound Management (Lantern Demonstration) HOWARD E SNYDER, Winfield Kan

Chemotherapy in Wound Management (Lantern Demonstration) CHAMP LYONS, New Orleans

Surgical Principles in Wound Management. FRANCIS B BERRY, New York
Discussion on the symposium to be opened by FRED W RANKIN, Lexington, Ky, E D CHURCHILL, Boston, HALL G HOLDER, San Diego, Calif, and A. W OUGHTERSON, New York.

An Appraisal of Surgery in the Treatment of Bronchiectasis (Lantern Demonstration) RALPH ADAMS and BERNARD J FICARRA, Boston
Discussion to be opened by LYMAN A BREWER, Los Angeles, and A LINCOLN BROWN, San Francisco

---

## SECTION ON OBSTETRICS AND GYNECOLOGY

MEETS IN WAR MEMORIAL OPERA HOUSE AUDITORIUM

### OFFICERS OF SECTION

Chairman—PHILIP F WILLIAMS, Philadelphia
Vice Chairman—FRANCIS B CARTER Durham, N C
Secretary—WILLIAM F MENGERT, Dallas, Texas
Executive Committee—WALTER T DANNREUTHER, New York, LOUIS E PHANEUF, Boston PHILIP F WILLIAMS Philadelphia

**Wednesday, July 3—2 p m**

Prolonged Labor, with Special Reference to Postpartum Hemorrhage (Lantern Demonstration) LESTER D ODELL and JOHN H RANDALL, Iowa City

Eclamptogenic Toxemia (Lantern Demonstration) FRANK E WHITACRE Memphis Tenn

Clinical Application of Continuous Caudal Analgesia in Obstetrics (Lantern Demonstration) JAMES M STEVER, San Antonio, Texas

Porro Cesarean Section (Lantern Demonstration) RALPH A REIS and EDWIN J DECOSTA, Chicago

A Statistical Study of the Obstetric Activities in Illinois Hospitals During 1945 (Lantern Demonstration) CHARLES NEWBERGER, Chicago

**Meeting of the Executive Committee**

**Thursday, July 4—2 p m**

**Election of Officers**

Chairman's Address Maternal Welfare and the Negro PHILIP F WILLIAMS, Philadelphia

Five Hundred Cases of Uterine Myoma Selected for Radiation Treatment (Lantern Demonstration) ROBERT J CROSSEN, St Louis

Nonmalignant Granulomatous Lesions of the Cervix (Lantern Demonstration) WILLIAM F GUERRIERO, Dallas, Texas.

The Value of the Vaginal Smear in the Diagnosis of Cancer of the Uterus (Lantern Demonstration) JOE VINCENT MEIGS, Boston

Contraception Masking Potential Infertility and Sterility, with Special Reference to Tubal and Seminal Factors (Lantern Demonstration) I C RUBIN New York

**Friday, July 5—9 a m**

JOINT MEETING WITH SECTION ON GENERAL PRACTICE OF MEDICINE IN MASONIC TEMPLE AUDITORIUM

The Nervous Pathways Involved in Pelvic Pain (Lantern Demonstration)
ROBERT D MUSSEY and ROBERT B WILSON, Rochester Minn

Psychosomatic Aspects of Pelvic Pain WILBUR R MILLER, Iowa City

Urinary Tract in Pelvic Pain from the Standpoint of the Gynecologist (Lantern Demonstration) R. GLENN CRAIG San Francisco

Orthopedic Causes of Pelvic Pain (Lantern Demonstration) HORACE C PITKIN, San Francisco

Deviations of Myometrial Physiology as Cause of Pelvic Pain (Lantern Demonstration)
RICHARD TORPIN, R A WOODBURY, G F CHILD W G WATSON and LOUISE JARBOE, Augusta, Ga

---

## SECTION ON OPHTHALMOLOGY

MEETS IN WAR MEMORIAL VETERANS BUILDING AUDITORIUM

### OFFICERS OF SECTION

Chairman—FREDERICK C CORDES, San Francisco
Vice Chairman—GRADY E CLAY, Atlanta, Ga
Secretary—R J MASTERS, Indianapolis
Executive Committee—LAWRENCE T POST, St. Louis CONRAD BERENS, New York FREDERICK C. CORDES San Francisco

**Wednesday, July 3—9 a. m**

Chairman's Address Ophthalmology's Postwar Responsibilities and Opportunities FREDERICK C CORDES, San Francisco

Address of Guest of Honor The Role of Ophthalmology in the Navy During Wartime VICE ADMIRAL ROSS T MCINTIRE (MC), USN

Industrial Ophthalmology as of 1946 (Lantern Demonstration) HEDWIG S KUHN, Hammond, Ind.
Discussion to be opened by DERRICK VAIL, Chicago, and A C DICK, San Diego, Calif

Complications of Cataract Operation (Lantern Demonstration) WILLIAM F HUGHES JR and WILLIAM C OWENS, Baltimore
Discussion to be opened by GRADY E CLAY, Atlanta Ga, and M HAYWARD POST, St. Louis

Esotropia Following Occlusion (Lantern Demonstration) KENNETH C SWAN, Portland Ore.
Discussion to be opened by PETER C KRONFELD Chicago, and GEORGE N HOSFORD, San Francisco

### Thursday, July 4—9 a m

**Executive Session**

**Election of Officers**

The Lesions of Diagnostic Value in Conjunctivitis (Lantern Demonstration)
LIEUTENANT COLONEL PHILLIPS THYGESON, Medical Corps Army of the United States
Discussion to be opened by JAMES H ALLEN Iowa City, and TRYGVE GUNDERSEN, Boston.

Congenital Glaucoma Importance of Early Diagnosis and Early Adequate Surgical Intervention (Lantern Demonstration) OTTO BARKAN, San Francisco
Discussion to be opened by MEYER WIENER, Coronado Calif and A RAY IRVINE, Beverly Hills Calif

A Neglected Cause of Secondary Glaucoma in Eyes in Which the Lens Is Absent or Dislocated (Lantern Demonstration) PAUL A CHANDLER, Boston
Discussion to be opened by JOHN H DUNNINGTON, New York, and EVERETT L GOAR Houston Texas.

Inheritance of Retinoblastoma (Lantern Demonstration)
HAROLD F FALLS Ann Arbor Mich
Discussion to be opened by THEODORE L TERRY, Boston, and C WILBUR RUCKER Rochester, Minn

**Demonstration of New Instruments**

### Friday, July 5—9 a m

JOINT MEETING WITH SECTION ON NERVOUS AND MENTAL DISEASES

Chairman's Address The Practice of Neurology in the U S A (Lantern Demonstration)
PERCIVAL BAILEY Chicago

Present Trends in the Practice of Neurology
GEORGE WILSON and CHARLES RUPP JR, Philadelphia
Discussion to be opened by J M NIELSEN and JOHN B DOYLE Los Angeles

Ocular Manifestations of Psychosomatic Disorders
DAVID O HARRINGTON San Francisco
Discussion to be opened by GEORGE STUART CAMPION San Francisco and MEYER A. ZELIGS, Oakland Calif

The Surgical Problem of Intracranial Aneurysm and Allied Vascular Lesions (Lantern Demonstration)
JOHN MARTIN Chicago
Discussion to be opened by JOHN E RAAF, Portland Ore. and HALE A HAVEN, Seattle.

Visual Field Changes Confirmed by Pathologic Diagnosis (Lantern Demonstration)
DONALD J LYLE Cincinnati
Discussion to be opened by CAPTAIN JOHN S MCGAVIC Medical Corps, Army of the United States and P J LEINFELDER, Iowa City

Management of Patients with Chronic Headache (Lantern Demonstration)
ARNOLD P FRIEDMAN, CHARLES BRENNER and H HOUSTON MERRITT, New York.
Discussion to be opened by CHARLES D ARING Cincinnati and J M NIELSEN Los Angeles

---

## SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN WAR MEMORIAL VETERANS BUILDING AUDITORIUM

### OFFICERS OF SECTION

Chairman—LOUIS H CLERF, Philadelphia
Vice Chairman—HENRY B ORTON, Newark N J
Secretary—FLETCHER D WOODWARD Charlottesville Va
Executive Committee—GORDON F HARKNESS Davenport Iowa CLAUDE C COBY Houston Texas LOUIS H CLERF Philadelphia

### Wednesday, July 3—2 p m.

Treatment of Neck Infections (Lantern Demonstration)
C H MCCASKEY Indianapolis
Discussion to be opened by J M BROWN Los Angeles

Surgical Treatment of Bilateral Abductor Muscular Paralysis as a Complication of Thyroidectomy
JOSEPH D KELLY New York
Discussion to be opened by SIMON JESBERG Los Angeles and LEWIS F MORRISON San Francisco

Pressure Treatment of Allergic Sinusitis (Lantern Demonstration) J M ROBISON, Houston Texas
Discussion to be opened by HOMER E. PRINCE, Houston Texas, and OSCAR SWINEFORD JR, Charlottesville, Va

The Diagnosis of Myasthenia Gravis in Patients with Dysphagia (Lantern Demonstration)
HENRY R VIETS Boston
Discussion to be opened by WALTER F SCHALLER and HENRY W NEWMAN, San Francisco

Nebulization Therapy in Bronchiectasis (Lantern Demonstration) A M OLSEN Rochester, Minn
Discussion to be opened by ALVAN L. BARACH New York, and DANIEL MILLER, Boston

### Thursday, July 4—2 p m

**Executive Session**

**Election of Officers**

Chairman's Address Keratosis of the Larynx (Lantern and Motion Picture Demonstration)
LOUIS H CLERF, Philadelphia

Complete Grafts of Skin and Cartilage from the Ear in Reconstruction of the Nose (Lantern Demonstration)
JAMES BARRETT BROWN, St Louis, and BRADFORD CANNON, Boston
Discussion to be opened by WILLIAM S KISKADDEN Los Angeles, and WALTER B MACOMBER, Albany, N Y

Fenestration Operation for Deafness
JULIUS A WEBER Seattle
Discussion to be opened by HOWARD P HOUSE, Los Angeles

The Modern Treatment of Sinusitis
LELAND G HUNNICUTT, Pasadena, Calif
Discussion to be opened by LEWIS F MORRISON and ROBERT C MCNAUGHT, San Francisco

### Friday, July 5—9 a m

JOINT MEETING WITH SECTION ON RADIOLOGY IN WAR MEMORIAL VETERANS BUILDING ROOM 223

Radium Treatment of Hyperplastic Lymphoid Tissue in the Nasopharynx. EDWARD M WALZL Baltimore
Discussion to be opened by H A FLETCHER San Francisco, and J S MIKELL, Tucson Ariz.

Supervoltage Roentgen Therapy for Carcinoma of the Esophagus
FRANZ J BUSCHKE and SIMEON T CANTRIL Seattle

Roentgen Therapy for Carcinoma of the Larynx (Lantern Demonstration) MAURICE LENZ New York

Surgical Management of Carcinoma of the Larynx
SIMON JESBERG Los Angeles
Discussion to be opened by ORVILLE N MELAND Los Angeles, and JULIUS A WEBER, Seattle.

Surgical Aspects of Bronchogenic Carcinoma (Lantern Demonstration) JOHN C JONES Los Angeles

---

## SECTION ON PEDIATRICS

MEETS IN HIGH SCHOOL OF COMMERCE AUDITORIUM

### OFFICERS OF SECTION

Chairman—JOHN AIKMAN, Rochester, N Y
Vice Chairman—HENRY G PONCHER Chicago
Secretary—GILBERT J LEVY, Memphis, Tenn
Executive Committee—PHILIP M STIMSON New York, HUGH L DWYER Kansas City, Mo, JOHN AIKMAN, Rochester, N Y

### Wednesday, July 3—9 a m

The Immunology of Allergy as Illustrated by Hay Fever (Lantern Demonstration) MILTON B COHEN, Cleveland
Discussion to be opened by GEORGE B LOGAN, Rochester, Minn, and GEORGE PINESS Los Angeles

Symptomatic Treatment of Bronchial Asthma in Infants and Children (Lantern Demonstration)
JEROME GLASER Rochester N Y
Discussion to be opened by VERNON W SPICKARD, Seattle, and WILLIAM C DEAMER, San Francisco

Eczema and the Essential Fatty Acids (Lantern Demonstration)
ARILD E. HANSEN, Galveston Texas
Discussion to be opened by ALTON GOLDBLOOM Montreal, Canada, and IRVINE MCQUARRIE, Minneapolis

Overdosage with Vitamin A (Lantern Demonstration)
JOHN A TOOMEY, Cleveland
Discussion to be opened by J M LEWIS, New York.

Psychologic Problems of Children.
CLIFFORD D SWEET, Oakland, Calif

The Present Status of the Study of Child Health Services (Lantern Demonstration)
JOHN P HUBBARD, Washington, D C
Discussion to be opened by GEORGE M WHEATLY, New York

**Thursday, July 4—9 a m**

**Election of Officers**

Treatment of Typhoid with Specific Bacteriophage (Lantern Demonstration)
PAUL A REICHLE and WALTER E WARD, Los Angeles, E G KNOUF South Pasadena, Calif, A G BOWER, Glendale, Calif, and PAUL M HAMILTON, San Marino, Calif

Measures for Protection of Newborn Infants (Lantern Demonstration) CHARLES A WEYMÜLLER, Brooklyn

Evaluation of the Use of Penicillin in the Treatment of Syphilis in Children (Lantern Demonstration)
JOSEPH YAMPOLSKY and ALBERT S HEYMAN, Atlanta, Ga
Discussion to be opened by OSCAR REISS, Los Angeles

Immunization Procedures in Pediatrics (Lantern Demonstration) JOHN J MILLER JR., San Francisco
Discussion to be opened by ALFRED E FISCHER, New York, and H E THELANDER, San Francisco

Triodine in the Treatment of Epilepsy (Lantern Demonstration)
WILLIAM G LENNOX, Boston

Benign Histoplasmosis and Pulmonary Calcification (Lantern Demonstration)
AMOS CHRISTIE and J C PETERSON, Nashville, Tenn

**Friday, July 5—9 a m**

The Knowledge on Human Virus Infections of Animal Origin (Lantern Demonstration)
KARL F MEYER San Francisco

*SYMPOSIUM ON ANEMIA IN INFANCY AND CHILDHOOD*

Pathogenesis WOLF W ZUELZER, Detroit

Diagnosis (Lantern Demonstration)
CARL H SMITH, New York

Classification (Lantern Demonstration)
JAMES M BATY Brookline Mass

Treatment HENRY G PONCHER, Chicago

---

## SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS

MEETS IN HIGH SCHOOL OF COMMERCE, BOYS' GYMNASIUM

### OFFICERS OF SECTION

Chairman—E V ALLEN, Rochester, Minn
Vice Chairman—CARL A DRAGSTEDT, Chicago
Secretary—DWIGHT L WILBUR, San Francisco
Executive Committee—WALLACE M YATER, Washington D C, TINSLEY R HARRISON, Dallas, Texas, E V ALLEN, Rochester, Minn.

**Wednesday, July 3—9 a m**

The Prevention of Renal Complications by the Use of Sulfonamide Mixtures (Lantern Demonstration)
DAVID LEHR, New York

Some Observations on Hypercholesterolemia and the Effects of Decholesterizing Agents (Lantern Demonstration)
GEORGE R HERRMANN, Galveston, Texas

Tridione, a New Anticonvulsant Drug (Lantern Demonstration)
RICHARD K. RICHARDS, North Chicago, Ill

*SYMPOSIUM ON UNUSUAL DISEASES*

Disseminated Lupus Erythematosus and Disseminated Scleroderma (Lantern Demonstration)
GEORGE BAEHR and ABOU D POLLACK, New York

Sarcoidosis (Lantern Demonstration) I SNAPPER, New York.
*Discussion on papers of* DRS BAEHR and POLLACK and DR SNAPPER to be opened by L HENRY GARLAND, San Francisco

Observations on the Electrocardiogram Made During Experimental Distention of the Human Gallbladder (Lantern Demonstration)
HOWARD WAKEFIELD and SELIM A MCARTHUR, Chicago

Thiouracil Remission or Relapse of Hyperthyroidism After Discontinuing Its Use (Lantern Demonstration)
ELMER C BARTELS, Boston.

**Thursday, July 4—9 a m**

**Election of Officers**

*SYMPOSIUM ON TREATMENT*

Chairman's Address The Challenge of Intravascular Thrombosis and the Clinical Use of Anticoagulants (Lantern Demonstration) E V ALLEN, Rochester, Minn.

The Diagnosis and Management of Spontaneous Hypoglycemia (Lantern Demonstration)
J W CONN, Ann Arbor, Mich
Discussion to be opened by HOWARD F WEST, Los Angeles

The Management of the Jaundiced Patient with Consideration of the Indications for Surgical Treatment (Lantern Demonstration) ALBERT M SNELL, Rochester, Minn
Discussion to be opened by LEON GOLDMAN, San Francisco

The Proof of and Treatment of Vitamin Deficiencies in an Individual Case (Lantern Demonstration)
TOM D SPIES, Birmingham, Ala, and CARL VILTER Cincinnati

The Treatment of Diseases of Virus Origin
MONROE D EATON, Berkeley, Calif

The Treatment of Coronary Artery Disease (Lantern Demonstration) O P J FALK, St Louis
Discussion to be opened by ARLIE R BARNES, Rochester, Minn, E STERLING NICHOL, Miami, Fla, and WILLIAM J KERR, San Francisco

**Friday, July 5—9 a m**

JOINT MEETING WITH SECTION ON INTERNAL MEDICINE

The Use of Streptomycin in Clinical Practice (Lantern Demonstration) HUGH J MORGAN, Nashville, Tenn.
Discussion on papers of DR. NICHOLS (presented in Section on Internal Medicine on Thursday, July 4) and DR MORGAN to be opened by HOBART A REIMANN Philadelphia, and COL MICHAEL E DEBAKEY, Medical Corps, Army of the United States

Recent Studies on Hepatitis (Lantern Demonstration)
JOSEPH STOKES JR, JOHN R NEEFE, J G REINHOLD and SIDNEY GELLIS, Philadelphia
Discussion to be opened by ALBERT M SNELL, Rochester, Minn, and DAVID A WOOD, San Francisco

*PANEL DISCUSSION ON THERAPEUTIC INFORMATION PLEASE*

JAMES A PAULLIN, Atlanta, Ga, Moderator

What's New in Hematology C C STURGIS, Ann Arbor, Mich.
What's New in Tropical Medicine (Lantern Demonstration)
ERNEST C FAUST, New Orleans
What's New in Gastroenterology
WALTER C ALVAREZ, Rochester, Minn
What's New in Infectious Diseases
HOBART A REIMANN, Philadelphia
What's New in Endocrinology
EDWARD H RYNEARSON, Rochester, Minn.
What's New in Virus Diseases
E W SCHULTZ, Stanford University, Calif
What's New in Cancer FRANK E ADAIR, New York.
What's New in Arthritis PHILIP S HENCH, Rochester, Minn

---

## SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN HIGH SCHOOL OF COMMERCE, BOYS' GYMNASIUM

### OFFICERS OF SECTION

Chairman—VIRGIL H MOON, Philadelphia
Vice Chairman—J J MOORE, Chicago
Secretary—FRANK W HARTMAN, Detroit.
Executive Committee—J P SIMONDS, Chicago, FRANK C. MANN, Rochester, Minn, VIRGIL H MOON, Philadelphia

### Wednesday, July 3—2 p m

*SYMPOSIUM ON RENAL INSUFFICIENCY IN THE SHOCK SYNDROME*

An Extrarenal Uremia and Tubular Disease of the Kidney (Lantern Demonstration) E T BELL, Minneapolis

Study of the Crush Syndrome and Posttraumatic Anuria (Lantern Demonstration) A C CORCORAN, Cleveland.

Studies on the Kidney Associated with Severe Burns P C MARTINEAU and F W HARTMAN, Detroit.

Chairman's Address Renal Deficiency Associated with Shock (Lantern Demonstration) VIRGIL H MOON, Philadelphia.

### Thursday, July 4—2 p m.

**Election of Officers**

*SYMPOSIUM ON PHYSIOLOGY OF HIGH ALTITUDE FLIGHT*

Concepts Derived from Investigations Pertaining to High Altitude Flight. CAPTAIN A R. BEHNKE (MC), U S N R

Some Factors Which Affect the Incidence of Bends at Altitude (Lantern Demonstration) W L BURCKHARDT, H F ADLER, A J ATKINSON and A C IVY, Chicago

Protection of Flying Personnel Against High Impact Forces COMMANDER HOWARD R BIERMAN (MC), U S N R.

The Effect of Continuous and Intermittent Pressure Breathing on Kidney Function DOUGLAS R DRURY, Los Angeles

Clinical Applications of Aviation Physiology H F HELMHOLZ JR, Rochester Minn

### Friday, July 5—9 a m

JOINT MEETING WITH SECTION ON GASTROENTEROLOGY AND PROCTOLOGY IN HIGH SCHOOL OF COMMERCE GIRLS' GYMNASIUM

*SYMPOSIUM ON DISEASES OF THE LIVER*

Physiology of Liver Disease

Application of Modern Physiologic Concepts to Treatment of Disease of the Liver JAMES F WEIR, Rochester, Minn

Interpretation of Liver Function Tests (Lantern Demonstration) EDWIN E OSGOOD Portland Ore.

Diagnosis of and Therapeutic Agents Used in Liver Disease

Diagnostic Handling of Patients with Jaundice (Lantern Demonstration) THEODORE L ALTHAUSEN and JOSEPH E GIANSIRACUSA, San Francisco

Needle Biopsy of the Liver (Lantern Demonstration) FREDERICK W HOFFBAUER Minneapolis

A Review of the Medical Agents (Lantern Demonstration) DWIGHT L WILBUR, San Francisco

Epidemic Hepatitis

Etiology (Lantern Demonstration) W PAUL HAVENS JR New Haven, Conn

Clinical and Laboratory Diagnosis RICHARD B CAPPS Chicago CAPTAIN VICTOR M SHOROV, Medical Corps Army of the United States, and M HERBERT BARKER Chicago

Pathology (Lantern Demonstration) TRACY B MALLORY Boston

Delayed Recovery from Acute Infectious Hepatitis Analysis of Its Causes and the Clinical Significance of Residuals CAPTAIN EMANUEL M RAPPAPORT Medical Corps Army of the United States, and MAJOR GERALD KLATSKIN, Medical Corps Army of the United States

Cirrhosis of the Liver

Its Relation to Hepatitis (Lantern Demonstration) STOCKTON KIMBALL WILLIAM A C CHAPPLE and SAMUEL SAXES, Buffalo

Alcoholic Cirrhosis RUSSELL S BOLES ROBERT S CREW and WILLIAM DUNBAR Philadelphia

New Methods of Therapy in Cirrhosis of the Liver (Lantern Demonstration) LESTER M MORRISON Los Angeles

Discussion to be opened by CECIL J WATSON, Minneapolis

## SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN WAR MEMORIAL OPERA HOUSE BUFFET

### OFFICERS OF SECTION

Chairman—PERCIVAL BAILEY, Chicago

Vice Chairman—H HOUSTON MERRITT, Boston

Secretary—R P MACKAY, Chicago

Executive Committee—STANLEY COBB Boston, J M NIELSEN, Los Angeles, PERCIVAL BAILEY, Chicago

### Wednesday, July 3—9 a m.

Rheumatic Brain Disease Late Sequel of Rheumatic Fever (Lantern Demonstration) WALTER L BRUETSCH, Indianapolis

Discussion to be opened by FREDERICK P MOERSCH, Rochester, Minn, and NATHAN MALAMUD, San Francisco

Reflex Sympathetic Dystrophy (Lantern Demonstration) JAMES A EVANS, Boston

Discussion to be opened by GEZA DE TAKATS, Chicago, and CAPTAIN W K. LIVINGSTON (MC) U S N R.

Complications of Penicillin Therapy in Meningitis and Brain Abscess (Lantern Demonstration) THEODORE C ERICKSON and MABEL G MASTEN, Madison, Wis

Periodic Ataxia (Lantern and Motion Picture Demonstration) HARRY LEE PARKER, Rochester Minn

Discussion to be opened by JOHN B DOYLE, Los Angeles

Surgical Aspects of Traumatic Subdural Hematoma (Lantern Demonstration) HAROLD C VORIS Chicago

Discussion to be opened by A. W ADSON, Rochester, Minn.

Spontaneous Regeneration of Severed Peripheral Nerves (Lantern Demonstration)

LEWIS J POLLOCK and JAMES G GOLSETH Chicago, FRANK H MAYFIELD Cincinnati, ALEX J ARIEFF, Chicago, CAPTAIN Y T OESTER, Medical Corps Army of the United States and ERICH LIEBERT Chicago

Discussion to be opened by HOWARD C NAFFZIGER, San Francisco

### Thursday, July 4—9 a m

**Election of Officers**

*SYMPOSIUM ON TROPICAL DISEASES*

Neurologic Complications of Diphtheritic Neuritis HERBERT S GASKILL Philadelphia

Discussion to be opened by ROBERT B AIRD San Francisco

Cerebral Manifestations During the Course of Malaria Experience in Mediterranean Theater World War II (Lantern Demonstration) BENJAMIN BOSHES Chicago

Discussion to be opened by W McD HAMMON San Francisco

Emotional Reactions to Schistosomiasis MAJOR JEROME D FRANK Medical Corps, Army of the United States

Psychoneurosis and Industry WALTER F SCHALLER, San Francisco

Discussion to be opened by ISRAEL S WECHSLER and FOSTER KENNEDY New York

Electrocerebral Shock Therapy A Reconsideration of Former Contraindications (Lantern Demonstration) MATTHEW T MOORE Philadelphia

Discussion to be opened by LOTHAR B KALINOWSKY New York, and NATHANIEL W WINKELMAN, Philadelphia

### Friday, July 5—9 a m

JOINT MEETING WITH SECTION ON OPHTHALMOLOGY IN WAR MEMORIAL VETERANS BUILDING AUDITORIUM

Chairman's Address The Practice of Neurology in the U S A (Lantern Demonstration) PERCIVAL BAILEY, Chicago

Present Trends in the Practice of Neurology GEORGE WILSON and CHARLES RUPP, Philadelphia

Discussion to be opened by J M NIELSEN and JOHN B DOYLE, Los Angeles

Ocular Manifestations of Psychosomatic Disorders
DAVID O HARRINGTON, San Francisco
Discussion to be opened by GEORGE STUART CAMPION, San Francisco, and MEYER A ZELIGS, Oakland, Calif
The Surgical Problem of Intracranial Aneurysm and Allied Vascular Lesions (Lantern Demonstration)
JOHN MARTIN, Chicago
Discussion to be opened by JOHN E RAAF, Portland, Ore, and HALE A HAVEN, Seattle
Visual Field Changes Confirmed by Pathologic Diagnosis (Lantern Demonstration) DONALD J LYLE, Cincinnati
Discussion to be opened by CAPTAIN JOHN S MCGAVIC, Medical Corps, Army of the United States, and P J LEINFELDER, Iowa City
Management of Patients with Chronic Headache (Lantern Demonstration)
ARNOLD P FRIEDMAN, CHARLES BRENNER and H HOUSTON MERRITT, New York
Discussion to be opened by CHARLES D ARING, Cincinnati, and J M NIELSEN, Los Angeles

## SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN WAR MEMORIAL VETERANS BUILDING ROOM 1

### OFFICERS OF SECTION

Chairman—CLYDE L CUMMER, Cleveland
Vice Chairman—DUDLEY C SMITH, Charlottesville, Va
Secretary—NELSON PAUL ANDERSON, Los Angeles
Executive Committee—C F LEHMANN, San Antonio Texas, CLARK W FINNERUD, Chicago, CLYDE L CUMMER, Cleveland

### Wednesday, July 3—9 a m

Chairman's Address Leukoplakia (Leukokeratosis) of the Palate (Lantern Demonstration)
CLYDE L CUMMER, Cleveland
The Treatment of Malignant and Benign Skin Lesions by the Topical Application of Radioactive Phosphorus (Lantern Demonstration)
BERTRAM V A LOW-BEER, San Francisco
Discussion to be opened by C GUY LANE, Boston, and HIRAM E MILLER, San Francisco
The Treatment of Basal Cell Epithelioma by the Injection of Tissue Extracts (Lantern Demonstration)
JOSEPH C AMERSBACH, New York
Discussion to be opened by S WILLIAM BECKER, Chicago, and CLYDE K EMERY, Los Angeles
Actinomycosis of the Face and Neck (Lantern Demonstration)
JOHN H LAMB and EVERETT S LAIN, Oklahoma City
Discussion to be opened by GEORGE M LEWIS, New York, and FRED D WEIDMAN, Philadelphia
Chronic Familial Porphyria with Photosensitivity (Lantern Demonstration)
LOUIS A BRUNSTING and HAROLD L MASON, Rochester, Minn
Discussion to be opened by CLEVELAND J WHITE, Chicago, and MAXIMILIAN E OBERMAYER, Los Angeles
The Cutaneous Lesions in Meningococcemia A Clinical and Pathologic Study (Lantern Demonstration)
WILLIAM R HILL JR and THOMAS D KINNEY, Boston
Discussion to be opened by MAURICE J COSTELLO, New York

### Thursday, July 4—9 a m

**Election of Officers**

A New Development Toward a Single Standard Blood Test for Syphilis (Lantern Demonstration)
BENJAMIN S KLINE Cleveland
Discussion to be opened by JOHN F MAHONEY, Stapleton, N Y, and M H MERRILL, Berkeley, Calif
Results of Treatment of Early Syphilis with Penicillin
LIEUTENANT COLONEL THOMAS H STERNBERG, Medical Corps, Army of the United States, and WILLIAM LEIFER, New York.
Discussion to be opened by ARTHUR G SCHOCH, Dallas, Texas, and GRANT MORROW, San Francisco
The Treatment of Early Syphilis by a Single Daily Intramuscular Injection of Calcium Penicillin in Beeswax and Peanut Oil (Lantern Demonstration)
CAPTAIN MONROE J ROMANSKY, Medical Corps, Army of the United States and CHARLES R REIN, New York
Discussion to be opened by D R NICHOLS, Rochester, Minn, and GEORGE V KULCHAR, San Francisco
Penicillin Therapy in Neurosyphilis (Lantern Demonstration)
AUGUSTUS S ROSE and HARRY C SOLOMON, Boston.
Discussion to be opened by PAUL A O'LEARY, Rochester, Minn and NORMAN N EPSTEIN, San Francisco
Penicillin Therapy in Early Congenital Syphilis (Lantern Demonstration) R V PLATOU, New Orleans
Discussion to be opened by ARILD E HANSEN, Galveston, Texas
Toxic Reactions Accompanying Penicillin Therapy (Lantern Demonstration)
CAPTAIN WILLIAM J MORGINSON, Medical Corps, Army of the United States
Discussion to be opened by HAROLD M JOHNSON Honolulu, Hawaii, and CHARLES W BARNETT, San Francisco
The Uses of "Bal," with Particular Reference to Arsenical Dermatitis (Lantern Demonstration)
MARION B SULZBERGER and RUDOLF L BAER, New York.
Discussion to be opened by JULIUS R SCHOLTZ, Los Angeles

### Friday, July 5—9 a m

Atabrine Dermatitis THOMAS W NISBET, Pasadena, Calif
Discussion to be opened by FREDERICK G NOVY JR, Oakland, Calif, and JAMES R DRAKE, San Francisco
An Unusual Form of Cutaneous Reaction Following Sulfonamide Therapy OSGOODE S PHILPOTT, Denver
Discussion to be opened by J BEDFORD SHELMIRE, Dallas, Texas, and STUART C WAY, San Francisco
Histoplasmosis A Review of Cutaneous and Adjacent Mucous Membrane Manifestations, with a Report of Three Cases (Lantern Demonstration)
ARTHUR C CURTIS, Ann Arbor, Mich, and JOHN N GREKIN, U S P H S
Discussion to be opened by CARL W LAYMON, Minneapolis, and JOHN F KESSEL, Los Angeles
Furacin Therapy (Lantern Demonstration)
JOHN G DOWNING, Boston.
Discussion to be opened by J GARDNER HOPKINS, New York and FRANCIS W LYNCH, St Paul
Correlation of the Boiling Ranges of Some Petroleum Solvents with Their Irritant Action on the Skin (Lantern Demonstration)
JOSEPH V KLAUDER and FRED BRILL, Philadelphia.
Discussion to be opened by LOUIS SCHWARTZ Bethesda, Md, and HARRY J TEMPLETON, Oakland, Calif
Cutaneous Manifestations of Monocytic Leukemia.
W R HUBLER and E W NETHERTON, Cleveland.
Discussion to be opened by HARRY L ARNOLD JR, Honolulu, Hawaii, and LOUIE H WINER, Beverly Hills, Calif

## SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

MEETS IN HIGH SCHOOL OF COMMERCE, GIRLS' GYMNASIUM

### OFFICERS OF SECTION

Chairman—E. L STEBBINS, New York
Vice Chairman—C O SAPPINGTON, Chicago
Secretary—W A SAWYER, Rochester, N Y
Executive Committee—HAVEN EMERSON, New York, JOSEPH W MOUNTIN, U S P H S, E L STEBBINS, New York.

### Wednesday, July 3—2 p m

The Maryland Medical Care Program R H RILEY, Baltimore
Effect of Season and Dust Control on Coccidioidomycosis (Lantern Demonstration)
C E SMITH and R R BEARD, San Francisco, CAPTAIN H G ROSENBERGER, Medical Corps, Army of the United States, and E G WHITING, San Francisco
Dysentery Vaccines Prepared by Ultraviolet Irradiation (Lantern Demonstration)
H J SHAUGHNESSY and SIDNEY O LEVINSON, Chicago
Poliomyelitis—1943, 1944, 1945 (Lantern Demonstration)
E A PISZCZEK, Chicago
Rapid Treatment of Early Syphilis (Lantern Demonstration)
J R HELLER JR, U S P H S

### Thursday, July 4—2 p m

**Election of Officers**

Importance of Physical Medicine in Public Health, with Particular Reference to Physical Therapy in Poliomyelitis and Cerebral Palsy (Lantern Demonstration)
ROBERT L BENNETT JR, Warm Springs, Ga.

Constructive Medicine R C PAGE, New York.

Study of 3,000 Pneumonia Cases in Shipyard Workers
MORRIS F COLLEN, Oakland Calif

Industrial Physical Examinations Objectives and Methods
FENN E POOLE, Los Angeles

The Doctor's Responsibility for Industrial Nursing
OLIVE WHITLOCK KLUMP Los Angeles

## SECTION ON UROLOGY

MEETS IN WAR MEMORIAL VETERANS BUILDING ROOM 1

### OFFICERS OF SECTION

Chairman—ARBOR D MUNGER, Lincoln, Neb

Vice Chairman—LLOYD G LEWIS Washington, D C.

Secretary—GRAYSON L CARROLL, St Louis

Executive Committee—VINCENT J O'CONOR, Chicago COMMANDER GERSHOM J THOMPSON (MC), U S N R ARBOR D MUNGER, Lincoln, Neb

### Wednesday, July 3—2 p m

Incidence of Urinary Calculi in the American Negro
AUSTIN I DODSON and JOHN R CLARK Richmond Va

Management of Ureteral Stones
MILO ELLIK, Long Beach Calif
Discussion to be opened by THOMAS E GIBSON San Francisco

Intestinovesical Fistula (Lantern Demonstration)
ROGER W BARNES and MALCOLM R. HILL Los Angeles
Discussion to be opened by JOHN H MORRISSEY New York and ROBERT A SCARBOROUGH, San Francisco

*SYMPOSIUM ON URINARY VESICAL TUMORS*

Infiltrating Carcinoma of the Bladder Application of Pathology to Clinical Diagnosis and Prognosis (Lantern Demonstration) HUGH J JEWETT, Baltimore

Endoscopic Treatment of Bladder Tumors (Lantern Demonstration) HAROLD P McDONALD Atlanta Ga

Results of Treatment by Surgical Removal vs Irradiation (Lantern Demonstration) VICTOR F MARSHALL, New York.

Surgical Treatment of Bladder Tumors (Lantern Demonstration) JAMES T PRIESTLEY Rochester Minn
Discussion on papers of DRS JEWETT McDONALD MARSHALL and PRIESTLEY to be opened by FRANK HINMAN San Francisco, and OSWALD S LOWSLEY, New York

### Thursday, July 4—2 p m.

**Election of Officers**

Urologic Complications in Spinal Cord Injuries
LIEUTENANT COMMANDER HERMON C BUMPUS (MC) U S N R. LIEUTENANT COMMANDER MYRON H NOURSE (MC), U S N, and COMMANDER GERSHOM J THOMPSON (MC), U S N R

End Results Following Nephrectomy in Hypertensive Patients (Lantern Demonstration)
REED M NESBIT and RIGDON K RATLIFF Ann Arbor, Mich
Discussion to be opened by WILLIAM J McMARTIN, Omaha, and ALFRED I FOLSOM Dallas Texas

Chairman's Address A Plea for a More Conservative Attitude in Kidney Surgery (Lantern Demonstration)
ARBOR D MUNGER, Lincoln Neb

Streptomycin in the Treatment of Tuberculosis of the Urinary Bladder (Lantern Demonstration)
FRANCIS H REDEWILL, San Francisco
Discussion to be opened by JAMES E POTTER Palm Springs, Calif, and GILBERT J THOMAS Beverley Hills, Calif

Urinary Antiseptics, Including Penicillin and Streptomycin in Infections of the Urinary Tract.
EDWARD N COOK, and THOMAS L POOL, Rochester Minn

Streptomycin for Urinary Tract Infections
JOHN D ADCOCK Ann Arbor Mich

### Friday, July 5—2 p m

A New Method and Device for Care of Nocturnal Enuresis (Lantern Demonstration)
FREDERIC E B FOLEY, St. Paul

Radical Perineal Prostatectomy for Carcinoma (Lantern Demonstration) JOHN K ORMOND Detroit.

Fertility Studies of the Male in Barren Marriages An Analysis of 850 Cases (Lantern Demonstration)
LEWIS MICHELSON and ROBIN P MICHELSON San Francisco
Discussion to be opened by ROBERT S HOTCHKISS New York

Androgen Therapy in Prostatic Disease (Lantern Demonstration) FRANKLIN FARMAN Los Angeles
Discussion to be opened by WILLIAM P HERBST Washington, D C

Renal Crush Syndrome (Lantern Demonstration)
SAMUEL A VEST Charlottesville Va

## SECTION ON ORTHOPEDIC SURGERY

MEETS IN WAR MEMORIAL OPERA HOUSE BUFFET

### OFFICERS OF SECTION

Chairman—THEODORE A WILLIS Cleveland

Vice Chairman—FRANCIS M McKEEVER, Los Angeles

Secretary—J WARREN WHITE, Greenville, S C.

Executive Committee—JAMES A DICKSON, Cleveland GUY A CALDWELL, New Orleans, THEODORE A WILLIS, Cleveland

### Wednesday, July 3—2 p m

Ambulatory Treatment of Hallux Valgus (Lantern Demonstration)
EDWARD L COMPERE and WILLIAM J SCHNUTE Chicago
Discussion to be opened by SYLVAN L HAAS, San Francisco, and ROBERT G PACKARD, Denver

Intocostrin in Acute Anterior Poliomyelitis
NICHOLAS S RANSOHOFF, New York

An Ambulatory Splint for the Treatment of Cervical Spine Injuries (Lantern Demonstration)
FREDERIC C BOST, San Francisco
Discussion to be opened by OSCAR L. MILLER, Charlotte N C, and RUDOLPH L DRESEL, San Francisco

Trochanteric Osteotomies in Poliomyelitis (Lantern Demonstration) C. E IRWIN, Warm Springs, Ga
Discussion to be opened by CHARLES L LOWMAN, Los Angeles and LEROY C ABBOTT, San Francisco

Conservative Treatment of Low Back Pain Including Suspected Disk Lesions EUGENE M REGEN, Nashville Tenn
Discussion to be opened by GEORGE J GARCEAU, Indianapolis, and JOHN DUNLOP Pasadena, Calif

### Thursday, July 4—2 p m

**Election of Officers**

Farm Injuries (Lantern Demonstration)
RALPH K GHORMLEY and H H YOUNG, Rochester, Minn
Discussion to be opened by H H HITCHCOCK, Oakland, Calif and STEELE F STEWART, Honolulu, Hawaii

Chairman's Address THEODORE A WILLIS, Cleveland

The Use of Small Threaded Wires in the Treatment of Fractures (Lantern Demonstration)
H RELTON McCARROLL St. Louis
Discussion to be opened by DONALD E. KING, San Francisco and FRANCIS M McKEEVER, Los Angeles

Solid Blast Injuries (Lantern Demonstration)
JOSEPH S BARR Boston
Discussion to be opened by LIEUTENANT COLONEL JOSEPH E MILGRAM, Medical Corps, Army of the United States and CAPTAIN WILLIAM L ROGERS (MC), U S N R

### Friday, July 5—9 a m

JOINT MEETING WITH SECTION ON ANESTHESIOLOGY

The Use of Local Anesthesia on Spinal Fusions in Children
J H KITE Atlanta Ga
Discussion to be opened by J JOSEPH MATTES, Seattle and LIEUTENANT CHARLES C WYCOFF, Medical Corps, Army of the United States

Refrigeration Anesthesia (Lantern Demonstration)
LYMAN WEEKS CROSSMAN, New York
Discussion to be opened by JOHN A STILES, San Francisco, and BRUCE M ANDERSON, Oakland, Calif

Various Anesthetics in Orthopedic Surgery
B B SANKEY, East Cleveland, Ohio
Discussion to be opened by JOSEPH A FREIBERG, Cincinnati, WALTER G STUCK, San Antonio, Texas, and FRANCIS M McKEEVER, Los Angeles

Neurologic Complications of Spinal Anesthesia
M J NICHOLSON and URBAN H EVERSOLE, Boston
Discussion to be opened by DAVID M BOSWORTH, New York, and J ARCHER O'REILLY, St Louis

## SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN HIGH SCHOOL OF COMMERCE, GIRLS' GYMNASIUM

### OFFICERS OF SECTION

Chairman—J A BARGEN, Rochester, Minn
Vice Chairman—MARTIN S KLECKNER, Allentown, Pa
Secretary—SARA M JORDAN, Boston
Executive Committee—WALTER L PALMER, Chicago, EMMETT H TERRELL, Richmond, Va, J A BARGEN, Rochester, Minn

### Wednesday, July 3—9 a m

Histamine in the Therapy of Peptic Ulcer
BENJAMIN M BERNSTEIN, Brooklyn
Discussion to be opened by A C IVY, Chicago

Peptic Ulcer in the Aged (Lantern Demonstration)
EVERETT D KIEFER and DAVID McC McKELL JR, Boston
Discussion to be opened by WILLIAM C BOECK, Los Angeles

Relative Importance of Acid and Pepsin in Production of Experimental Gastric Ulcers in the Rat, with an Evaluation of Some Antacid and Antipeptic Agents (Lantern Demonstration)
HARRY SHAY and S A KOMAROV, Philadelphia
Discussion to be opened by JOHN H FITZGIBBON, Portland, Ore

Troublesome Symptoms Following Gastric Operations, with Special Reference to Carbohydrate Ingestion (Lantern Demonstration)
ROBERT M ZOLLINGER, Columbus, Ohio, and STANLEY O HOERR, Boston
Discussion to be opened by H GLENN BELL, San Francisco

Partial Gastrectomy versus Palliative Resection in the Surgical Treatment of Duodenal Ulcers (Lantern Demonstration)
RICHARD LEWISOHN, New York
Discussion to be opened by FRANK H LAHEY, Boston

The Diagnosis and Treatment of Cardiospasm (Lantern Demonstration) PORTER P VINSON, Richmond, Va
Discussion to be opened by GUNTHER W NAGEL, San Francisco

Cerebral Dysrhythmias Associated with Gastrointestinal Syndromes (Lantern Demonstration)
HARRY L SEGAL and HENRY A BLAIR, Rochester, N Y
Discussion to be opened by MATTHEW T MOORE, Philadelphia

Clinical and Pathologic Studies in Sprue (Lantern Demonstration)
DAVID ADLERSBERG and JOSEPH T SCHEIN, New York.
Discussion to be opened by GEORGE BAEHR, New York

Unusual (Benign) Hematemesis Gastric Telangiectatic Dysplasia, Review of Literature and Case Reports, Rendu-Osler-Weber's Disease (Lantern Demonstration)
HYMAN I GOLDSTEIN, Camden, N J
Discussion to be opened by FELIX CUNHA, San Francisco

The Annual Banquet of the section will be held Wednesday, July 3, at 7 p m. at the Whitcomb Hotel

### Thursday, July 4—9 a m.

Election of Officers

Chairman's Address Newer Concepts of Intestinal Function (Lantern Demonstration)
J A BARGEN, Rochester, Minn

Intestinal Dysfunction
The Roentgenologic Contribution to the Diagnosis of Functional Intestinal States (Lantern Demonstration)
HENRY M WEBER, Rochester, Minn.
Treatment of Intestinal Conditions as Based on Disordered Functions
DONOVAN C BROWNE, New Orleans
Discussion to be opened by SARA M JORDAN, Boston.

Diverticulosis and Diverticulitis of the Colon in Young Persons
CARL BEARSE, Boston.
Discussion to be opened by REGINALD FITZ, Boston.

Intestinal Tumors of Dysentery Origin (Lantern Demonstration)
DANIEL N SILVERMAN and ALAN N LESLIE, New Orleans
Discussion to be opened by RUSSELL S BOLES, Philadelphia.

Proctologic Interpretation and Treatment of Chronic Ulcerative Colitis (Lantern Demonstration)
MARTIN S KLECKNER, Allentown, Pa.
Discussion to be opened by A W MARTIN MARINO, Brooklyn

Segmental Colitis (Lantern Demonstration)
BURRILL B CROHN, JOHN H GARLOCK and HARRY YARNIS, New York
Discussion to be opened by J A BARGEN, Rochester, Minn

Clinical, Chemical and Bacteriologic Evaluation of Oral Penicillin in Chronic Ulcerative Colitis (Lantern Demonstration) MICHAEL H STREICHER, Chicago
Discussion to be opened by THEODORE L ALTHAUSEN, San Francisco

The Causes and Management of Anemia Associated with Chronic Ulcerative Colitis (Lantern Demonstration)
H MARVIN POLLARD and MALCOLM BLOCK, Ann Arbor, Mich
Discussion to be opened by EVERETT D KIEFER, Boston.

Pilonidal Disease Present Status of Surgical Treatment (Lantern Demonstration)
CURTICE ROSSER and JACK G KERR, Dallas, Texas
Discussion to be opened by WALTER A FANSLER, Minneapolis

### Friday, July 5—9 a m.

JOINT MEETING WITH SECTION ON PATHOLOGY AND PHYSIOLOGY

*SYMPOSIUM ON DISEASES OF THE LIVER*

Physiology of Liver Disease
Application of Modern Physiologic Concepts to Treatment of Disease of the Liver
JAMES F WEIR, Rochester, Minn.
Interpretation of Liver Function Tests
EDWIN E OSGOOD, Portland, Ore.

Diagnosis of and Therapeutic Agents Used in Liver Disease
Diagnostic Handling of Patients with Jaundice (Lantern Demonstration)
THEODORE L ALTHAUSEN and JOSEPH E. GIANSIRACUSA, San Francisco
Needle Biopsy of the Liver (Lantern Demonstration)
FREDERICK W HOFFBAUER, Minneapolis
A Review of the Medical Agents
DWIGHT L WILBUR, San Francisco

Epidemic Hepatitis
Etiology (Lantern Demonstration)
W PAUL HAVENS JR, New Haven, Conn.
Clinical and Laboratory Diagnosis
RICHARD B CAPPS, Chicago CAPTAIN VICTOR M SBOROV, Medical Corps, Army of the United States, and M HERBERT BARKER, Chicago.
Pathology (Lantern Demonstration)
TRACY B MALLORY, Boston.
Delayed Recovery from Acute Infectious Hepatitis Analysis of Its Causes and the Clinical Significance of Residuals
CAPTAIN EMANUEL M RAPPAPORT, Medical Corps, Army of the United States, and MAJOR GERALD KLATSKIN, Medical Corps, Army of the United States

Cirrhosis of the Liver
Its Relation to Hepatitis (Lantern Demonstration)
STOCKTON KIMBALL, WILLIAM A. C. CHAPPLE and SAMUEL SANES, Buffalo
Alcoholic Cirrhosis
RUSSELL S. BOLES, ROBERT S. CREW and WILLIAM DUNBAR, Philadelphia
New Methods of Therapy in Cirrhosis of the Liver
LESTER M. MORRISON, Los Angeles
Discussion to be opened by CECIL J. WATSON, Minneapolis

## SECTION ON RADIOLOGY

MEETS IN WAR MEMORIAL VETERANS BUILDING ROOM 223

### OFFICERS OF SECTION

Chairman—EDWIN C. ERNST, St. Louis
Vice Chairman—BARNARD P. WIDMANN, Philadelphia.
Secretary—U. V. PORTMANN, Cleveland
Executive Committee—RALPH S. BROMER, Bryn Mawr, Pa., ROBERT A. ARENS, Chicago, EDWIN C. ERNST, St. Louis

### Wednesday, July 3—9 a. m.

A Comparison of the Effectiveness for Tuberculosis Case Finding of Various Roentgenographic and Photofluorographic Methods
W. EDWARD CHAMBERLAIN, Philadelphia, CARL C. BIRKELO, Detroit, PAUL S. PHELPS, Hartford, Conn., PERCY E. SCHOOLS, Richmond, Va., JOSEPH YERUSHALMY, Washington, D. C., and DAVID ZACKS, Boston

Nontuberculous Pulmonary Calcification and Histoplasmin Sensitivity. HENRY B. ZWERLING, Berkeley, Calif.

Roentgenographic Diagnosis of Virus Pneumonia
MAURICE D. SACHS, San Francisco

The Diagnosis of Carcinoma of the Stomach by Chest Roentgenography (Lantern Demonstration)
B. R. KIRKLIN and EVA L. GILBERTSON, Rochester, Minn.

Epicardial Fat Shadows in Differential Diagnosis (Lantern Demonstration)
FRED J. HODGES and JOHN F. HOLT, Ann Arbor, Mich.

### Thursday, July 4—9 a. m.

**Election of Officers**

Chairman's Address: Mandibular Joint Syndrome.
EDWIN C. ERNST, St. Louis

Changes in Roentgenologic Diagnostic Criteria Resulting from Chemotherapy (Lantern Demonstration)
ARTHUR C. CHRISTIE and GEORGE M. WYATT, Washington, D. C.

Irradiation for Cancer of the Face, Mouth and Metastatic Cervical Lymph Nodes (Lantern Demonstration)
CHARLES L. MARTIN and CARLETON C. WRIGHT, Dallas, Texas

The Cancer Problem and Nuclear Physics (Lantern Demonstration)
PAUL C. HODGES and RUSSELL H. MORGAN, Chicago

### Friday, July 5—9 a. m.

JOINT MEETING WITH SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Radium Treatment of Hyperplastic Lymphoid Tissue in the Nasopharynx. EDWARD M. WALZL, Baltimore
Discussion to be opened by H. A. FLETCHER, San Francisco, and J. S. MIKELL, Tucson, Ariz.

Supervoltage Roentgen Therapy for Carcinoma of the Esophagus
FRANZ J. BUSCHKE and SIMEON T. CANTRIL, Seattle

Roentgen Therapy for Carcinoma of the Larynx (Lantern Demonstration). MAURICE LENZ, New York.

Surgical Management of Carcinoma of the Larynx.
SIMON JESBERG, Los Angeles
Discussion to be opened by ORVILLE N. MELAND, Los Angeles, and JULIUS A. WEBER, Seattle

Surgical Aspects of Bronchogenic Carcinoma (Lantern Demonstration). JOHN C. JONES, Los Angeles

## SECTION ON ANESTHESIOLOGY

MEETS IN WAR MEMORIAL VETERANS BUILDING ROOM 223

### OFFICERS OF SECTION

Chairman—ANSEL M. CAINE, New Orleans
Vice Chairman—HAROLD C. KELLEY, New York.
Secretary—JOHN S. LUNDY, Rochester, Minn.
Executive Committee—THOMAS J. COLLIER, Atlanta, Ga., PAUL M. WOOD, New York, ANSEL M. CAINE, New Orleans

### Wednesday, July 3—2 p. m.

**Business Meeting for Presenting Resolutions**

*SYMPOSIUM ON MILITARY ANESTHESIA IN WORLD WAR II*

Program of United States Navy. Introduced by VICE ADMIRAL ROSS T. MCINTIRE (MC), U.S.N.

Wartime Anesthesia in United States Navy (Lantern Demonstration). CAPTAIN DONALD E. HALE (MC), U.S.N.R.
Discussion to be opened by LIEUTENANT COMMANDER JOSEPH T. TROTTER, JR. (MC), U.S.N.R.

Remarks by ROGER I. LEE, President, American Medical Association.

Program of United States Army. Introduced by MAJOR GENERAL NORMAN T. KIRK, Medical Corps, United States Army

The Problems of the Consultant in Anesthesia for the European Theater of Operations (Lantern Demonstration)
COLONEL RALPH M. TOVELL, Medical Corps, Army of the United States
Discussion to be opened by F. E. DAVIS, Medical Corps, Army of the United States

The Problems of Anesthesiology Consultant for the Pacific Ocean Areas
LIEUTENANT COLONEL C. F. MCCUSKEY, Medical Corps, Army of the United States
Discussion to be opened by MAJOR THOMAS A. BRODERICK, Medical Corps, Army of the United States, and MAJOR FORREST E. LEFFINGWELL, Medical Corps, Army of the United States

Lessons Learned from Resuscitation of Wounded Soldiers That Are Applicable to Civilian Practice (Lantern Demonstration)
LIEUTENANT COLONEL HENRY K. BEECHER, Medical Corps, Army of the United States
Discussion to be opened by MAJOR MALCOLM H. HAWK, Medical Corps, Army of the United States

Anesthesia for Thoracic Surgery in the Zone of the Interior
LIEUTENANT COLONEL LLOYD H. MOUSEL, Medical Corps, Army of the United States
Discussion to be opened by MAJOR ERNEST W. WARNOCK, Medical Corps, Army of the United States, and MAJOR GORDON C. LANGSDORF, Medical Corps, Army of the United States

### Thursday, July 4—2 p. m.

**Election of Officers**

Chairman's Address: Group Practice of Anesthesiology
ANSEL M. CAINE, New Orleans

*SYMPOSIUM ON CURARE*

Effects of Curare on Tissue Respiration (Lantern Demonstration)
ROBERT M. FEATHERSTONE and E. G. GROSS, Iowa City

The Use of Curare in Infants and Children (Lantern Demonstration). SCOTT M. SMITH, Salt Lake City

The Physiologic Effects of Curare and Its Use as an Adjunct to Anesthesia (Lantern Demonstration)
PHYLLIS HARROUN, San Francisco
Discussion on papers of DRS. FEATHERSTONE and GROSS, DR. SMITH and DR. HARROUN to be opened by STUART C. CULLEN, Iowa City, and WILLIAM B. NEFF, San Francisco

The Subarachnoid Use of Vasoconstrictors in Spinal Anesthesia
R. J. WHITACRE and J. K. POTTER, East Cleveland, Ohio
Discussion to be opened by CURTISS B. HICKCOX, Philadelphia, and JOHN ADRIANI, New Orleans

Use of Amnesia in Obstetric Patients
PERRY P VOLPITTO, Augusta, Ga
Discussion to be opened by JOHN A MOFFITT, Los Angeles, and WALTER LAWRENCE, San Francisco

**Friday, July 5—9 a. m**

JOINT MEETING WITH SECTION ON ORTHOPEDIC SURGERY
IN WAR MEMORIAL OPERA HOUSE BUFFET

The Use of Local Anesthesia on Spinal Fusions in Children
J H KITE, Atlanta, Ga
Discussion to be opened by J JOSEPH MATTES, Seattle, and LIEUTENANT CHARLES C WYCOFF, Medical Corps, Army of the United States

Refrigeration Anesthesia (Lantern Demonstration)
LYMAN WEEKS CROSSMAN, New York
Discussion to be opened by JOHN A STILES San Francisco, and BRUCE M ANDERSON, Oakland, Calif

Various Anesthetics in Orthopedic Surgery
B B SANKEY, East Cleveland, Ohio
Discussion to be opened by JOSEPH A FREIBERG, Cincinnati, WALTER G STUCK, San Antonio, Texas, and FRANCIS M McKEEVER, Los Angeles

Neurologic Complications of Spinal Anesthesia
M J NICHOLSON and URBAN H EVERSOLE, Boston
Discussion to be opened by DAVID M BOSWORTH, New York, and J ARCHER O'REILLY, St Louis

## SECTION ON GENERAL PRACTICE OF MEDICINE

MEETS IN MASONIC TEMPLE AUDITORIUM

### OFFICERS OF SECTION

Chairman—WINGATE M JOHNSON, Winston-Salem, N C
Secretary—W B HARM, Detroit

**Wednesday, July 3—9 a m**

Chairman's Address Will General Practice Survive?
WINGATE M JOHNSON, Winston-Salem, N C

The Present Status of Gelatin Sponge as a Hemostatic Agent (Lantern and Motion Picture Demonstration)
HILGER PERRY JENKINS, Chicago

Laboratory Tests in General Practice (Lantern Demonstration)
DONALD H KAUMP, Detroit

Dislocations
J J CALLAHAN, Chicago

The Diagnosis and Treatment of Early Deficiency Diseases (Lantern Demonstration)
DAVID CAYER, Winston-Salem, N C

The Physiology of Spermatogenesis and Treatment of Male Infertility
EDWARD T TYLER, Los Angeles

**Thursday, July 4—9 a m**

**Election of Officers**

The Male Climacteric (Lantern Demonstration)
AUGUST A WERNER, St Louis

How Long Does the Patient with Angina Pectoris Due to Coronary Sclerosis Live (Lantern Demonstration)?
THOMAS J DRY, Rochester, Minn.

The "Acute Abdomen" as It Applies to the General Practitioner
G LAWRENCE CHAFFIN, Los Angeles

Psychoneurosis Its Significance in General Practice
RAYMOND W WAGGONER, Ann Arbor, Mich

Bile Physiology and Therapy (Lantern Demonstration)
E J TEETER, Indianapolis

**Friday, July 5—9 a m**

JOINT MEETING WITH SECTION ON OBSTETRICS AND GYNECOLOGY

The Nervous Pathways Involved in Pelvic Pain (Lantern Demonstration)
ROBERT D MUSSEY and ROBERT B WILSON, Rochester, Minn

Psychosomatic Aspects of Pelvic Pain
WILBUR R MILLER, Iowa City

Urinary Tract in Pelvic Pain from the Standpoint of the Gynecologist (Lantern Demonstration)
R GLENN CRAIG, San Francisco

Orthopedic Causes of Pelvic Pain (Lantern Demonstration)
HORACE C PITKIN, San Francisco

Deviations of Myometrial Physiology as Cause of Pelvic Pain (Lantern Demonstration)
RICHARD TORPIN R A. WOODBURY, G F CHILD, W G WATSON and LOUISE JARBOE, Augusta, Ga.

# THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be located in the Civic Auditorium, occupying Polk Hall and corridors on the first and second floors

Special exhibits include fractures and physical medicine, in both of which demonstrations will be carried on throughout the week by a large number of physicians

The United States Army and the United States Navy will present extensive displays depicting the achievements of medicine during World War II

The seventeen sections of the Scientific Assembly have arranged groups of exhibits dealing with the various specialties of medicine All exhibits, however, are presented for the physician in general practice rather than for the specialist

The most significant motion pictures produced in 1945 and 1946 will be shown in several motion picture theaters in the Veterans Building, which is in close proximity to the Civic Auditorium In addition to films produced by physicians there will be a large number of motion pictures shown under the auspices of both the Army and the Navy in theaters in the Veterans Building as well as a group of pictures dealing with physical therapy, occupational therapy and rehabilitation shown in conjunction with the special exhibit on physical medicine in the Civic Auditorium

Admission to the Scientific Exhibit will be limited to persons wearing the Fellowship badge or other official badge of the convention The public will not be admitted to the Scientific Exhibit.

## SPECIAL EXHIBITS

The Committee on Scientific Exhibit of the Board of Trustees is sponsoring two special exhibits—one on fractures and the other on physical medicine, including physical therapy, occupational therapy and rehabilitation Each exhibit is presented under the auspices of a special exhibit committee. (These exhibits are not open to awards)

### Special Exhibit on Fractures

The special exhibit on fractures is presented for the fifteenth time under the auspices of the following committee

Kellogg Speed, Chicago, chairman
Frank D Dickson, Kansas City, Mo
Walter Estell Lee, Philadelphia

Drs F C Bost and Carleton Mathewson are the San Francisco representatives for the exhibit.

The exhibit will be accompanied by continuous demonstrations throughout the week on the following subjects

Fractures of the Radius—Lower End.
Fractures of the Ankle
Compression Fracture of the Spine.
Fractures of the Carpal Navicular
Fractures of the Shaft of the Femur
Fractures into the Knee Joint

A pamphlet giving some of the essential features of the exhibit will be distributed

The following demonstrators will assist the committee in the presentation of the exhibit

Rodney F Atsatt Santa Barbara Calif
Donald T Babcock Los Angeles
C Glenn Barber, Cleveland
David M Bosworth New York
W J Carson Milwaukee
Arthur H Conley Chicago
Lloyd W Fisher Oakland Calif
Alfred E Gallant Los Angeles
George J Garceau Indianapolis, Ohio
Cerold G Gill Oakland Calif
John L Lindquist Chicago
Robert F Legge Great Lakes Ill
F M Lyle, Spokane Wash
Paul E McMaster, Los Angeles.
Gilbert J McKelvey Portland
James W Martin Omaha
H P Muller Berkeley Calif
Frank G Murphy Chicago
Lawrence Noall Portland Ore
Sheppard Remington Chicago
S L Robbins Cleveland
M John Rowe Jr Long Beach Calif
Fred Shapiro Chicago
M B Shaw Boise Ida
L. D Smith Milwaukee.
C Splithoff Oakland Calif
G Mosser Taylor Los Angeles
J R Tillotson Lima Ohio
Herbert W Virgin Jr, Miami Fla

### Special Exhibit on Physical Medicine

The special exhibit on physical medicine includes physical therapy, occupational therapy and rehabilitation It is presented for the first time under the auspices of the following committee

Frank H Krusen Rochester Minn chairman
Winfred Overholser, Washington D C
Howard A Rusk, New York

The following committees have been appointed to assist the general committee

*Advisory Committee*

Raymond B Allen Chicago
John S Coulter Chicago
Robert W Johnson Jr Baltimore
William D Stroud Philadelphia
Francis B Trudeau Saranac Lake N Y

*Local Committee*

Captain Herman L Rudolph M C U S Army San Francisco chairman
Frances Baker University of California Hospital San Francisco
William H Northway Stanford University Hospital San Francisco

The subjects covered in the exhibit, with the demonstrators in charge, are as follows

Recent Developments in Physical Medicine. Frank H Krusen, Barach Committee on Physical Medicine

This exhibit will outline recent developments in teaching and research as related to physical medicine. New training centers will be described

The Community Rehabilitation Center Howard A Rusk, Barach Committee on Physical Medicine.

This exhibit will present flow charts, organizational charts, floor plans and other data on an ideal community rehabilitation center

Education in Physical Medicine. Frances Hellebrandt, Medical College of Virginia, Richmond.

This exhibit will include data concerning agencies employing physical medicine, undergraduate and graduate education in physical medicine, education of technicians and objective criteria for evaluating departments of physical medicine

Technology and Medicine. Kurt Lion, Massachusetts Institute of Technology, Boston

This exhibit will deal with methods of teaching the fundamentals of technology and biophysics to physicians

Physical Medicine in Military Hospitals Capt Herman L Rudolph, M C, U S Army, San Francisco

This exhibit will present a pictorial review of physical medicine in military hospitals, and certain forms of physical therapy and occupational therapy will be demonstrated.

Reconditioning in Chest Diseases Lieut Col O Leonard Huddleston M C, U S Army, Washington, D C

This exhibit will present methods of physical reconditioning in diseases of the chest.

Heavy Resistance Exercise Therapy Capt. Thomas L. DeLorme Jr, M C U S Army Chicago

This exhibit will present a method of providing heavy resistance exercises in the management of certain orthopedic diseases

Physical Rehabilitation of Amputees Comdr Harry Etter, Bureau of Medicine and Surgery, U S Navy, Washington, D C

This exhibit will demonstrate methods of employing physical therapy and occupational therapy in the rehabilitation of amputees

Restoring Injured Workers Frances Baker and William H Northway, University of California Hospital and Stanford University Hospitals, San Francisco

This exhibit will demonstrate physical and occupational therapy as employed in restoring injured workers

Physical Rehabilitation of Paraplegics George Deaver, Major A B C Knudson and P R. Hawley, U S Veterans Administration, Washington, D C

This exhibit will demonstrate physical therapeutic methods employed in rehabilitation of patients with injuries of the spinal cord.

Vocational Placement of the Handicapped Worker Carl M Peterson, Council on Industrial Health, American Medical Association assisted by Clark D Bridges, Industrial Welfare Department, Zurich Insurance Company, Chicago

This exhibit will demonstrate exact technics for the satisfactory placement of handicapped persons in industry

The following demonstrators will assist in the presentation of the exhibit

Robert L Bennett Warm Springs Ga
Hollis H Buckelew Rogers, Ark.
Howard A Carter Chicago.
Harold Dinken New York
John S Hibben, Pasadena Calif
N Jerome Lee Nashville, Tenn
Lester H Lonergan Loma Linda, Calif
Comdr E L Lowman (MC) U S N Philadelphia.
W D Paul Iowa City
Capt G A Peters M C A U S White Sulphur Springs W Va
George D Wilson Chicago
Walter J Zeiter Cleveland

### Motion Pictures on Physical Medicine

The following motion pictures will be shown in a separate area adjoining the Special Exhibit on Physical Medicine

#### Technology and Medicine

*The Electron* (U S Office of Education) Sound Running time, 16 minutes

*The Diode* (U S Office of Education) Sound Running time, 17 minutes

*The Triode* Amplification. (U. S Office of Education) Sound Running time, 14 minutes

*Principles of Gas Filled Tubes* (U S Office of Education) Sound. Running time, 15 minutes

#### Clinical Applications of Physical Medicine

*Therapeutic Uses of Heat and Cold Part I Administering Hot Applications* (U S Office of Education) Sound Running time, 21 minutes

*Therapeutic Uses of Heat and Cold Part II, Administering Cold Applications* (U S Office of Education) Sound Running time, 22 minutes

*Hydrotherapy* (U S Office of Education) Sound Running time 22 minutes

*Recreational and Occupational Therapy* (U S Office of Education) Sound Running time 13 minutes

*Teaching Crutch Walking* (U S Office of Education) Sound. Running time, 13 minutes

#### Physical Rehabilitation of the Amputee

*Swinging into Step* (Army Service Forces) Sound Running time 44 minutes

*Life Begins Again* (British Information Services) Sound Running time, 21 minutes

*The Diary of a Sergeant* (Army Service Forces) Sound Running time, 20 minutes

#### Physical Rehabilitation of the Paraplegic

*Orthopedic Care of Spinal Cord Injuries* (Institute for the Crippled and Disabled) Sound Running time, 30 minutes

### Physical Rehabilitation in Chest Diseases

*Reconditioning in Chest Surgery* (Army Service Forces) Sound Running time 20 minutes

### Rehabilitation of Convalescent Patients

*Back to Normal* (British Information Services) Sound Running time, 16 minutes

*Reconditioning of the Convalescent* (Army Service Forces) Sound. Running time, 30 minutes

*Out of Bed—Into Action* (Army Service Forces) Sound Running time, 17 minutes

*Voyage to Recovery* (Bureau of Medicine and Surgery) Sound Running time, 30 minutes

*Back to Battle* (National Film Board of Canada) Sound Running time, 23 minutes

*Road to Recovery* (Army Air Forces) Sound. Running time, 40 minutes

### Physical Rehabilitation of the Crippled Child

*Hospital School* (British Information Services) Sound Running time, 11 minutes

### Physical Rehabilitation in Orthopedic Disabilities

*Accident Service* (British Information Services) Sound. Running time 40 minutes

## UNITED STATES ARMY

A group of exhibits is presented depicting the achievements of the Army Medical Department during World War II under the direction of the Surgeon General of the United States Army, Major Gen Norman T Kirk

*Evacuation of Casualties* A flow chart that shows graphically the Army's system of evacuating casualties

*The Preventive Medicine Service,* under the direction of Brig Gen James S Simmons, U S Army, presents the role that preventive medicine played in Medical Department activities in World War II, with special reference to the fields of tropical disease control, sanitation, army laboratories, epidemiology, nutrition, occupational health, civil public health, medical intelligence, typhus control and health education

*The Training Division,* under the direction of Col Floyd L Wergeland, M C, presents (1) a flow chart of the processing, training and assignment of enlisted men, (2) photographs of the step-by-step training given a civilian ordered to active duty, that he may become an adequately trained officer of the Medical Department, (3) the orientation measures for the medical soldier that keep him informed of current events in war and peace, and (4) the various Medical Department publications and visual aids prepared to facilitate the training of all officers and enlisted men

*The Army Nurse Corps,* under the direction of Colonel Florence A Blanchfield, A N C, presents by the use of diorama the story of how nurse power was conserved in army hospitals to compensate for the extreme nurse shortage that existed during World War II, and the effective and efficient use of enlisted technicians, both male and female, Red Cross Nurses' Aides and other nonprofessional people who work under the direct supervision of registered graduate nurses In addition, the conservation of nurse power is also shown by two lighted charts and a series of still pictures projected by a Selectoslide

*The Army Institute of Pathology* under the direction of Col James E. Ash, M C., presents (1) the history of the Institute in a graphic presentation of its past, present and future activities, (2) samples of material studies by the Department of Pathology, with a demonstration of important findings in the realms of general and special pathology, (3) specimens and material available for study by those who apply through the American Registry of Pathology, (4) color reproduction methods with a discussion of the benefits to be gained from each, a collection of illustrative material gathered in all theaters during World War II

*The Neuropsychiatry Consultants Division,* under the direction of Brig Gen William C Menninger, U S Army, presents Neuropsychiatry in World War II This exhibit shows (1) the incidence and magnitude of the neuropsychiatric problems, (2) the organization of the neuropsychiatric services in the Army, (3) the important aspects of preventive psychiatry, including causes of neuropsychiatric disorders, control of stress factors by education, motivation and manipulation of environment, (4) the advances in neuropsychiatric treatment through the use of the psychiatric team, forward area treatment, group psychotherapy, narcosynthesis, shock treatment and special neurologic therapeutic programs, and (5) the neuropsychiatric problems anticipated in the civilian practice of general medicine as a result of the war

*The Surgical Consultants Division,* under the direction of Col Frank L Cole, M C, presents the following group of displays

1 The program for the blind, showing how, through the social readjustment program, the loss of capacities inflicted by blindness are reestablished on a different basis by special technic and training, through proper orientation, instruction in braille and typing, recreation and sports vocational guidance, instruction in industrial skills and business, introduction to the professions and further education, and hobbies

2 The program for the deaf, showing the examination and treatment of the hard of hearing patient and the complete tests to determine hearing acuity, the process of evaluation and selection of hearing aids, auditory training in the use of hearing aids, lip reading instruction in individual and group classes, speech correction and conservation, and ancillary programs to complete the patient's adjustment to his handicap

3 Plastic surgery This illustrates the methods used in the reconstructive surgery of shell fragment wounds of the face, jaw and extremities and including studies of free skin grafts, local and remote flaps and bone, cartilage and fascial transplants There is also presented a recently described supraclavicular skin graft from the base of the neck and the composite graft of the skin and cartilage from the ear

4 Hand surgery This shows the importance of combined plastic and orthopedic surgery in preparing for surgery on tendons, nerves, joints and bones of the hand All stages of orthopedic surgery on these parts are presented

5 Thoracic surgery This shows the pertinent pathologic changes, diagnostic factors, indications for surgery and the technical procedures associated with pulmonary resections for tuberculosis, mediastinal tumors and surgery of the esophagus

6 Principles of the surgical management of the wounded. Here are shown the essential principles of surgical management of the wounded in the overseas theaters Particular emphasis is placed on the two most important phases, i e initial and reparative surgery

Initial surgery is concerned with accomplishing a state of complete resuscitation that permits surgery to be performed and with those surgical procedures which are designed to prevent or eradicate wound infection

Reparative surgery is designed to prevent or cut short wound infection either before it is established or at the time of its inception It is concerned with shortening the period of wound healing, and it seeks as its objective the early restoration of function and the return of the soldier to duty in a minimum number of days

7 Vascular surgery This illustrates the manifestations, diagnosis, pathology, physiology and treatment of vascular injuries, aneurysms and cold injuries (frostbite and trenchfoot)

8 Neurosurgery Essential factors associated with cranioplasty, peripheral nerve pathology, post-traumatic epilepsy and paraplegia are shown, and the accepted management of these conditions is described There is also a demonstration of tantalum plates and the methods used in their preparation.

9 Amputations and prostheses Various types of emergency and definitive amputations are demonstrated by drawings and photographs Developments in prosthetics concerning the cosmetic hand and the metal and plastic limb are presented.

10 Orthopedic advances This display includes kodachromes, translite x-ray reproductions and moulages to show the repair of skin and bone defects Utilization of acrylic implants is demonstrated.

*The Dental Division,* under the direction of Brig Gen Thomas L Smith, Medical Department (D C), presents (1) an exhibit of the materials, their fabrication and the procedures employed in the preparation, fitting and insertion of tantalum plates as used in the repair of cranial injuries, (2) models of the steps employed in the fabrication of artificial acrylic eyes and a pictorial series of completed cases, (3) the various steps used in the manufacture of the individual ear pieces required for the conduction of sound from hearing aid receiver to the patient's ear drum, (4) different types of splints used during World War II to reduce and retain in their proper position fractures of the mandible and maxilla, as well as the appliances used in the treatment of fractures of facial bones, and (5) the methods used in the production of artificial ears, noses and other lost tissues of the face and head

*The Medical Consultants Division* under the direction of Col Arden Freer, M C, presents

1 Malaria data on relapses and a study of the methods of treatment and the results obtained with various drugs

2 Leishmaniasis (kala-azar) diagnosis and treatment

3 Schistosomiasis early symptoms, clinical course and results of treatment.

4 Infectious hepatitis diagnosis course and treatment.

5 Skin diseases the importance of atypical lichen planus and diphtheria

6 Radiopaque angiocardiography

7 Pulmonary tuberculosis as seen in the United States Army

8 Medical statistics showing a comparison of main causes of physical rejection of selectees at induction stations and separation for physical disability of enlisted men from the military service, and a comparison of World War II disease mortality rates with those of previous wars, i e. Mexican, Civil, Spanish-American, Philippine Insurrection and World War I

*The Army Air Forces School of Aviation Medicine* Randolph Field, Texas under the direction of Brig Gen Eugene G Reinartz, U S Army, presents

1 Physiologic studies of respiration, asphyxia and resuscitation Wall charts describe a quantitative theory for chemical control of respiration and the rationale for carbon dioxide mixtures in resuscitation.

2 The effects of deceleration in animals Such effects are displayed by wall charts, kodachrome transparencies, photos and moving pictures in color and with sound

*The Air Evacuation Headquarters Air Transport Command,* Bolling Field Washington, D C, under the direction of Col M S White, M C, presents A T C long distance air evacuation of equipment, photographs, a panorama moving picture of ditching, forced landing in water and the air evacuation of wounded Special charts show evacuation of patients by campaign and cause, the chain of evacuation, the criteria for air evacuation immunizations required for personnel traveling by air, the priority by type of injury for evacuation of patients, classification of evacuation of patients by components air evacuation versus water evacuation by percentages aerial ports and the activities and duties associated with all the medical aspects of air evacuation

*The Aero Medical Research Laboratory,* Wright Field, Dayton, Ohio under the direction of Col Loyd E Griffis, M C presents equipment used in flight. This includes equipment used in flight, photographs transparencies, clothing, color vision tests and kodachrome photographs

*The Medical Department of the Army Ground Forces,* under the direction of Col F A Blesse M C. the Ground Surgeon, presents newly developed Medical Department field equipment. Equipment is shown which has been developed or is under development for use by field medical units of Army Ground Forces

*The Veterinary Service,* under the direction of Col James A McCallam V C, presents

1 Food inspection service of the United States Army Pictures of food inspection in the field and laboratory, pictures and slides of animal diseases transmissible through food to man, demonstrations of some of the common methods of chemical and bacteriologic analysis of food, charts and diagrams depicting the volume of food inspected at home and abroad, types of food inspection and causes of rejection are shown

2 Research activities of the Veterinary Corps Record of findings pertinent to equine influenza, periodic ophthalmia, canine leptospirosis and breeding diseases of horses are displayed

3 Animal service A showing of activities in connection with the care and treatment of animals, the research and development of protective agents and equipment against chemical warfare agents, and the production of some of the commonly used vaccines

4 This presentation will also include a display of equipment such as the improved horse and dog gas masks pictures, slides and demonstrations

*The Personnel Service* under the direction of Col Francis P Kintz, M C., presents officers and enlisted men of the Medical Department, United States Army This exhibit includes (1) a series of charts showing graphically the utilization, procurement, composition and rate of separation of Medical Department officers and (2) charts and illustrations of the contributions made by enlisted men of the Medical Department

*The Hospital and Domestic Operations Division,* under the direction of Lieut Col James T McGibony, M C., presents (1) the zone of interior World War II hospitalization scheme including animated maps depicting the location of army hospitals by type (i e station regional and general or convalescent), showing the regulating of movements of patients from various sources to the appropriate type of hospitals and identifying a few specialized treatment centers, (2) a model of a mobilization type general hospital (Kennedy General Hospital, Memphis, Tenn), (3) a model of a hospital car, showing the interior of the car, (4) a brochure depicting the establishment and operation of a convalescent hospital (Welch Convalescent Hospital, Daytona Beach Fla) (5) a chart illustrating the overall patient load in zone of interior hospitals from 1939 to 1946, with the total number of beds available, (6) photographs of various hospitals, illustrating different structural types (7) publications that prescribe hospital administration procedures, (8) a chart illustrating how prisoner of war hospitalization was accomplished in the zone of the interior during the war, and (9) an invitation to each visitor to inspect a hospital ship and a hospital train.

*The Physical Medicine Consultants Division* under the direction of Col Edward M DeYoung, M C, presents physical medicine in World War II This includes (1) pictures and charts to demonstrate physical therapy activities in various types of army hospitals located in the communications zone and the zone of the interior (2) pictures to demonstrate physical reconditioning by use of physical activities scientifically designed and medically prescribed emphasizing general conditioning exercises remedial activities and sports adapted to the needs of all types of military patients, (3) the methods of treatment and technic used in various phases of occupational therapy in the zone of interior hospitals, as illustrated by pictures, projects and a model of an orthopedic occupational therapy shop and (4) pictures and charts to demonstrate educational reconditioning and counseling activities

(Motion Pictures will be shown in the Veterans Building in the Civic Center See Motion Picture Program)

## UNITED STATES NAVY

A group of exhibits is presented under the auspices of the Bureau of Medicine and Surgery United States Navy showing many of the advances in medicine as encountered in the Navy

COMDR H R BIERMAN (MC), U S N R, Naval Medical Research Institute, Bethesda, Md.

*Studies on Linear Acceleration* Exhibit including some of the devices developed in the U S Navy for the investigation of the effects of accelerating forces (impacts) on human volunteers The study of these forces has led to the development of protective devices which measurably reduce the physical

damage incurred in aircraft crashes and in parachuting from planes traveling at speeds over 500 miles per hour or at altitudes above 35,000 feet

G J THOMPSON, Rochester, Minn., and U S Naval Hospital, Bethesda, Md

*The Management of the Urinary Bladder in Cases of Cord Injury* Exhibit presents a graphic presentation of a method by which a patient with cord injury can maintain a satisfactory control of the urinary bladder

COMDR E E BARKSDALE (MC), U S N, U S Naval Hospital, Bethesda, Md

*The Atabrine Dermatoses* Exhibit of colored pictures showing the chief characteristics of the dermatitis occasionally accompanying the long continued use of atabrine

COMDR. E E BARKSDALE (MC), U S N, U S Naval Hospital, Bethesda, Md

*Penicillin in Syphilis* Exhibit presenting the results of the treatment of primary, secondary and tertiary syphilis with penicillin

COMDR ROBERT LANGLEY (MC) U S N, U S Naval Hospital, Long Beach, Calif

*Bundle Branch Block* Exhibit of electrocardiographic tracings and statistics showing the means of diagnosis and the frequency of this condition in naval personnel

COMDR. W L JANUS (MC), U S N, U S Naval Hospital, Long Beach, Calif

*Skin Cancer in Naval Personnel in the Pacific* Exhibit showing, by means of color transparencies and statistics, the types and frequency of skin cancer particularly as it occurred in naval personnel exposed to the tropical sun in the Pacific

COMDR. JULIUS M AMBERSON (MC), U S N R, Naval Epidemiology Unit No 50

*Middle Eastern Schistosomiasis* Exhibit including the weeds, the snails, pictures of the miricidia and cercariae, and pictures of clinical cases of infection with Schistosoma hematobium and with Schistosoma mansoni

CAPTAIN SHIELDS WARREN (MC), U S N, National Naval Research Institute, Bethesda, Md

*The Pathologic Effects of the Atomic Bomb* Exhibit of pictures illustrating the five chief effects of the atomic bomb on its victims

COMDR. JULIUS M AMBERSON (MC), U S N R, Naval Epidemiology Unit No 50

*The Modern Management of Cholera* Exhibit of statistics and pictures demonstrating the spectacular results obtained on moribund patients with cholera by the use of blood plasma and sulfadiazine.

COMDR S A. BRITTEN (MC), U S N R, Preventive Medicine Division, Bureau of Medicine and Surgery and U S Public Health Service, Washington, D C

*The Results of Routine Chest Photofluorographic Examinations—Naval Personnel and Civilian Hospital Admissions* Exhibit of pictures and statistics showing the results obtained in the photofluorographic examination of the chests of approximately 3,000,000 naval personnel and several thousand civilian hospital admissions

(Motion Pictures will be shown in the Veterans Building in the Civic Center See Motion Picture Program)

## SECTION EXHIBITS

Each of the seventeen sections of the Scientific Assembly has arranged a group of exhibits dealing with the various branches of medicine

### Section on Internal Medicine

The representative to the Scientific Exhibit from the Section on Internal Medicine is Thomas C Garrett, Philadelphia.

JOSEPH HARKAVY, Mount Sinai Hospital, New York

*Cardiovascular Allergy* Exhibit demonstrating various manifestations in the heart and blood vessels due to allergy Part I deals with clinical syndromes resulting from hypersensitiveness to tobacco, foods, drugs, serums and inhalants (*a*) Peripheral vascular disease thromboangiitis obliterans, migrating phlebitis, intermittent claudication. (*b*) Heart arrhythmias, i e. premature contraction, paroxysmal tachycardia and auricular fibrillation, angina pectoris and coronary artery disease Part 2 deals with bacterial allergy evidenced by hyperergic vascular disease such as acute arteritis, necrotizing arteritis, endarteritis obliterans and periarteritis nodosa, giving rise to bronchial asthma, transitory pulmonary infiltrations with eosinophilia, cardiac and renal involvement, polyserositis, urticaria, purpura and angioneurotic edema.

IRVING TREIGER, University of Illinois School of Medicine and Presbyterian Hospital, Chicago

*Correlative Study of Cardiac Diseases* Exhibit of translite films for correlative study of roentgenograms, electrocardiograms and pathologic specimens of most common cardiac diseases to emphasize the clinical and diagnostic values of various methods of examination

BERTHOLD R COMEAU, A M LYLE and HENRY B KIRKLAND, Prudential Insurance Company, Newark, N J

*Diagnostic Advantages of Multiple Precordial Leads* Exhibit showing contribution of multiple precordial leads to electrocardiographic diagnosis The single chest lead being normal, other precordial leads demonstrate anteroseptal infarct, lateral infarct, T wave abnormalities, ST elevation and right bundle conduction defect Examples of anterior wall infarct complicating right bundle branch block and of right ventricular hypertrophy are shown Estimation of infarct size is demonstrated. Borderline apex leads are clarified by other precordials Characteristics of normal multiple precordial leads are outlined Some notes on technic are included

WALTER S PRIEST, CHAS J MCGEE, JACQUES M SMITH, Wesley Memorial Hospital and Northwestern University Medical School, Chicago, and EUGENE HILDEBRAND, Great Falls, Mont.

*Antibiotic Therapy of Subacute Bacterial Endocarditis A Clinical and Histologic Résumé* Exhibit showing failures with inadequate penicillin dosage, the unreliability of normal temperature, improved sense of well being and a negative blood culture as criteria for adequacy of therapy color transparencies of gross specimens and of microscopic slides showing various stages of healing and bacteria filled fibrin from patients inadequately treated, correlation of the clinical charts and negative blood cultures with the persistence of the active lesion, color transparencies showing invasion of the valves and subendocardial tissue by bacteria via capillaries as well as direct invasion of injured endothelial cells along the very margin of the valve, color transparencies showing myocardial lesions, charts of serum levels obtained with various doses of penicillin by different methods of administration, illustrating particularly the serum levels found necessary for cure in relation to the in vitro penicillin sensitivity of the organism, serial electrocardiograms made during treatment and correlation of changes, if any, with the myocardial lesions found at autopsy pathologic anatomy and histology of valves in relation to the value of the sedimentation rate and leukocyte count as criteria for adequacy of treatment, pathologic, anatomic and histologic evidence of the apparent unimportance of anticoagulants in the treatment of the disease. Chart of 3 patients treated with streptomycin, with anatomic and histologic specimens, will also be shown

GEORGE E. BURCH TRAVIS WINSOR and J LEROY KIMBALL, Tulane Medical School, New Orleans

*Clinical Applications of Venous Pressure Measurements* Exhibit of diagrams, illustrations, graphs and demonstrations of the methods, including a presentation of the underlying principles of pressures in the veins, venous hypertension and hypotension as related to normal venous blood flow and disturbances with flow in disease states generally and locally Normal venous

pressure values and studies on patients with disease states with values before and after therapy are indicated The diagnostic value of venous pressure studies is emphasized

BERT E STOFER, GORDON B MYERS and TOMIHARU HIRATZKA, Wayne University College of Medicine and City of Detroit Receiving Hospital, Detroit

*Correlation of Electrocardiographic Findings with Cardiac Pathologic Conditions* Exhibit dealing with a study based on a series of 290 cases all of which showed standard and multiple precordial leads (Wilson type) and most of which showed Goldberger extremity leads All hearts were injected with radiopaque material, appropriately sectioned, and roentgenograms made The hearts were subjected to careful gross dissection checked by multiple microscopic blocks to delineate areas of infarction and other abnormalities The exhibit consists of the electrocardiograms and the roentgenograms of injected hearts from cases which illustrate the normal findings and those in left ventricular hypertrophy, right ventricular hypertrophy, pericarditis and anterior, lateral posterior and septal infarction

CARROLL L BIRCH and LOUIS R LIMARZI, University of Illinois College of Medicine, Chicago

*Diseases of the Blood* Exhibit showing thirty kodachrome photomicrographs and enlargements of blood and bone marrow smears normal blood, pernicious anemia, iron deficiency anemia, leukemia and several other blood dyscrasias

PAUL M AGGELER and S P LUCIA, University of California Medical School, San Francisco

*Bleeding Tendency in Hemorrhagic and Systemic Diseases* Exhibit based on an original study of the bleeding tendency in over 500 patients suffering from various diseases, showing (1) the physiology of hemostasis, (2) the clinical pathology of abnormal bleeding and (3) the clinical manifestations of the hemorrhagic states Under the latter heading are considered the hemostatic defect, hemorrhagic manifestations, hemostatic tests and the treatment of hemophilia primary and secondary thrombocytopenic purpura, obstructive jaundice, diseases of the liver hypertension and renal disease, gastrointestinal diseases and other conditions in which abnormal bleeding is present.

K J HENRICHSEN and RICHARD DAVISON, Municipal Tuberculosis Sanitarium, Chicago

*Differential Diagnosis in Tuberculosis and Nontuberculous Conditions Encountered in the Sanitarium* Exhibit consisting of roentgenograms and pathologic specimens demonstrating diseases of the lungs, tuberculosis and nontuberculous conditions and their treatment

D B ARMSTRONG and G M WHEATLEY Metropolitan Life Insurance Company, New York

*Studies in Heart Disease* Exhibit of charts dealing with the increase in the death rate from heart disease and its explanation, the prevalence of heart disease, variations in etiology of heart disease by sex, age and region, socioeconomic and occupational differences in mortality from heart disease, and the longevity of persons with heart disease of various types

SHEPARD SHAPIRO New York University College of Medicine, New York

*Prothrombin Estimation Whole and Diluted (12.5 per cent) Plasma Prothrombin Clotting Time* Exhibit showing (1) demonstration of the technic, (2) charts illustrating advantages of procedure (*a*) increased sensitivity, (*b*) hyperprothrombinemia (*c*) excess anticoagulant effect, (3) clinical applications of the method (*a*) drug-induced hypoprothrombinemia, (*b*) demonstration of reactive hyperprothrombinemia (*c*) liver function test, (*d*) demonstration of vitamin K activity

J Q GRIFFITH JR. and M A LINDAUER, Hospital of the University of Pennsylvania Philadelphia R L SHANNO Forty Fort Pa and J F COUCH, U S Department of Agriculture Eastern Regional Laboratory

*Rutin Treatment for Arterial Hypertension Characterized by Increased Capillary Fragility* Exhibit of charts and photographs including (1) demonstration of the method for measuring capillary fragility in man, based on the method of Gothlin, (2) demonstration of rutin powder, rutin crystals under the microscope and description of the chemical properties of rutin (3) the incidence of increased capillary fragility in hypertension, effect of therapy with thiocyanate and relation to the hemorrhagic complications of apoplexy and retinal hemorrhage, (4) the result of treating such persons with rutin, including effect on blood pressure and symptoms and comparison of results with hesperidin, and (5) a method suitable for bioassay of rutin

ALBERT H ROWE and ALBERT P ROWE JR., P A Surg U S P H S (R), Oakland, Calif

*Bronchial Asthma—Its Diagnosis and Treatment* Exhibit presenting (1) the importance of a proper history, (2) the value of skin testing in inhalant allergy, (3) the fallibility of the skin test, especially in food allergy, (4) the value and use of the exhibitors' elimination tests for the study and control of food allergy, (5) the relative frequency of food, inhalant and infectant allergies as causes of bronchial asthma, (6) the infrequency of intrinsic and psychogenic asthma, (7) the seasonal and geographic influences on asthma due to food allergy, (8) the complications of bronchial asthma, (9) the control of mild or moderate symptoms, (10) the treatment of intractable asthma.

WILLIAM B KOUNTZ, LILLI HOFSTATTER and PHILIP ACKERMANN, St Louis Chronic Disease Hospital and Infirmary, St. Louis

*Degenerative Changes in Man Associated with Age* Exhibit of charts and data accumulated over period of eight years study of elderly people in the St. Louis Chronic Disease Hospital and Infirmary The studies were chiefly on such factors as the influence of age and degeneration on the known physiologic functions of the body Such studies as glucose tolerance exercise tolerance, vital capacity and renal function were made and records compiled Comparative health evaluation and age studies in different age groups are considered. Partial reestablishment of metabolic factors in older people will be demonstrated.

HOWARD F ROOT, ELLIOTT P JOSLIN PRISCILLA WHITE and C CABELL BAILEY, George F Baker Clinic and New England Deaconess Hospital, Boston

*Diabetes in the Clinic and Laboratory* Exhibit of charts with new statistics on the incidence and results of treatment, including a survey of children with twenty or more years duration, new data on alloxan diabetes, treatment of pregnancy in diabetes and coma, with differential diagnosis

### Section on Surgery, General and Abdominal

The representative to the Scientific Exhibit from the Section on Surgery, General and Abdominal, is Warren H Cole, Chicago

LEO LOEWE, EDWARD HIRSCH, DAVID M GRAYZEL, BERNARD S EPSTEIN and HAROLD B EIBER, Jewish Hospital of Brooklyn, Brooklyn

*Heparin in the Treatment of Thromboembolic Disease* Exhibit demonstrates the functional pathology of thombosis and the problems of thromboembolic disease. Experimental evidence is graphically presented elucidating the rationale of subcutaneous heparin in the Pitkin menstruum for the conservative management of thomboembolism The material exhibited portrays technics of administration, observations of its clinical deportment and results of treatment in various thrombotic conditions such as venous thromboembolism subacute bacterial endocarditis, peripheral vascular disease arterial embolization, retinal vein occlusion and experimental human frostbite.

WILLIAM T GREEN and DAVID S GRICE, Department of Orthopedic Surgery, the Children's Hospital, Boston

*Skeletal Manifestations in Neurofibromatosis* Exhibit presenting cases of neurofibromatosis with skeletal involvement correlation of clinical appearance, roentgenographic lesions and pathologic sections

ROBERT E. GROSS, Department of Surgery, the Children's Hospital, Boston

*Coarctation of the Aorta* Exhibit presenting technic of operation and postoperative results in coarctation of the aorta

ORVAR SWENSON, Department of Surgery, the Children's Hospital, Boston

*A Nonsuture Method of Vascular Anastomosis, Using an Absorbable Tube* Exhibit presenting experimental work on a nonsuture method of vascular anastomosis, using an absorbable tube

FRANC D. INGRAHAM and DONALD D. MATSON, Neurosurgical Service, the Children's Hospital, Boston

*Subdural Hematoma in Infancy* Subdural hematomas in infants under 2 years of age are much more common than generally recognized and require a careful program of both conservative and surgical treatment. The experience of 150 cases is used to demonstrate (1) the important symptoms and signs witnessed, (2) the indications and exact technics for diagnostic and therapeutic subdural punctures, (3) the plan of operative treatment used, (4) the pathologic types seen and (5) the follow-up results which have been obtained.

GORDON B. NEW and JOHN B. ERICH, Mayo Clinic, Rochester, Minn.

*Partial and Total Loss of the Nose. Plastic Reconstruction by Pedicle Skin Grafts* Exhibit showing the technic employed for the plastic repair of partial and total loss of the nose by means of pedicle skin grafts, illustrated by means of moulages and photographs to show the end results.

HILGER PERRY JENKINS, RUDOLPH JANDA, JAMES CLARKE, EDWARD H. SENZ and HOWARD W. OWEN, University of Chicago Department of Surgery, Chicago

*Gelatin Sponge—Absorbability and Hemostatic Action* Exhibit showing studies on the absorbability and hemostatic action of gelatin sponge, demonstrated by a series of photographs and photomicrographs. Gelatin sponge undergoes absorption within a period of about five weeks, but the rate of absorption may be considerably accelerated by leukocytes. Bleeding from wounds of the liver, kidneys and spleen can be controlled by gelatin sponge in experimental animals without the use of sutures or the addition of thrombin. In addition, good hemostasis has been obtained in experimental liver resections and in injuries to large veins. Data are also presented on the use of gelatin sponge in clinical surgery, with studies of specimens removed at subsequent operation or autopsy.

VIRGINIA KNEELAND FRANTZ, Columbia University College of Physicians and Surgeons, New York.

*Oxidized Cellulose in Surgery* Exhibit showing comparative studies in animals of various absorbable hemostatic agents, with particular emphasis on oxidized cellulose, experimental studies of the use of this material in reconstructive surgery, particularly joint surgery, charts and illustrations of the use of the material in clinical surgery. The gross animal specimens and the clinical illustrations are shown in kodachrome transparencies.

EDGAR J. POTH, University of Texas Medical Branch, Galveston, F. L. KNOTTS, Washington University Medical School, St. Louis, and C. A. ROSS, University of Illinois School of Medicine, Chicago

*Succinylsulfathiazole and Phthalylsulfathiazole* Exhibit presenting experimental data and evidence demonstrating the bacteriostatic action of succinylsulfathiazole and phthalylsulfathiazole in the gastrointestinal tract. The application of the drugs in the treatment of the dysenteries, ulcerative colitis, regional enteritis, chronic coliform infections of the urinary tract, and in the preoperative preparation and postoperative care of patients subjected to operations on the bowel is demonstrated. Specimens of segments of bowel which have had various forms of ligations of the blood supply performed, showing the control specimens in which almost complete dissolution of the wall of the viscus occurred and the specimens taken at various intervals showing the protection afforded following the administration of succinylsulfathiazole and phthalylsulfathiazole. Plates showing the characteristic growth of coliform organisms on desoxycholate plates and a simplified streak technic will be demonstrated.

HARRY E. BACON and LOWRAIN E. MCCREA, Temple University Hospital, Philadelphia

*Surgical Treatment of Rectal Cancer and Management of Associated Vesical Dysfunction* Exhibit showing series of models disclosing various premalignant and malignant lesions. Preoperative and postoperative management is presented and technic of surgical removal eliminating the abdominal colostomy and means of preserving the sphincter musculature shown. In spite of the high rate of resectability (88 per cent) and operability (91.1 per cent) the mortality is low (6.2 per cent), the period of hospitalization is short (13.7 days), return to work is early, the sphincter function is excellent, the survival rate as to three year cure is 58.6 per cent and five year cure is 50 per cent. Transparencies show normal distribution of nerve supply to bladder and the surgical disturbance of the hypogastric plexus during proctosigmoidectomy. Drawings depict cystometric readings prior to and immediately following the surgical procedure and following return to normal. Models show various bladder lesions in association with rectal cancer as viewed through the cystoscope.

RICHARD B. CATTELL, the Lahey Clinic, Department of Surgery, Boston

*Surgery of the Pancreas* Exhibit showing the clinical analysis of 100 patients with obstructive jaundice due to malignancy, operative methods, including pancreatoduodenal resection, colored photographs of specimens and results of treatment.

TIBOR DE CHOLNOKY, New York Postgraduate Hospital and Medical School, Columbia University, New York

*Cancer of the Head, Neck and Breast* Exhibit presenting photographs and transparencies of patients with tumor of the head, neck and breast selected to illustrate the surgical treatment of early, neglected and recurrent lesions. Emphasis is laid on radical excision regardless of defects and early reconstruction. Head and neck cancer responds favorably to radical surgery, however, in late and advanced cases the possibility of palliation and arrest still exists, which is demonstrated. The primary purpose is therefore the eradication of the disease, because surgical repair is not usually a limiting factor. Radical operation of early cancer of the breast and surgical handling of the recurrent and neglected advanced cancer of the breast are included.

## Section on Obstetrics and Gynecology

The representative to the Scientific Exhibit from the Section on Obstetrics and Gynecology is Frederick H. Falls, Chicago.

FREDERICK H. FALLS, University of Illinois College of Medicine, and CHARLOTTE S. HOLT, Illinois State Department of Public Health, Chicago

*Toxemias of Pregnancy* Exhibit presenting the main features of the pathology of eclamptogenic toxemia, nephritic toxemia, hyperemesis gravidarum and acute yellow atrophy. The correlation between the pathology and the symptomatology is pointed out. Different types of eclamptogenic toxemia are depicted, and the treatment is outlined. The differences in management of eclamptogenic and nephritic toxemias are indicated. The three groups of hyperemesis gravidarum are described and their treatment is outlined. The material consists of drawings and gross and microscopic materials, sculptured models, graphs and statistical charts, illustrating the etiology and pathology and giving the symptoms, diagnosis and treatment of these different types of toxemias.

CHARLES E. GALLOWAY, Northwestern University Medical School, Chicago, and Evanston Hospital, Evanston, Ill.

*Early Diagnosis of Cervical Carcinoma* Exhibit demonstrating (1) various methods of cervical examination, (2) detailed methods of cervical biopsy, both office and hospital, (3) kodachrome illustrations of cervical biopsies, carcinomas, leukoplakias, erosions, tuberculosis and other cervical lesions resembling carcinoma in which biopsy is necessary. The

general practitioner needs to be helped as to which cervix needs a biopsy and which does not and where the biopsy should be obtained and how it should be obtained He also needs to be shown that hospitalization is not necessary, demonstration of office technic is given

SHELDON A PAYNE, EDWARD T TYLER, Shelton Clinic, Los Angeles, and ALBERT TYLER, California Institute of Technology, Pasadena

*Electron Microscopic Studies of Normal and Abnormal Sperm* Exhibit showing the results of study of material obtained from patients under investigation for infertility and the response to treatment with some of the newer gonadotropic substances

JOE V MEIGS, HOWARD ULFELDER, HELEN M GILBERT RUTH M GRAHAM, MAURICE FREMONT-SMITH and SOMERS H STURGIS, Massachusetts General Hospital, Boston

*The Vaginal Smear in Diagnosis of Cancer of the Uterus Its Practical Application* Exhibit includes method of taking, staining and examining the vaginal smears, and photomicrographs of normal and malignant cells Abstracts of 25 cases of uterine cancer either unsuspected or primarily diagnosed by vaginal smear and the diagnostic cells found in these cases are demonstrated

ROBERT A WOODBURY, RICHARD TORPIN RAYMOND P AHLQUIST GEORGE P CHILD, WALTER G WATSON and LOUISE JARBOE, University of Georgia School of Medicine Augusta, Ga

*Electrouterograms and Pressures in the Human Uterus and Cervix as Related to Dysmenorrhea Hypermenorrhea and Pregnancy* Exhibit showing results when uterine and cervical pressures and electrouterograms were recorded from patients at various times of the menstrual cycle and of pregnancy In dysmenorrhea and in dystocia dystrophy records show that multiple origin of impulses frequently occurs and contractions are superimposed on one another They may remain as organized contractions and develop pressures as high as 300 mm. of mercury or become disorganized and develop various forms of uterine tetany In labor the highest recorded pressure developed by the uterus is 100 mm. of mercury Typical dysmenorrhea symptoms were produced in human beings and various forms of treatment were evaluated.

W L WILLIAMSON and L W KIBLER Postgraduate Committee in Gynecology, Tennessee State Medical Association Memphis

*Postgraduate Study in Gynecology* Exhibit of a map of the state of Tennessee showing instruction centers by circuit districts The centers are shown by stars Charts show the personnel of the State Medical Association Postgraduate Committee and the number of physicians participating in all courses for a period of nine years Outlines of all past courses, from the beginning, are available on the shelf Manuals containing the lectures of all courses offered to date are on display

I C. RUBIN and BERNARD BERGLAS Mount Sinai Hospital, New York

*Roentgen Ray Myography in the Female Pelvis* Exhibit showing clinical roentgen ray visualization of the levator ani muscle in relation to vagina and uterus under normal conditions and in uterine prolapse (*a*) transparencies showing levator ani injected with contrast medium in relation to uterus and vagina in living subjects (*b*) diagrams and drawings of cadaver specimens showing difference in dynamic functional relations

## Section on Ophthalmology

The section exhibit committee of the Section on Ophthalmology consists of Georgiana D Theobald Oak Park, Ill, chairman Derrick Vail, Cincinnati, and A B Reese, New York.

HAROLD F FALLS, University Hospital, Ann Arbor, Mich

*Hereditary Ocular Anomalies* Exhibit consisting of three sections each presenting a type of hereditary ocular anomalies, including the pedigree of the family with the condition accompanied by several illustrations of the actual funduscopic and iris pictures The three conditions to be shown are (1) retinitis pigmentosa, (2) anterior segment developmental anomalies and (3) choroideremia

A D RUEDEMANN, Cleveland Clinic Foundation, Cleveland

*A Permanent Plastic Eye* Exhibit showing the technic of operation, orbital studies and end results

DONALD J LYLE, Cincinnati

*Neuro Ophthalmology* Exhibit consisting of (1) visual field charts demonstrating various locations and lesions in the visual pathways and centers, with illustrative case reports, (2) semidiagrammatic drawings showing syndromes associated with eye movements, with illustrative case reports, and (3) drawings of anatomic sections and preparations

K. W ASCHER, University of Cincinnati College of Medicine, Cincinnati

*Aqueous Veins* Exhibit showing that aqueous veins are blood-vessel-like structures containing a clear colorless fluid or diluted blood and intercalated, via Schlemm's canal, between intraocular fluid on one side and conjunctival and subconjunctival veins on the other side The qualities of the aqueous veins, their physiologic and clinical significance and the influence of experimental physiologic and pharmacologic factors are shown Backflow phenomena into the canal of Schlemm and responsiveness to miotics and to surgery are described. In the aqueous veins, intraocular fluid, clear or mixed with blood, is accessible to biomicroscopic observation

LORAND V JOHNSON, University Hospital, Cleveland

*Ocular Toxoplasmosis* Exhibit showing drawings of fundus appearance of human toxoplasmosis and charts concerning incidence and details of Sabine test for neutralizing antibodies

## Section on Laryngology, Otology and Rhinology

The representative to the Scientific Exhibit from the Section on Laryngology, Otology and Rhinology is Paul H. Holinger, Chicago

J M ROBISON University of Texas School of Medicine, Houston

*Pressure Treatment of Maxillary Sinusitis* Exhibit of roentgenograms and charts showing the theory and practice of the application of local pressure to the mucosa of the maxillary sinus

PAUL H HOLINGER, TOBI JONES and ALBERT H ANDREWS JR, University of Illinois College of Medicine, Chicago

*Endoscopic Photography in Otolaryngology and Bronchoesophagology* Exhibit consisting of kodachrome photographs of the ear, nose and throat tracheobronchial tree and esophagus The normal endoscopic fields are shown as well as examples of the common pathologic conditions seen through the otoscope, laryngoscope, bronchoscope and esophagoscope The camera devised for this photography will be illustrated

ROMEO A LUONGO, Philadelphia

*Rhinoplasty* Exhibit showing all the steps of the technic for rhinoplasty, given in detail by means of drawings casts, masks and anatomic specimens A series of casts with instruments in place illustrate the most important steps, and the drawings show the minutest details Physiologic aspects of rhinoplasty will be demonstrated also

GEORGE E SHAMBAUGH JR., Northwestern University Medical School Chicago

*Factors That Influence the Results of the Fenestration Operation for Otosclerosis* Exhibit showing how clinical experience in 1,000 consecutive fenestration operations indicates that bony closure and postoperative labyrinthitis are the chief causes for failure to obtain a permanent hearing improvement Experimental fenestration operations on the monkey have demonstrated certain of the factors that influence bony closure and labyrinthitis A new improved fenestration technic to take advantage of these

factors has reduced bony closures to less than 5 per cent of operations done on the human ear and has reduced the incidence of labyrinthitis Photomicrographs are shown to demonstrate these factors, specimens and apparatus used in the improved fenestration operation are demonstrated also

### Section on Pediatrics

The representative to the Scientific Exhibit from the Section on Pediatrics is W Ambrose McGee, Richmond, Va

THEODORE O ELTERICH, University of Pittsburgh and Allegheny General Hospital, Pittsburgh

*Origin of Certain Pediatric Names and Phrases—Original Conception—Present Day Interpretation* Exhibit explaining and illustrating the origin of certain phrases commonly used in pediatrics, such as St Vitus's dance murmur deRoger, rachitic rosary, Harrison's groove Chvostek's sign, Trousseau's sign, hutchinsonian triad and identifying certain personalities who have had diseases named after them such as Froehlich Still, Little, Gaucher and Banti It is the author's thesis that as the years have passed the original conception of a given disease has been lost and a somewhat modified and often erroneous, present day interpretation has gradually evolved An attempt to correct this misinterpretation is made—to link the historical past with present day scientific advances

KATHERINE BAIN Children's Bureau U S Department of Labor, Washington

*Pediatric Unit for Hospitals* Exhibit showing a model designed by the Children's Bureau, U S Department of Labor, and U S Public Health Service, Federal Security Agency

JOHN P HUBBARD, American Academy of Pediatrics, Washington, D C

*Study of Child Health Services* Exhibit showing the organization and objectives of the study being made on child health services in the United States

MILTON B COHEN, the Asthma and Hay Fever Clinic and the Cleveland Health Museum, Cleveland

*Immunology of Allergy as Illustrated by Hay Fever* Exhibit showing the immunology of allergy, how allergy develops, specific treatment with pollen extract and immunization against H substance

### Section on Experimental Medicine and Therapeutics

The representative to the Scientific Exhibit from the Section on Experimental Medicine and Therapeutics is Robert W Wilkins, Boston

AUSTIN SMITH and WALTON VAN WINKLE JR, Council on Pharmacy and Chemistry, American Medical Association, Chicago

*Endocrine Products Actions and Uses* Exhibit showing the actions and uses of endocrine products known to be of worth while therapeutic value in the control of endocrine disorders and other diseases Information to help clarify the present confusing nomenclature situation and the confusion that exists concerning units and weight measures is included

DAVID SCHWIMMER, THOMAS H MCGAVACK and I J DREKTER, New York Medical College, Metropolitan Hospital Research Unit Welfare Island, New York

*Metabolic Studies in Human Volunteers on Limited Food and Water Intake* Exhibit of charts, graphs and tables describing over twenty-five experimental survival rations tested on 85 human subjects for the Office of the Quartermaster General Results of studies of various phases of nitrogen metabolism, carbohydrate metabolism, electrolytic shifts, water balance and changes in circulation are demonstrated.

KURT LANGE, LINN J BOYD and DAVID WEINER, New York Medical College, New York

*Frostbite—Functional and Morphologic Pathology and the Prevention of Subsequent Gangrene* Exhibit showing how, by means of the fluorescein test, the sequence of events in frostbite as far as the vascular tree is concerned was investigated The initial stage of severe vasoconstriction is always followed by a state of complete restoration of circulation during which the capillary permeability is much increased During this stage silting of red cells, probably due to loss of plasma, takes place. These red cells are finally transformed into organized clots leading to subsequent gangrene If heparin is given early and long enough, this clot formation can be prevented Experiments on human volunteers, actual cases and pathologic specimens prove this fact Kodachromes, photomicrographs, drawings and charts illustrate the findings

EUGENE B FERRIS, GEORGE L ENGEL, MRS GEORGE L ENGEL, JOSEPH P WEBB, CHARLES D STEVENS and M A BLANKENHORN, University of Cincinnati and Cincinnati General Hospital, Cincinnati

*Nature of Decompression Sickness* Exhibit of charts and graphs illustrating the various clinical syndromes which make up the disease—decompression sickness, explaining the mechanism of each These syndromes include "bends," "chokes," skin lesion focal neurologic manifestations and syncope Evidence is presented to indicate that decompression sickness is due to distortion of tissue spaces by the formation of nitrogen bubbles It is shown that the symptoms are due to bubble formation in the tissue spaces and not in blood vessels The effect of preflight denitrogenation (100 per cent oxygen inhalation) in preventing decompression sickness is demonstrated

HAMILTON H ANDERSON, EDER LINDSAY HANSEN and HERBERT G JOHNSTONE, University of California Medical School, San Francisco

*Amebiasis Pathology Diagnosis and Chemotherapy* Exhibit stressing the pathology of amebiasis, with special reference to chronic, resistant cases and to frequent complications of the disease The differential diagnosis of amebiasis, especially from bacillary dysentery and other dysenteries due to animal parasites, is emphasized Complications, which are diagnostic problems requiring special awareness, such as abscess of the liver and other organs, are shown For control, the use of detergents in water and the usefulness of the traditional chemical types in therapy—emetine, arsenicals and the halogenated hydroxyquinolines plus new agents, now under trial, such as the arsine oxides, antibiotics, acridines and plant extractives—are featured

ARTHUR E MAHLE and HELEN M PATTON, Northwestern University Medical School and Wesley Memorial Hospital, Chicago

*Excretion of Vitamin A and Carotene as Influenced by Emollient and Hydrophilic Colloid Cathartics* Exhibit showing how blood and fecal vitamin A and carotene levels were estimated on 5 normal adult male medical students who were on a standard daily diet containing 4,000 international units of vitamin A for a period of fourteen months A gradual drop in the blood vitamin A was noted with a gradual increase in the blood carotene level When liquid petrolatum was given, the excretion of vitamin A and carotene increased When metamucil was given, no change was noted in the fecal vitamin A or carotene excretion

STANLEY C HARRIS and A C IVY, Northwestern University Medical School, Chicago

*Amphetamine Induced Weight Loss* Exhibit dealing with consideration of the several mechanisms which might act to cause weight loss (1) increased metabolism, (2) diuresis, (3) anorexia (*a*) peripheral (gastrointestinal) and (*b*) central

KARL H BEYER and WILLIAM P BOGER, Medical Research Division, Sharp and Dohme Inc, Glenolden, Pa

*Use of Sodium P-Aminohippurate and Mannitol in Renal Function* Exhibit showing a full color, diagrammatic representation of the nephron unit and its blood supply, so lighted as to simulate tubular function Charts describing the measurement of glomerular filtration and a description of the measurement of tubular excretion and renal blood flow Normal values for these functions are for men, women and children together

with an indication of the variation of these values in disease. Charts illustrating the clinical use and pharmacologic properties of mannitol and sodium p aminohippurate Graphic illustrations of the efficacy of sodium p aminohippurate in elevating penicillin plasma concentration by decreasing its renal tubular excretion and also the recent work on the use of mannitol as a diuretic agent are shown.

BERT R BOONE, FRED G GILLICK GEORGE C HENNY, MORTON J OPPENHEIMER and W EDWARD CHAMBERLAIN, U S Public Health Service and Temple University Medical School, Philadelphia

*The Electrokymograph A Recorder of Cardiovascular Motions* Exhibit presenting the electrokymograph, consisting of a photomultiplier tube which views heart border and great vessel motions appearing on a fluoroscopic screen and records them on an electrocardiographic string galvanometer For demonstration, a chest film placed on a special 14 by 17 inch illuminator is shown A pulsating phantom heart within the box superimposes its silhouette on the heart shadow of the film A photocell placed over the moving heart border is connected to the electrocardiographic string galvanometer In this way the phantom heart motion and the corresponding string movements may be viewed continuously during the exhibit. Charts, photographs and actual records of ventricular, auricular and great vessel motions are shown

### Section on Pathology and Physiology

The representative to the Scientific Exhibit from the Section on Pathology and Physiology is Frank W Konzelmann, Atlantic City, N J

H SIDNEY NEWCOMER and J C BURKE, E R Squibb and Sons New York and SCOTT M SMITH, HUGH O BROWN JAMES E P TOMAN and LOUIS S GOODMAN, University of Utah School of Medicine Salt Lake City

*Curare and Its Graded Pharmacologic Action* Exhibit showing source material for curare photomicrograph s and other data on active ingredients pharmaceutic forms, assay procedure, graded and progressively rising blood levels at which different muscle groups and nervous system units are affected with time elements of the rising and falling cycle together with outline and summary of the supporting data

W C HUEPER Warner Institute for Therapeutic Research, New York

*Etiology and Morphology of Arteriosclerosis* Exhibit of charts showing the various types of causes and causative mechanisms involved in the production of degenerative and proliferative vascular lesions of sclerotic and atheromatous character The different types of anatomic reaction products are presented in transparencies of photomicrographs prepared from lesions in man and experimental animals

S E GOULD Wayne County General Hospital and Infirmary, Eloise, Mich

*Control of Trichinosis in the United States* Exhibit presenting the principal features of the methods now used in the control of trichinosis and of a method advocated for adoption in the United States which is regarded as the simplest and most effective means for the control of this disease.

O B PRATT Institute of Experimental Medicine College of Medical Evangelists, Los Angeles

*The Rh Antigen Its Occurrence and Demonstration in Man and Animals* Exhibit of charts tables and photographs summarize the occurrence, genetic distribution and methods for recognizing the Rh group of antigens The information presented surveys the existing literature and presents original observations

HERBERT M EVANS and Associates Institute of Experimental Biology, University of California, Berkeley

*Hormones of the Anterior Hypophysis* Exhibit illustrating the chief results of some twenty years of pituitary research on the part of one group of investigators

CON FENNING C R MOTT and V E FENNING University of Utah School of Medicine, Salt Lake City

*Selective Physiologic Action of High Frequency Electrostatic Fields* Exhibit showing (1) oscillator audio-oscillator, modulating amplifier and accessory tuned circuit (2) the characteristics of the radio frequency current employed, the modulating signal the modulated wave form and the percentage of modulation, (3) typical results obtained from various preparations subjected to the field (4) the actual use of the equipment in securing 'selective results

E B POTTER JOEL W BAKER and THOMAS B CARLILE JR. Virginia Mason Hospital, Seattle

*The Cancer Clinic of the Virginia Mason Hospital Seattle* Exhibit of (1) charts showing the formation and the functions of a cancer clinic and its usefulness to a practitioner (2) illustrative photographs of a variety of cancers as visualized by roentgenograms gross pathologic changes and a few pertinent photomicrographs, (3) pictures of cancer cases before and after treatment, and data regarding the choice of treatment

### Section on Nervous and Mental Diseases

The representative to the Scientific Exhibit from the Section on Nervous and Mental Diseases is Frederick P Moersch, Rochester, Minn.

A E BENNETT A R. MCINTYRE and PAUL T CASH University of Nebraska College of Medicine, Omaha

*Comparison of Curarization with Myasthenia Gravis* Exhibit showing how with in vitro and in vivo experiments on muscle nerve preparation with curare, physostigmine (eserine), prostigmine and acetylcholine, the mechanism of curarization has been critically examined and new data obtained indicating the inadequacy of previous views concerning curarization Many striking parallels between curarization and myasthenia gravis have been established Clinical application includes a new diagnostic test and prognostic aid in the disease

A. L SAHS and CLARK H MILLIKAN State University of Iowa College of Medicine and University Hospital Iowa City

*Ruptured Intracranial Aneurysms* Exhibit of gross photographs, photomicrographs and drawings of the developmental anomalies of the circle of Willis and the production of congenital aneurysms of the circle incidence of aneurysms seen at University Hospital Iowa City gross and microscopic pathologic changes clinical features, diagnosis and differential diagnosis prognosis treatment and arteriography

GEORGE S BAKER and ARTHUR H BULBULIAN Mayo Clinic Rochester Minn.

*New Method for Molding of Tantalum Plate in Cranioplastics* Exhibit demonstrating the method by the use of a series of plaster masks and moulages accompanied by photographs and roentgenograms of patients on whom cranioplastics have been performed

C WILBUR RUCKER Mayo Clinic, Rochester Minn

*The Fundus of the Eye in Disorders of the Central Nervous System* Exhibit of enlarged transparencies of the fundus oculi illustrating the manifestations in the eye of various disorders of interest to the neurologist and stressing especially the differential diagnosis of abnormal fulness of the optic disk.

J M NIELSEN KARL O VON HAGEN and GEORGE N THOMPSON University of Southern California, Los Angeles

*Focal Cerebral Lesions with Mental Symptoms* Exhibit of preserved specimens of brain in addition to photographs, showing focal cerebral lesions

WALTER L BRUETSCH and MAY A BAHR Central State Hospital, Indianapolis, WALTER CLARKE American Social Hygiene Association, New York and CONRAD BERENS, National Society for the Prevention of Blindness, New York

*Syphilitic Optic Atrophy—Pathogenesis and Treatment* Exhibit of photographs and sections of optic nerves chiasm and optic tracts showing the tissue changes which lead to optic

atrophy Demonstration of syphilitic optochiasmatic arachnoiditis and its relation to atrophy of the optic nerves The successes and failures of present day treatment of syphilitic optic atrophy become more clearly understood on the basis of the underlying pathologic condition as presented in the exhibit.

HENRY W NEWMAN, Stanford University School of Medicine, San Francisco

*Methods of Electrical Testing in Peripheral Nerve Injuries* Exhibit demonstrating an apparatus suitable for determination of strength duration curves, chronaxia and tetanus-twitch ratio There is graphic representation of the findings in cases of peripheral nerve injuries, both spontaneously recovered and recovered after suture, with an evaluation of the different tests in diagnosis and prognosis

EDWIN B BOLDREY and EARL R MILLER, University of California Medical School, San Francisco

*Carotid Arteriography* Exhibit of roentgenograms showing external and internal carotid vessels, their branches and venous connections in some normals, saccular aneurysms, arteriovenous aneurysms, congenital malformations and tumors

J JAY KEEGAN and FREDERIC D GARRETT, University of Nebraska College of Medicine Omaha

*Cutaneous Distribution of Segmental Nerves in Man* Exhibit based on clinical and experimental outlining of dermatome areas of reduced pain sensation or hypalgesia produced by compression, stretching section and procaine injection of single nerve roots of the leg and arm From this a new conception and chart of cutaneous distribution of segmental nerves in the extremities is presented, with comparison with dermatome charts of previous investigators The clinical application of this knowledge is shown in two sections one with portrayal of anatomic and pathologic factors involved in single nerve root compression by herniation of an intervertebral disk and the other showing radiologic factors involved in localization of a nerve root compression syndrome.

## Section on Dermatology and Syphilology

The representative to the Scientific Exhibit from the Section on Dermatology and Syphilology is Hamilton Montgomery, Rochester, Minn, and Francis W Lynch, St Paul, Minn, is assistant representative

LOUIS SCHWARTZ, SAMUEL M PECK ISADORE BOTVINICK and A L LEIBOVITZ, U S Public Health Service, Bethesda Md

*Control of Epidemic Ringworm of the Scalp* Exhibit showing the incidence of ringworm of the scalp in the United States and in the schools of Hagerstown, Md Charts describe the methods used for controlling epidemics, including sanitation of barber shops, setting up of treatment clinics in the schools, method of identifying cases by means of Wood's light method of sterilizing electric clippers and other barbers instruments, evaluation of various topical applications for treatment and cultures of Microsporon audouini Photographs of actual cases are shown

BENJAMIN S KLINE, Mount Sinai Hospital, Cleveland

*New Development Toward a Single Standard Blood Test for Syphilis Cardiolipin-Lecithin Antigen* Exhibit showing the steps in the simplification of technic of tests for syphilis from complex, time consuming complement fixation type (five ingredients) to rapid tube and slide flocculation types (two ingredients) Furthermore, it shows the steps in the improvement of the antigen from saline extracts to crude alcoholic extracts to purified alcoholic extracts and most recently to essentially chemically pure lecithin and cardiolipin first isolated by Pangborn in 1941 Outlines of desirable future studies are included.

FRANCESCO RONCHESE, Providence, R I

*Occupation Marks as Aids to Personal Identification* Exhibit of photographs and drawings of calluses, cicatrices and other marks produced by various occupations or remnants of operation or disease The drawing shows the worker handling the tool or in the position producing the mark The marks are grouped according to their usefulness as an aid to personal identification, the very useful because found only in one occupation or one disease, the moderately useful because shared by more than one occupation or disease, and the rare or obsolete interesting only for their peculiarities

JOHN H LAMB and EVERETT S LAIN, Oklahoma City

*Actinomycosis of the Face and Neck* Exhibit of colored photographs of 14 cases of the anaerobic type of cervicofacial actinomycosis and 1 case from which an aerobic actinomycete was isolated The various clinical types are described, with charts showing the most successful type of treatment. A large map of the United States demonstrates the distribution of cases of actinomycosis from 1920 to 1940 Photomicrographs of various types of granules will be shown The various species of actinomycetes are described and the oral cavity as a focus of infection, particularly chronic actinomycetic periodontitis, is stressed.

THOMAS W NISBET, Pasadena, Calif

*Atabrine Dermatitis* Kodachrome transparencies showing the characteristic types of eruption occurring in patients following the chronic administration of atabrine

## Section on Preventive and Industrial Medicine and Public Health

The representative to the Scientific Exhibit from the Section on Preventive and Industrial Medicine and Public Health is Paul A Davis, Akron, Ohio

VICTOR ROSS, College of Physicians and Surgeons, Columbia University, New York

*Immunization with Protamine-Diphtheria Toxoid* Exhibit showing the results of immunization of 4,000 children with protamine-diphtheria toxoid Charts showing (1) results of Schick test on groups of children at different intervals following the injection, (2) antitoxin titers produced (3) data obtained on the areas of erythema produced following simultaneous intradermal injection of equivalent quantities of protamine, alum and "fluid" toxoid in adults, (4) nitrogen content per Lf unit of the new preparation compared with that of alum and 'fluid" toxoids

W W BAUER and WILLIAM W BOLTON Bureau of Health Education, American Medical Association, Chicago

*Electrically Transcribed Radio Programs for County Medical Societies* Exhibit from the Bureau of Health Education, with a map showing the distribution of its electrically transcribed radio broadcasts for county medical societies plus sample copies of the scripts, and charts and posters showing how county medical societies can get the records for local use. Pamphlet listings of available transcriptions will be distributed Sample transcriptions will be available for listeners Headphones are included, so that persons can listen to the programs

## Section on Urology

The representative to the Scientific Exhibit from the Section on Urology is John H Morrissey, New York

THOMAS L GIBSON, San Francisco

*Hydronephrosis—Classification and Plastic Repair of Ureteropelvic Obstructions* Exhibit demonstrating types of hydronephroses and pyeloplastic procedures for their correction combined with methods of ureteral splinting together with nephrostomy and pyelostomy drainage

ROGER W BARNES and MALCOLM R HILL, College of Medical Evangelists School of Medicine, Los Angeles

*Intestinovesical Fistula* Exhibit of drawings and posters illustrating the causes, diagnostic procedures and treatment of intestinovesical fistulas The difficulties and importance of diagnosis are illustrated

JOHN O RAO, Mercy Hall Hospital for Cancer, Detroit

*Urologic Complications in Carcinoma of Cervix* Exhibit of moulages showing relations of ureters to cervix and para

metrium and the way in which the spread of carcinoma produces urinary obstruction, moulage illustrating mechanism of fistula formation drawings illustrating roentgen ray findings and path findings at postmortem in the same case, drawings illustrating paths of extension and amount of disease at necropsy survival period after onset of urinary obstruction and fistula formation, charts indicating in what cases urinary complication resulted from carcinoma, adhesions or radiation necrosis

ROBERT H HERBST and JAMES W MERRICKS, University of Illinois (Rush) College of Medicine and Presbyterian Hospital, Chicago

*Transurethral Drainage of Seminal Vesicles* Exhibit of roentgenograms showing the seminal tract in health and disease with case histories also drawings illustrating technic Transparent cleared specimens of seminal tract, bladder neck and bladder are shown.

FREDERIC E B FOLEY, St. Paul

*An Artificial Sphincter A New Operation and Device for Control of Urinary Incontinence* Exhibit of drawings illustrating technic of operation display of samples of the artificial sphincter and inflating device, and a mannequin demonstrating operation of the device.

### Section on Orthopedic Surgery

The representative to the Scientific Exhibit from the Section on Orthopedic Surgery is David M Bosworth, New York.

S L HAAS, Stanford Medical School San Francisco

*Fusion of Vertebral Bodies After Resection of the Intervertebral Disk* Exhibit showing series of experiments performed on dogs at various ages in which the intervertebral disk was removed as thoroughly as possible, first, by a transabdominal approach, second, by laminectomy, and, third, by lateral extraperitoneal approach Various degrees of fusion were obtained depending possibly on age and thoroughness of the operations Studies include the second changes on the articular facets degree of fixation, deformity and injury to the cord and nerve tissue.

WILLIS C BEASLEY, United States Public Health Service, Bethesda, Md.

*Electronic Myodynemetry* Exhibit showing new method for measuring muscular strength using specially designed electronic instruments The technic is adapted particularly to force measurement (in pounds) in testing procedures typically employed by physical therapists on infantile paralysis patients Procedures utilized in calibrating the test instruments are demonstrated. Data showing typical measurements obtained for various muscle action on normal and clinical patients are displayed The method is of interest to those concerned with muscular dysfunction and rehabilitation. Special demonstrations daily at 10 00 a m and 3 00 p m

GUY A CALDWELL, FRANCIS M MCKEEVER and A R SHANDS JR American Board of Orthopedic Surgery and Joint Committee on Graduate Training New Orleans

*The American Board of Orthopedic Surgery and the Joint Committee on Graduate Education* Exhibit of maps indicating location of hospitals with approved resident training in orthopedic surgery tables showing the numbers of applicants and vacant positions and posters relative to board requirements for parts I and II of the examinations Essential requirements for approval of resident training and practice by the Council on Medical Education and Hospitals are shown Pamphlets and booklets, both pertinent information relative to these subjects, will be distributed.

JOHN LYFORD III, ROBERT W JOHNSON JR. and ROGER B SCOTT, Johns Hopkins Hospital, Baltimore

*The Donovan Body,' An Organism Causing (1) Generalized Granuloma Inguinale (2) Osteomyelitis and (3) Polyarticular Arthritis* Exhibit showing that granuloma inguinale is a systemic as well as a local disease and that the 'Donovan body" as the causative organism of one form of polyarticular arthritis and osteomyelitis has been demonstrated in pathologic sections and "continuous tissue cultures" of material from the involved bones and joints Microscopic sections photographs and transparencies, roentgenograms, charts and photomicrographs demonstrate these findings

H H YOUNG and R K GHORMLEY, Mayo Clinic, Rochester, Minn

*Accidents on the Farm and How They Happen* Exhibit presents a statistical analysis of 575 typical fatal and nonfatal farm accidents seen at the Mayo Clinic from 1934 to 1944 It emphasizes the common causes of these accidents and stresses the means of preventing them

LAURENCE JONES, Beverly Hills Calif

*Sciatic Neuritis and Low Back Pain—A Different Cause and Treatment The Pronation Syndrome* Exhibit showing that faulty foot posture is the primary cause of sciatic neuritis An individual method of correction brings prompt and consistent relief from pain In a large series of cases, disk protrusion was of little or no clinical importance.

NICHOLAS S RANSOHOFF, Monmouth Memorial Hospital, Long Branch N J

*Purified Curare in the Treatment of Acute Anterior Poliomyelitis* Exhibit showing central black and white poster on which the electromyographic stories of the treatment of poliomyelitis are reviewed photographs of action currents of muscles showing the effects of purified curare and physical therapy Muscles are traced from a complete paralysis through recovery on to complete function. Mounted silhouettes show the physical therapy technics involved. A large number of myographs in book form are included as well as a two channel electromyograph to demonstrate action currents

COMMITTEE ON PROSTHETIC DEVICES National Research Council, Northwestern Technological Institute, Evanston Ill

*New Developments in Artificial Limbs* Exhibit presenting the results of the program of the Committee on Prosthetic Devices of the National Research Council, which has had an extensive research and development program under way for over a year It contains varied illustrative material examples of new devices and mechanisms results of basic studies on human locomotion and new developments in methods of fitting artificial limbs

### Section on Gastro-Enterology and Proctology

The representative to the Scientific Exhibit from the Section on Gastro Enterology and Proctology is Grant H Laing Chicago

LEO L HARDT, JOHN S COULTER FREDERICK STEIGMANN and JACK I RABENS Cook County Hospital, Cook County Graduate School the Loyola University Medical School Northwestern University Medical School University of Illinois College of Medicine the Illinois Central Hospital and the Chicago Municipal Tuberculosis Sanitarium, Chicago

*Gastroscopic Studies in the Diagnosis and Treatment of Gastric Diseases* Exhibit presenting slides, roentgenograms and artist s drawings through the gastroscope showing the value of gastroscopy in the diagnosis of gastric diseases and also exhibiting various pathologic conditions as found in a large group of patients (3 600) examined during six years The appearance of the gastric mucosa after various medications is demonstrated by several colored plates (artist s drawings)

HAROLD LINCOLN THOMPSON, JOSEPH M OYSTER, JOHN B HEID and FRANK M MORGAN, Los Angeles

*Hematemesis—An Analysis of Underlying Pathologic Changes* Exhibit of charts photographs, roentgenograms and drawings resulting from a study of 300 cases of hematemesis

LESTER M MORRISON Los Angeles

*Improved Methods in the Treatment of Cirrhosis of the Liver* Exhibit dealing with small but carefully controlled series of 62 patients with chronic hepatitis treated by three

separate methods over a period of eight years One group of 23 patients was treated by the methods commonly in use in 1938, a second group of 19 was treated by a "modified Patek" regimen, a third group of 20 patients was treated by a method using choline and methionine in combination, a special protein diet, a new liver extract and various vitamin adjuncts An analysis is presented of the sharp reduction in mortality and morbidity rate in the third therapeutic group, using new and improved methods of treatment for cirrhosis of the liver applied by the exhibitor

BENJAMIN M BERNSTEIN, Brooklyn Jewish Hospital, Brooklyn

*Histamine in the Therapy of Peptic Ulcer* Exhibit describing the study of more than 60 cases treated by injection of histamine No other medication, except belladonna in a few cases, was used. Relief from pain was rapid in most cases, symptoms were aggravated in none It would seem that the continuance of acidity does not interfere with the relief from the symptoms of the ulcer syndrome but permits the recurrence to abate quickly and in some instances permits the ulcer deformity to modify its appearance and even disappear

### Section on Radiology

The representative to the Scientific Exhibit from the Section on Radiology is S W Donaldson, Ann Arbor, Mich

SAMUEL BROWN, Jewish Hospital, Cincinnati

*Roentgen Study of Duodenum* Exhibit showing illustrations of the normal duodenum as revealed in the ventral and right lateral projections with its relationship to the stomach, pancreas liver, gallbladder, extrabiliary ducts, right kidney and spine Illustrations showing the frequent advantage of the lateral projection over the ventral in demonstrating intrinsic lesions of the duodenum. Illustrations of alterations in the position, shape and contour of the duodenum produced by abnormal changes in the adjacent structures which are often characteristic for the organs involved, enabling one to arrive at a more accurate diagnosis

WILBUR BAILEY, University of Southern California Medical School, Los Angeles

*Spondylolisthesis—A Congenital Anomaly Frequently Unaccompanied by Symptoms* Exhibit of roentgenograms, posters and placards showing the main points of spondylolisthesis and its precursors Special attention is directed to the congenital origin of this disease and the fact that it is frequently discovered in the absence of symptoms

CALVIN L STEWART and FREDERICK B WAGNER JR, Jefferson Hospital, Philadelphia

*Abdominal Aortography* Exhibit describing the technic of introducing suitable contrast mediums into the abdominal aorta by the translumbar route, with photographs and illustrations Several cases are exhibited by showing reproductions of the actual films exposed with the contrast medium in place, the diagnostic problem involved in each case is stated to show the indication for the examination, the conclusions of each examination are enumerated.

L H GARLAND, H A HILL and M E MOTTRAM, San Francisco

*Pancreatic Calcifications* Exhibit illustrating the diagnostic features of the various types of pancreatic calcification and the differential diagnostic points between calculous and parenchymal calcification

### Section on Anesthesiology

The representative to the Scientific Exhibit from the Section on Anesthesiology is Urban H Eversole, Boston.

URBAN H EVERSOLE, MORRIS J NICHOLSON and LEO V HAND, the Lahey Clinic, Boston

*Anesthesia for Thyroid Surgery* Exhibit showing the importance of the preoperative visit by the anesthesiologist, premedication ordinarily used and an evaluation of the various anesthetic agents The indications for and technic of endotracheal anesthesia are presented The explosion hazard associated with inhalation anesthesia is mentioned and a means of safeguarding against it is presented Attention is focused on the management of such complications as excess mucus in the tracheobronchial tree, hyperactive carotid sinus reflex and severe exophthalmos A safe method of controlling the anesthesia for tracheotomy is demonstrated

HUGH O BROWN, University of Utah Medical School, Salt Lake City and JAMES M THOMSON, Minneapolis

*Continuous Caudal Technics* Exhibit of plaster models depicting steps in continuous caudal catheter technic. Charts show the history, classification of technics, indications, contra indications, drugs and concentrations in use, preparation of solution and tabulated results in 500 cases employing pontocaine epinephrine solution Skeletal model, sagittal section and equipment are included

ELMER C BARTELS and GEORGE O BELL, the Lahey Clinic, Boston

*Use of Thiouracil in Preparation of Patients with Severe Hyperthyroidism for Thyroidectomy* Exhibit reviewing the experience obtained from the use of thiouracil as a preoperative drug on 400 patients with severe hyperthyroidism. A practical demonstration of the value of thiouracil with indications as to its use and dangers is shown

H C SLOCUM, E A HOEFLICH and C R. ALLEN, Texas University School of Medicine, Galveston

*Malpositions on the Operating Table* Exhibit of photographs, charts and demonstrations to show the effects on anesthetized patients of malpositions on the operating table as recorded by respiratory, circulatory and nervous system changes

JOHN ADRIANI and RAY T PARMLEY, Charity Hospital and Louisiana State University School of Medicine, New Orleans

*Saddle Block Anesthesia* Exhibit describing a new technic with details and results Saddle block anesthesia is a form of low spinal anesthesia confined to the perineal area. When nupercaine is used, prolonged analgesia is obtainable. This has been used for relief of pain of labor and for deliveries in obstetrics Exhibit emphasizes this aspect but also describes its value for general surgery

WILLIAM B NEFF and RICHARD C GILL, Stanford University School of Medicine, San Francisco

*Curare in Anesthesiology* Exhibit showing the transition of curare from a drug of use only in the jungle to its present clinical importance in medicine, illustrated by photographs, charts, specimens and pictures taken in the curare country at the headwaters of the Amazon The method of primitive curare production and its ethnobotany is shown together with photographs illustrating its clinical application in anesthesiology

### Section on General Practice of Medicine

#### Miscellaneous Exhibits

The representative to the Scientific Exhibit from the Section on General Practice of Medicine is Wingate M Johnson Winston-Salem, N C A group of miscellaneous exhibits is included under this section

VICTOR JOHNSON, F H ARESTAD, M G WESTMORELAND and FRODE JENSEN, Council on Medical Education and Hospitals, American Medical Association, Chicago

*Medical Education and Hospital Service* Exhibit featuring educational facilities for physician veterans and giving information regarding medical schools, internships, residencies in specialties, schools for medical record librarians, occupational therapists, physical therapists and x-ray and laboratory technicians, annual census of hospitals for 1945, revised data on medical education and licensure, and lists of approved medical schools, internships, residencies and approved technical schools

CHARLES R REYNOLDS and BOWMAN C CROWELL, American College of Surgeons, Chicago

*Graduate Training for Surgery, Cancer Clinics* Exhibit of posters and charts demonstrating aims, scope and function of

graduate training program Progress of cancer clinic program is shown also

LOUIS I DUBLIN, Metropolitan Life Insurance Company, New York

*Cancer Facts* Exhibit of charts showing (1) the facts behind the increasing death rate from cancer in the United States—effects of aging population and advances in medical diagnosis (2) current cancer facts—relative importance of cancer as a cause of death as compared with other numerically important diseases, share of cancer of all deaths in various age groups, comparison of urban and rural cancer mortality rates, the chief sites of cancer in men and women cancer mortality by age, men and women compared, and (3) recent progress in cancer control, with special emphasis on the decreases in mortality from cancer among women since 1931-1935

P R HAWLEY, Veterans Administration, Washington

*Activities of the Veterans Administration Department of Medicine and Surgery* Exhibit of charts and pictographs showing the organization, plans and policies of the Veterans Administration

WILLIS S KNIGHTON and VIRGINIA M SMITH, Committee on Glaucoma, National Society for Prevention of Blindness, New York

*The Physician Saves Sight Through Early Recognition of Glaucoma* Exhibit consisting of charts, posters and graphic devices illustrating signs and symptoms easily recognizable during a general physical checkup Testing equipment and technic will be included.

GEORGE W COOLEY, Council on Medical Service and Public Relations, and CHARLES E. NYBERG Bureau of Medical Economics, American Medical Association, Chicago

*Prepayment Medical Care Plans* Exhibit of maps showing areas covered by prepayment medical care plans, types of plans in operation, and extent of cooperation with Blue Cross Plans, together with charts showing growth in the number of plans and in enrolment, and the various types of benefits, premiums, waiting periods exceptions and the like. Prepayment plan pamphlets and sample copies of operative forms and promotional material will be available.

M VIRGINIA SHULER, Bureau of Information, American Medical Association, Chicago

*Rural Medical Service* Exhibit showing a map of the United States with the physician population ratio by counties, charts and posters giving the relations between the Bureau of Information and other organizations, such as hospitals, the Farm Bureau and the Farm Foundation. Pamphlets on rural medical service will be available.

J LOUIS NEFF, American Cancer Society, New York, and THEODORE CURPHEY, American Society of Clinical Pathologists, Garden City, N Y

*Teamwork In Cancer Diagnosis* Exhibit of transparencies and diagrammatic sketches presenting problems of differential diagnosis. Early cancer cannot be diagnosed by clinical evidence alone but requires the teamwork of the pathologist, the surgeon and the roentgenologist as well as the original clinician The efficacy of teamwork in the diagnosis of such common lesions as cancer of the skin, cervix and breast is demonstrated Since the one fundamental and essential approach to the correct treatment of cancer is the pathologic diagnosis, the method of taking adequate and correct biopsy material is graphically illustrated Emphasis is given to selection of the site, method of removal and correct handling of the material

## INFANTILE PARALYSIS—1946

The following group of exhibits show the results of some of the research studies supported by the National Foundation for Infantile Paralysis

HUBERT S LORING, Stanford University Medical School, San Francisco

*Virus Research* Methods of purification and determination of characteristics of the poliomyelitis virus

VERNE T INMAN, JOHN B SAUNDERS and LEROY C ABBOTT, University of California Medical School, San Francisco

*Body Mechanics* A graphic visualization of the rhythm of action of muscles of the shoulder joint

KARL F MEYER, W McD HAMMOND, W C. REEVES and WALTER N MACK, University of California and the George Williams Hooper Foundation, San Francisco

*Epidemiology* A visual demonstration of the host factors and transmission in poliomyelitis, the epidemiology and the differential diagnoses of the St. Louis and western equine encephalitides

HAROLD K FABER, Stanford University Medical School, San Francisco, KENNETH F MAXCY, HOWARD A HOWE and DAVID BODIAN, Johns Hopkins University, Baltimore

*Pathology* The distribution of poliomyelitis lesions and sources of virus recovery in the human being, also the chromatolysis of the nerve cells

ROBERT S SCHWAB MARY A B BRAZIER and ARTHUR L WATKINS, Massachusetts General Hospital, Boston

*Muscle Function* Electromyograph and ergograph studies of muscle function in normal and in paralyzed muscles

LUCILLE DANIELS WILLIAM H NORTHWAY and E. B SHAW, Stanford University Medical School, San Francisco

*Treatment* The acute diagnostic signs of infantile paralysis, the phases of treatment and the technic of muscle testing

CHARLES L LOWMAN, Orthopedic Hospital, Los Angeles

*Orthopedic Surgery Rehabilitation* Visual evidence of correction of orthopedic deformities through orthopedic surgery consisting of a series of translights showing "before and after" views of actual cases

## MOTION PICTURE PROGRAM

SIX motion picture theaters will be in operation continuously throughout the week. One of these will be in the Civic Auditorium in connection with the Special Exhibit on Physical Medicine. (For titles see Special Exhibit on Physical Medicine.)

FIVE motion picture theaters will be located in the Veteran's Building, Civic Center, where the following films will be shown once each day on a prearranged schedule

### Motion Pictures on Internal Medicine

CARROLL L BIRCH and LOUIS R LIMARZI, University of Illinois College of Medicine, Chicago

*Animated Hematology* Motion picture on physiology and pathology of hemopoietic principle. This includes clinical cases, kodachrome photomicrographs of blood and bone marrow and outlines the treatment of pernicious anemia, sprue, cirrhosis of the liver and aplastic anemia Silent, color, 50 minutes

CLAYTON J LUNDY, Presbyterian Hospital, Chicago

*The Electrocardiogram and Heart Sound Records in Rheumatic Heart Disease* Motion picture showing the formation of early and late electrocardiographic changes which take place in rheumatic heart disease. Electrocardiogram formation is depicted simultaneously with heart action. The abnormal heart sounds heard in rheumatic heart disease are demonstrated as they occur simultaneously with electrocardiogram formation and heart action The relationships of normal heart sounds are shown first, then various types of systolic and diastolic murmurs The differentiation of the diastolic murmurs heard in aortic and mitral valve disease is emphasized Silent, 50 minutes.

K. J HENRICHSEN and RICHARD DAVISON, Municipal Tuberculosis Sanitarium, Chicago

*Collapse Therapy in Pulmonary Tuberculosis* Motion picture demonstrating pneumothorax, phrenicectomy, extra pleural pneumothorax, pneumolysis and thoracoplasty Silent, color, 20 minutes

## Motion Pictures on Surgery

JAMES BARRETT BROWN and FRANK McDOWELL, Washington University School of Medicine, St Louis

*Support of the Paralyzed Face by Fascia* Motion picture showing how in cases of facial paralysis which are not amenable to nerve operations a worth while result can be obtained by connecting the face to the temporalis muscle with strips of fascia lata This maintains the face in a good level position in repose and permits a small amount of movement which is of definite value in facial expression Good control of the mouth is obtained, permitting the patient to smoke, eat and drink in public without embarrassment. Silent, color, 15 minutes

CONARD R LAM, Henry Ford Hospital, Detroit

*Repair of Congenital Tracheoesophageal Fistula with Atresia* Motion picture consisting of a pictorial case history of an infant born with atresia of the esophagus and tracheoesophageal fistula. The chief points in the establishment of the diagnosis are outlined. The preferred operation of ligation of the fistula and direct anastomosis of the segments of the esophagus within the mediastinum is demonstrated Postoperative care and outpatient follow-up are depicted Silent, color, 12 minutes

A. H WHITTAKER, Harper Hospital, Detroit

*Inter-Innomino-Abdominal Amputation* Motion picture presents indications for 'hind quarter amputation" It shows by animated drawing the anatomic landmarks and the technic of the operation. Roentgenograms are reproduced, and the end result is illustrated Silent, color, 11 minutes

THOMAS A SHALLOW, Jefferson Medical College Hospital, Philadelphia

*Extraperitoneal Closure of Colostomy* Motion picture showing both diagrammatically and actually how the spur of a double barrel colostomy is crushed by means of a specially devised clamp, followed by the various steps in closure of the colostomy by the extraperitoneal method Silent, color, 16 minutes

RALPH HERZ, Cleveland

*Subfascial Fat Herniation* Motion picture of dissection on cadavers showing basic fat pattern in the gluteal and lumbar regions of the back. Clinical diagnosis locating hernia, injection of hernia with local anesthetic and effect of injection on patients are portrayed. Technic of operation, demonstration of postoperative results, summary and conclusions are given. Silent, color, 15 minutes

VIRGINIA KNEELAND FRANTZ, Columbia University College of Physicians and Surgeons, New York

*Hemostasis with Oxidized Cellulose (Absorbable Gauze and Cotton)* Motion picture showing a few simple chemical tests of oxidized cellulose in the form of surgical gauze, i e. solubility, and combination with hemoglobin and with whole blood The technic of testing absorbable materials in subcutaneous tissue of rats is shown, followed by operative procedures in dogs and human beings in which bleeding is controlled by the hemostatic sponge Autopsy of the dog four and one-half weeks postoperative is shown Silent, color, 25 minutes

HILGER PERRY JENKINS, RUDOLPH JANDA, HOWARD OWENS and EDWARD SENZ, University of Chicago, Billings Hospital, Chicago

*Gelatin Sponge Studies on Hemostatic Action* In experimental resection of segment of liver the gelatin sponge was used to control the bleeding without the addition of thrombin or the use of any suture material In addition studies have been conducted on injuries of large veins the hemorrhage from which was controlled by the application of gelatin sponge alone. Silent, color, 10 minutes

RICHARD B CATTELL, Lahey Clinic, Boston

*Pancreatoduodenal Resection for Carcinoma* Motion picture showing two stage operation. The operative findings and technic of cholecystojejunostomy are portrayed, together with the steps of removal of the pyloric end of the stomach, lower end of the common duct, head of the pancreas and the duodenum. The procedure emphasizes implantation of the duct of Wirsung into the jejunum Silent, 50 minutes

ARKELL M VAUGHN, Loyola University School of Medicine and Mercy Hospital, Chicago

*Partial Resection of the Stomach (Gastrectomy), with Antecolic Terminolateral Gastrojejunostomy* Motion picture reviewing the history of gastric resection Symptoms of carcinoma of the stomach are discussed and roentgenographic diagnosis of the carcinoma of the stomach to be removed is shown. Detailed preoperative preparation and postoperative care are discussed. The technic of nupercaine spinal anesthesia is shown. Silent, color, 30 minutes

HARRY E BACON, Temple University Medical School and Hospital, Philadelphia

*Abdominoperineal Proctosigmoidectomy Without Colostomy and With Preservation of Sphincter Musculature* Motion picture showing the technic of operation, with the rates of operability, resectability mortality, morbidity and survival It is based on 460 cases of cancer of the sigmoid and rectum. Silent, color, 30 minutes

JEROME M LYNCH and G JOHNSON HAMILTON, New York Polyclinic School and Hospital, New York

*The Lynch Operation for Carcinoma of the Rectosigmoid* Motion picture depicting the technic of the operation and permitting exaggeration of the salient points Selected pictures taken during various operations present each maneuver There are also shown a series of pictures of the various stages of healing and stoma formation from twenty-four hours to ten years after operation, together with Broders and Duke's classification of the tumor, its distance from the anal verge and the length of the specimen removed. Silent, 23 minutes

TIBOR DE CHOLNOKY, New York Postgraduate Hospital and Medical School, Columbia University, New York

*Surgery in Facial Cancer* Motion picture of an operation consisting of a radical excision of a post radiational recurrent carcinoma of the nose with immediate reconstruction of the resected and recurrent cancer of the nose. The second series of pictures shows a recurrent advanced cancer of the orbit, paranasal sinuses and cheek. The preoperative condition and the resulting defects after electrocoagulation are shown, with steps of reconstruction and follow-up Silent, color, 12 minutes

*Electrocoagulation in Advanced Cancer of the Rectum* Motion picture showing electrocoagulation for an advanced recurrent cancer of the rectum, with operative procedure and palliative result Silent, color, 10 minutes

## Motion Pictures on Obstetrics

A HERBERT MARBACH, Jewish Hospital, Philadelphia

*Vaginal Flora During Pregnancy* Motion picture showing normal and abnormal flora during pregnancy with associated *pn* changes and showing gross changes of vagina. Silent, 20 minutes

## Motion Pictures on Ophthalmology

LOUIS LEHRFELD, Wills Eye Hospital, Philadelphia

*Herbert Operation for Glaucoma* Motion picture of an old operation under modern conditions of surgery, with slight modification of technic, is reviewed pictorially in color The simplicity of the operation and freedom of complications make it an important contribution to the treatment of glaucoma. Silent, color, 20 minutes

RUDOLPH JAEGER, Jefferson Medical College and Hospital, Philadelphia

*Intracranial Removal of Intraorbital Tumor* Motion picture showing a dermoid cyst of the orbit causing proptosis and *double vision which could not be safely removed* by anterior approach to it. The tumor is shown being removed by means of a craniotomy opening above the orbit and removal of the top of this structure. Through this opening exposure was adequate to remove completely the circumscribed cystic tumor Silent, 15 minutes

JACK S GUYTON, Wilmer Institute, Johns Hopkins Hospital, Baltimore

*Ptosis Operations* Motion picture showing three different types of ptosis operations, including a Blascovicz operation, a Dickey operation and a Friedenwald operation Indications for these different types of operations are noted Silent, color, 39 minutes

### Motion Pictures on Laryngology, Otology and Rhinology

PAUL H HOLINGER and ALBERT H ANDREWS JR, University of Illinois College of Medicine, Chicago

*Endoscopic Photography in Otolaryngology and Bronchoesophagology* Motion picture showing the areas visualized by the otolaryngologist in routine examination of the ear, nose and throat. Pictures of the ear drum, the anterior nasal chamber and the postnasal space, the hypopharynx and the larynx are shown as they are seen through the ear speculum and the nasal speculum or with postnasal or laryngeal mirrors Direct views of the larynx, the tracheobronchial tree and the esophagus are shown taken through the laryngoscope, bronchoscope and esophagoscope The normal anatomy and commoner pathologic entities are shown Silent, color, 48 minutes

IRVING REHMAN and PAUL R PATEK, University of Southern California School of Medicine, Los Angeles

*High-Speed X-Ray Motion Pictures of Swallowing and Joint Actions* Motion picture presenting an analysis of swallowing in normal and pathologic states, and bizarre types resulting from partial bulbar palsy or stricture of the esophagus, and a preliminary study of normal joint actions of the upper and lower extremities Silent, 20 minutes

### Motion Pictures on Experimental Medicine and Therapeutics

H SIDNEY NEWCOMER, E R Squibb and Sons, New York, HARRISON FLIPPIN, Philadelphia General Hospital, Philadelphia, T R HELLER U S Public Health Service, Bethesda, Md., and FRANK L. MELENEY, Presbyterian Hospital, New York

*Penicillin Therapy* Motion picture presenting the therapy with penicillin in internal medicine, venereal disease and surgery The principles of penicillin therapy are demonstrated by example and precept both in medicine and in surgery Sound, color, 40 minutes

MICHAEL HENRY STREICHER, University of Illinois College of Medicine Chicago

*The Use of Phthalylsulfathiazole in Chronic Ulcerative Colitis* Motion picture presenting in brief form the pharmacologic aspects of the new intestinal bacteriostatic agent phthalylsulfathiazole. It outlines the toxicology and indicates the dosage of the drug, it presents the clinical indications and presents the results obtained following treatment. It also shows the studies made on the bacteriology of the stools, the blood level concentrations and also stool concentrations Sound, color, 15 minutes

### Motion Pictures on Nervous and Mental Diseases

L M EATON and O T CLAGETT, Mayo Clinic, Rochester, Minn

*Myasthenia Gravis* Motion pictures of patients undergoing tests are presented to illustrate the three general groups of myasthenic symptoms (1) ocular symptoms, (2) bulbar symptoms and (3) generalized weakness with only minimal symptoms of groups 1 and 2 The therapeutic tests with neostigmine, quinine and curare are illustrated The relationship of myasthenia gravis and the thymic tumor is portrayed by pictures of roentgenograms and operative findings Silent, 20 minutes

A E BENNETT and C. B WILBUR, Bishop Clarkson Memorial Hospital, Omaha

*Narcosynthesis Use of Drugs as an Aid in Psychotherapy* Motion picture demonstrating a psychiatric technic which consists in injecting ultra-short acting barbiturates to the point of very light narcosis Patients under the influence of these drugs reproduce and reexperience emotions which are associated with psychic trauma and are more amenable to suggestion. Silent, 20 minutes

S PHILIP GOODHART and BENJAMIN HARRIS BALSER, New York

*Psychoneuroses* Motion picture showing relationship of organic and psychogenic conditions Silent, 10 minutes

*Dystonia Musculorum Deformans* Motion picture showing apparent transition from functional to organic disease Silent, 10 minutes

*Neuro-Ophthalmologic Conditions* Motion picture showing ocular manifestations with pathologic changes in the nervous system Silent, 10 minutes

### Motion Pictures on Orthopedic Surgery

BECKETT HOWORTH, New York

*Dynamic Posture* Motion picture showing that posture is more than the static standing and sitting positions The picture shows the basic dynamic posture and its relationship to the various positions and activities, including studies of the transitions between the positions in walking, running, jumping, dancing, climbing, including steps, and so on with examples of poor and of good dynamic posture. A new concept of posture presenting material not previously presented to a medical audience. Silent, 30 minutes

LAURENCE JONES, Beverly Hills, Calif

*Complete Rupture of Supraspinatus* Motion picture demonstrating basic anatomy of the capsule of the shoulder joint and its relationship to the capsular or 'short rotator" muscles Demonstration of relation between the various structures about the shoulder joint, with diagrammatic representation of supraspinatus rupture and its various sequelae (subdeltoid bursitis and other conditions) Cadaver and actual operative demonstration of simplified surgical reconstructive procedure using a fascial suture. Silent, color, 20 minutes

DONALD T IMRIE and GUY A. CALDWELL, Ochsner Clinic, New Orleans

*Analysis of Muscle Function in Poliomyelitis* (For description see Motion Pictures on Infantile Paralysis)

NICHOLAS S RANSOHOFF, Monmouth Memorial Hospital, Long Branch, N J

*Curare (Intocostrin) in the Treatment of Acute Anterior Poliomyelitis*
(For description, see Motion Pictures on Infantile Paralysis)

### Motion Pictures on Urology

FREDERIC E B FOLEY, St. Paul

*An Artificial Sphincter A New Operation and Device for Control of Urinary Incontinence* Motion picture showing cutaneous tunnel operation, design and construction of the artificial sphincter (pneumatic incontinence clamp) and inflating device for the pneumatic incontinence clamp demonstration of incontinent patients use of the artificial sphincter Silent, 20 minutes

ROGER W BARNES and R. THEODORE BERGMAN, College of Medical Evangelists, Los Angeles

*Surgical Treatment of Vesical Diverticula* Motion picture of preoperative cystogram of large vesical diverticulum which does not drain Operative technic for removal of large vesical diverticula, indicating how the mucosa of the diverticulum only is removed through a wide exposure of the interior of the diverticulum The entire diverticular sac is not removed This greatly simplifies the procedure and reduces shock, infection and operative risk. Silent, color, 12 minutes

### Motion Pictures on Gastro-Enterology and Proctology

LEO L HARDT FREDERICK STEIGMANN, MORRIS WEISSMAN and ERNEST C OLSON, Loyola University School of Medicine, Municipal Tuberculosis Sanitarium, Cook County Hospital, Illinois Central Hospital and Henrotin Hospital, Chicago

*Gastroscopic Studies in the Diagnosis and Treatment of Gastric Diseases* Motion picture of a typical gastroscopy clinic, showing technic and passing the gastroscope, also pictures as seen through the gastroscope. Silent, color, 20 minutes

ASHER WINKELSTEIN, FRANKLIN HOLLANDER, JOSEPH BANDES and ALBERT CORNELL, Mount Sinai Hospital, New York

*Intragastric Drip Therapy for Peptic Ulcer* Motion picture showing the modern physiologic interpretation of ulcer therapy and describing in detail the technic and results of intragastric drip therapy Sound, color, 40 minutes

### Motion Pictures on Anesthesiology

RALPH T KNIGHT, University of Minnesota, Minneapolis

*The Use of Curare in Anesthesia with Cyclopropane* Motion picture showing the effects of the administration of curare on 4 patients a patient without operation showing the effect of relaxation of the abdominal musculature and of the muscles of respiration, a gynecologic case showing opening of the abdomen, a resection of the colon and a gallbladder operation Silent, color, 30 minutes

PHYLLIS HARROUN and FREDERICK E BECKERT, University of California Hospital, San Francisco

*The Use of Curare with Nitrous Oxide Anesthesia for Thoracic Surgery* Motion picture showing the progress of an intrathoracic operation under nitrous oxide anesthesia with curare It includes the equipment used for this type of anesthesia, the patient properly medicated, induction, administration of curare, intubation and the setup for maintenance Record of pulse, blood pressure and respiration during anesthesia and electrocardiograms before and after administration of curare are shown Silent, color, 39 minutes

### Motion Pictures—United States Army

*Removal of Magnetic Foreign Bodies from the Eye*
*Trench Foot*
*Neurosurgery in an Overseas General Hospital*
*Convalescent Care and Rehabilitation of Patients with Spinal Cord Injuries*
*Thoracic Surgery Part I Hemothorax, with a Consideration of Specific Remedial Breathing Exercises*
*Thoracic Surgery Part II Foreign Bodies in the Lung and Mediastinum*
*Thoracic Surgery Part III Foreign Bodies in the Pericardium and Heart*
*Meet McGonegal*
*Anterior Acrylic Bridgework*
*Dental Health*
*Demonstration of the Effects of the Invisible Force Which Can Prevent Man's Escape from Spinning Aircraft*
*Construction and Use of Provisional Prostheses Part I Upper Extremity Part II Lower Extremity*
*Half a Chance (Athletic Capabilities of an Amputee)*
*Diary of a Sergeant*
*The Evacuation Hospital*
*Medical Service in the Invasion of Normandy*
*The Human Centrifuge*
*Explosive Decompression*
*The Hospital Train*
*The General Hospital*
*The Army Nurse*
*Schistosomiasis*
*Let There Be Light* (NP)
*Strictly Personal* (WAC)
*Control of Louse-Borne Diseases*
*Easy to Get*
*Ward Care of Psychotic Patients*
*Personal Health in The Jungle*
*Figures Don't Lie (WAC)*
*Pick Up*
*DDT—Weapon Against Disease*
*Avon Farms Program or Amputation of the Lower Extremities*
*Development of the Human Pick-Up*
*G Facts*
*Medical Service in the Jungle*
*Personal Health in the Jungle*
*Explosive Decompression*

### Motion Pictures—United States Navy

*Hemolytic Streptococcus Control* Motion picture stressing the need for more careful diagnosis of streptococcus cases in sick bay and use of better control measures in barracks and dispensaries, especially during epidemics Sound, 12 minutes.

*Tsutsugamushi—Prevention* Motion picture describing the work of the Medical Department in combating scrub typhus It explains methods for impregnation of clothing, clearing of camp sites, use of repellents and other preventive measures. Sound, 46 minutes

*Eye Surgery—Removal of Intraocular Foreign Bodies* Motion picture giving complete technical details for locating and removing both metallic and nonmagnetic bodies from the eye Sound, color, 15 minutes

*Eye Surgery—Field Management of Eye Injuries* Motion picture demonstrating the removal of pterygium using local anesthesia, the removal of chalazions, the treatment of wounds lacerating the cornea or penetrating it, the removal of intra ocular foreign bodies and enucleation of a badly injured eye. Sound, color, 20 minutes

*Early Care of Plastic Surgical Cases* (a) *Wounds of the Hand* Sound, color, 20 minutes (b) *Wounds of the Face and Jaw* Sound, color, 20 minutes Two motion pictures illustrating the basic theme that good end results of plastic surgery must be based on the proper handling of plastic surgical cases in the combat zones Surgical work on casualties during the battle for Germany provide realistic examples

*Plastic Surgery of the Hand* Motion picture illustrating the basic principles of traumatic surgery of the hand and the complexities of elective surgery in hand construction. The restoration of function is underlined as the primary goal Sound, color, 20 minutes

*Plastic and Reconstruction Surgery of the Hand* Motion picture showing early traumatic wounds of the hands, methods of elective surgery of the hands and, finally, cases showing late reconstructive hand surgery Basic rules and principles for hand surgery are demonstrated. Sound, color, 35 minutes.

*Plague Control* Motion picture presenting the chief clinical types of plague, the type of environment in which plague tends to flourish and rat control measures Methods for combating the spread of plague both in rats and in man are emphasized. Sound, color, 25 minutes

### Motion Pictures on Infantile Paralysis

NATIONAL FOUNDATION FOR INFANTILE PARALYSIS, New York

*Physical Testing* 25 minutes

*Muscle Testing* 10 minutes

*Electromyographic and Ergographic Studies on Muscle Action* 10 minutes

*Treatment of Infantile Paralysis* 20 minutes

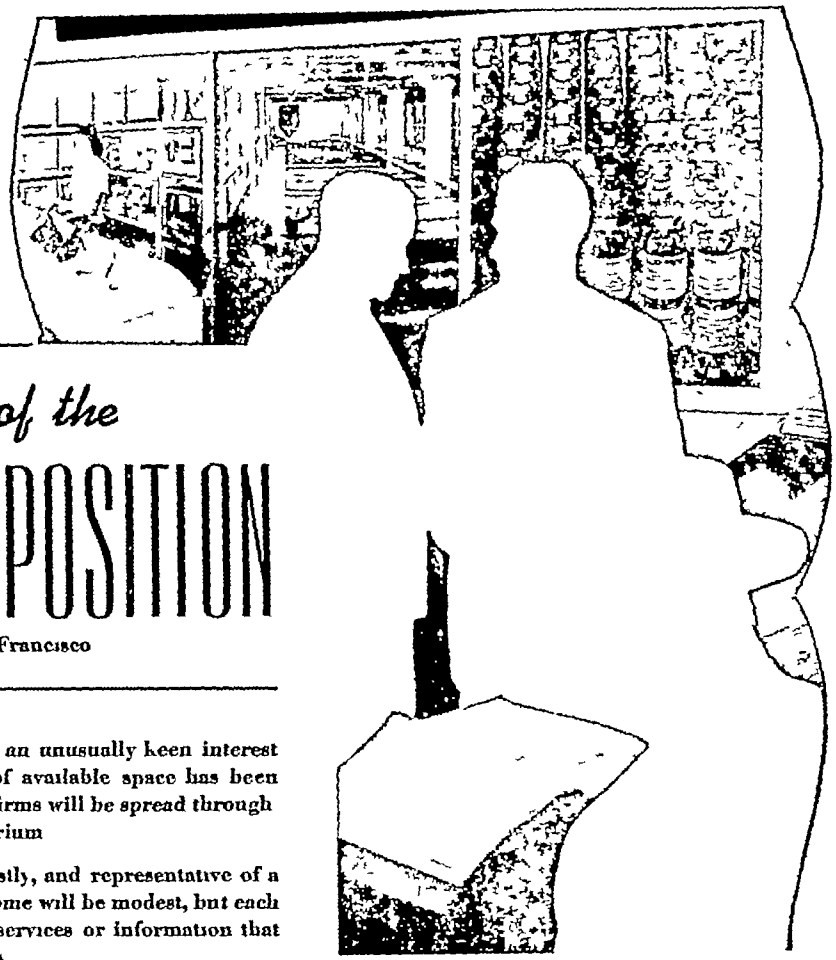
DONALD T IMRIE and GUY A. CALDWELL, Ochsner Clinic, New Orleans

*Analysis of Muscle Function in Poliomyelitis* Motion picture showing a case of severe paralysis The muscle function test is demonstrated The patient's gait is analyzed and correlated with the pattern of paralysis Crutches and braces are used and again the gait is studied Silent, color, 25 minutes

NICHOLAS S RANSOHOFF, Monmouth Memorial Hospital, Long Branch, N J

*Curare (Intocostrin) in the Treatment of Acute Anterior Poliomyelitis*

Motion picture showing the progress of the disease in the 25 cases of acute anterior poliomyelitis Method of giving Intocostrin, myographic studies showing spasm in acute anterior poliomyelitis and its control, and the physical therapy technics used in the treatment with the end results are included Sound, color, 40 minutes



# *Highlights of the* TECHNICAL EXPOSITION

Civic Auditorium, San Francisco

This year, manufacturers have shown an unusually keen interest in the Technical Exposition Every bit of available space has been taken and the exhibits of more than 200 firms will be spread through out three floors of the great Civic Auditorium

Some of the exhibits will be large, costly, and representative of a vast amount of work and investigation, some will be modest, but each and every one will feature products or services or information that has a live interest for the profession today

To indicate the vast amount of information available to the visiting physician, it may be pointed out that, from the pharmaceutical industry alone, more than 50 manufacturers will bring exhibits of important products. Leading manufacturers of apparatus, instruments, and x ray machines will have big showings of new and standard items Special dietary products and infant feeding materials will be presented in the light of today's knowledge. And publishers will make it possible for you to see at first hand almost any or all books of interest.

Plan to visit the exhibits, not merely one day, but every day In the Exposition Hall will be found general registration, alumni registration, post office, information bureau, lounge, transportation desk and other convenient services, adjacent (in the west end of the auditorium, 1st and 2nd floors), are the Scientific Exhibits.

Following are brief, advance notices which tell what to expect when visiting the Technical Exposition The Exposition will run from Monday, July 1 to noon Friday, July 5, daily hours, from 8.30 A.M to 6·00 P M

THOS R GARDINER
*Business Manager and Director of Exhibits*

- *Apparatus and Instruments*
- *Diagnostic Equipment*
- *Dietetic Products*
- *Medical Books*
- *Office Furniture*
- *Pharmaceuticals*
- *Special Apparel*
- *Surgical Supplies*
- *Toilet Preparations*
- *X-Ray and Radium*
- *Miscellaneous*

## *Apparatus and Instruments*

### ADEL PRECISION PRODUCTS CORPORATION

The Adel Clinical Color Camera and Surgiscope are solutions to the problems of taking proper color photos of clinical and operative techniques. The Adel Camera with the surgiscope provides sterile method for taking a series of precise color reproductions of the surgical field See the exhibit in booth 2

### A S ALOE COMPANY

In booth H-17 will be shown a representative cross section of a complete line of surgical instruments equipment and supplies Featured will be Aloe STEELINE treatment room equipment In addition, a wide selection of American made chrome and stainless steel instruments will be on display so that the surgeon may "browse" among them at his leisure

### AMERICAN CYSTOSCOPE MAKERS INC

The American Cystoscope Makers Inc exhibit will feature a complete line of electrically lighted telescopic diagnostic and operative instruments such as Cystoscopes Resectoscopes, Thoracoscopes Buddock Peritoneoscopes Decker Culdoscopes, as well as electro-surgical and electromedical equipment A special display will feature A.C.M.I woven and rubber catheters and the 1946 model A C M I diagnostic set Visit booth LL-24

### AMERICAN STERILIZER COMPANY

An entirely new model of the MacEachern Obstetrical Table will be featured at booth G 1 Demonstrations with a live model on this new Obstetrical Table the American Operating Table Model 1075 and the Albee-Comper Fracture Table will clearly show all that can be accomplished on this superior line of surgical equipment. Your attendance is cordially invited

*(Continued on next page)*

### C R BARD INC

If you ever have occasion to use Catheters of any description you cannot afford to miss the Bard exhibit at booth LL-7 It demonstrates that American manufacturers have succeeded in producing urological instruments superior to those made abroad The exhibit displays a complete line of woven Catheters manufactured in this country including new types designed for continuous caudal and spinal analgesia

### BARNETT OPTICAL LABORATORIES

The new Copeland Super-Viewer designed to accept photo-transparencies in sizes ranging from the standard 2" x 2" to 3¼" x 4¼" will be on display in booth H-26 This viewer will be of special interest to biological photographers who specialize in the standard lantern slide—size 3¼" x 4"

### BAUSCH AND LOMB OPTICAL COMPANY

The Bausch and Lomb exhibit will include, among other things modern diagnostic instruments, the Poiser Slit Lamp and the Ortho-Lite operating lamp Also information about the Bausch and Lomb Industrial Vision Service which includes every facility for determining the visual performance of employees Visit booth 12

### BECTON DICKINSON & CO

Featured in Becton Dickinson s booths H-5 and H-7 will be the complete line of Vacutainer equipment Representatives will demonstrate this new method of taking blood specimens for all purposes With the regular line of hypodermic equipment will be shown recently developed outfits for administering continuous caudal and continuous spinal anesthesia

### THE CALIFORNIA DARLINGTON COMPANY

The new electrically operated Beem *Hospital Bed is equipped with a standard* flush toilet lavatory with hot and cold water and drain retractable trapeze lights and many other functions all of which are concealed Stop and see it in booth I-22 \

### CAMERON SURGICAL SPECIALTY COMPANY

See the new Cameron Electro-Surgical Units, Coagulair-Sigmoidoscope Electro-Diagnostosets Flexible Gastroscopes, Bronchoscopes - Esophagoscopes - Laryngoscopes, Mirrolite, Binocular Spectacle Loupe Magniscope and other specialties developed for your postwar diagnosis, treatment and *surgery in booth H-13 All products avail*able for prompt delivery

### WILMOT CASTLE COMPANY

Most all of the Sterilizers and Operating Lights which the Castle Company is now *manufacturing will be on exhibit in their* 30 foot space booths A-26 and A 28 Equipment which will interest both the practitioner for his office and for the surgeon and specialist for institutional work will be displayed

### WARREN E COLLINS INC

You are cordially invited to visit booth I-38 where the first postwar showing of respiration apparatus will be on display The exhibit features the Drinker-Collins Respirator the Collins Oxyflo Oxygen Tent, the Drinker-Collins Infant Respirator the Benedict-Roth Water Metabolism Apparatus and the Collins Vitalometer

### CONTINENTAL HOSPITAL SERVICE

This exhibit will feature the Continental-air iceless oxygen tent with automatic temperature control, indicated for individual air-conditioning for bedside as an air therapy chamber for the removal of airborne irritants Visit booth LL-11 on the lower level

### THE DEVILBISS COMPANY

Modern instruments for spray application *oral inhalation, powder insufflation,* local application and steam inhalation will be on display at booth D-7 Representatives will welcome the opportunity to demonstrate and explain the outstanding features of the DeVilbiss line

### E & J MANUFACTURING COMPANY

The E & J Manufacturing Company will exhibit the latest developments in the F & J Resuscitator Inhalator and Aspirator You are cordially invited to witness interesting demonstrations of resuscitation by both mask and intratracheal catheter in booth I-9

### J H EMERSON COMPANY

In booth I-19 will be shown the latest models of the Emerson Resuscitator, including units for use by small hospitals and physicians the Emerson Respirator with late features including two attachments for carrying on breathing while the respirator is open for hot pack application or other physical therapy the Hot Pack Apparatus which heats moistens and wrings them out in two minutes

### THE FOREGGER COMPANY INC

The Foregger Company booth 10 will exhibit some new developments in Endotracheal equipment including a new type interchangeable folding Laryngoscope Bronchoscope-Catheter with Light and Oxygen Tube for open-chest surgery A new development in Anesthesia Apparatus containing some unique features will be shown as well

### HANOVIA CHEMICAL & MFG CO

This exhibit will feature self-lighting type Ultraviolet Quartz Lamps for orificial and general body irradiation Safe-T-Aire Quartz Lamps for the destruction of air-borne bacteria will also be displayed Ask for details about this new source of application Competent and courteous representatives will be in booth C-13 to demonstrate and explain these items

### ILLE ELECTRIC CORPORATION

The demonstration in booth C-30 will show how the care of infantile-paralysis arthritis and other disabling conditions can be greatly improved by hydromassage subaqua therapy tanks An improved 'Mobile Whirlpool Bath Mobile Sitz Bath Chair, Paraffin Bath and Folding Thermostatic Bed Tent will also be displayed

### KEYSTONE VIEW COMPANY

The exhibit at booth 4 will show latest technics in visual training Of a special interest will be the new Colordepth Trainer giving stereoprojection with the *Keystone Overhead Projector and a standard* screen New innovations in home training material will also be on display

### KIDDE MANUFACTURNIG CO INC

The Kidde exhibit in booth C-22 consists *of the plastic $CO_2$ Snow Maker plastic* applicators for applying the Snow and $CO_2$ Refill Cartridges for the Apparatus The Kidde Dry Ice Apparatus makes cryotherapy safe simple and easy to apply thus eliminating former objections to the use of this long recognized therapy

### THE LIEBEL FLARSHEIM COMPANY

It will be a privilege for the Liebel Flarsheim Company to exhibit their latest model BOVIE electrosurgical units and short wave diathermies The company and its representatives cordially invite you to visit booth H-15 for examination and demonstration of the latest developments in electrosurgical and diathermy apparatus

### THE LINDE AIR PRODUCTS COMPANY

The LINDE oxygen USP and LINDE oxygen therapy regulating equipment will be presented at booth G-9 Aspects of oxygen therapy of special interest to physicians will be a feature of the exhibit. The LINDE R-50 all-purpose oxygen therapy *regulator and the LINDE L-14 float type* flowmeter will be displayed

### MACALASTER BICKNELL COMPANY

This exhibit in booth LL-2o will feature the Fenwal System for the simplified prep*aration, storage and administration of* parenteral fluids reusable equipment for whole blood collection processing to plasma storage and administration a unique consolidated Tube and Needle Set featuring a single vent tube and expendable tubing. Your inspection is cordially invited

### THE MAICO COMPANY INC

The Maico Company will feature a new inverted tonal emphasis the Stethetron permitting selective amplification of body sounds Operating on a principle of inverted tonal emphasis the Stetheton permits emphasis of particular sounds while subduing extraneous sounds to convenient levels of comparison See it in booth F 26

### V MUELLER & COMPANY

The remarkable new Eder Gastroscopes both the Flexible and the Flexi Rigid models will have a prominent place in the V Mueller & Company exhibit in booth G-14 You are invited to examine these *greatly improved diagnostic instruments* The display will also include a large selection of new developments in instruments for special surgery of all types

### ORTHOPEDIC FRAME COMPANY

*The Stryker Cast Cutter will be demon*strated in booth LL-3 This electric saw does not rotate but oscillates thus cutting the cast which is rigid but not the padding and skin beneath which gives with the oscillations The Stryker Turning Frames now available for civilian use will also be demonstrated

### THE PELTON & CRANE COMPANY

You are invited to visit display booth C-19 At this showing Pelton offers no *startling innovations as all available* facilities and materials are being devoted to one end—a desperate effort to meet your overwhelming demands for our already established items of professional equipment

### THE PROMETHEUS ELECTRIC CORP

New developments in Food Conveyors Tray Trucks Sterilizers and Operating Lights are featured at the Prometheus Electric Corporation exhibit in booth E 9 *Materials such as stainless steel bronze* and live rubber which have long been unobtainable for use in this type of equipment make a welcome *reappearance*

## Exhibitors

| | | |
|---|---|---|
| Abbott Labs North Chicago | C 6 & C 8 | |
| Adel Precision Products Corp Los Angeles | 2 | |
| Allergen Proof Encasings Inc Cleveland | LL-9 | |
| Allison Co W D Indianapolis | So ½ I 22 | |
| Almay Inc N Y C | I 15 | |
| Aloe Co A S St Louis | H 17 & H-19 | |
| American Can Company N Y C | F 11 | |
| American Cystoscope Makers Inc N Y C | LL-24 | |
| American Hospital Supply Corp Chicago | H 27 | |
| Amer Optical Co Southbridge Mass | F 1 & F 3 | |
| American Safety Razor Corp Brooklyn | LL-15 | |
| Amer Seal Kap Corp L I City N Y | H 9 | |
| American Sterilizer Co Erie Pa | G 1 | |
| Ames Company Elkhart Indiana | C 42 | |
| Arlington Chemical Co Yonkers N Y | A 2A | |
| Armour Labs Chicago | I 11 & I 13 | |
| Ayerst McKenna & Harrison N Y C | D 13 | |
| Aznoe s Woodward Med. Pers. Bur Chicago | I 8 | |
| Baker Labs Cleveland | E 12 | |
| Bard C. R Inc New York N Y | LL-7 | |
| Barnett Optical Labs Chicago | H 26 | |
| Bauer & Black Chicago | C-44 | |
| Baum Co W A N Y C | C 15 | |
| Bausch & Lomb Optical Rochester N Y | 12 | |
| Baxter Don Glendale 1 Calif | C 28 | |
| Beck Lee Corporation Chicago | F 9 | |
| Becton Dickinson Rutherford N J | H 5 & H 7 | |
| Best Foods N Y C | F 15 | |
| Bilhuber Knoll Corp Orange N J | E 7 | |
| Blakiston Company Philadelphia | B 1 & B 3 | |
| Borden Company N Y C | F-4 24 & 26 | |
| Breon & Co Geo A Kansas City 10 Mo | I 17 | |

### THE PYRAMID RUBBER COMPANY

See the Modern Evenflo Nursers in booth C 18 which embody one of the most important improvements in nursing equipment in years Their valve action nipple enables normal and subnormal babies to nurse better and get more benefit from their food And the modern self-contained Evenflo with its nipple bottle cap all-in-one unit sanitarily seals both the formula and the nipple

### RITTER COMPANY INC

On exhibition in booths 7 and 9 are the Ritter shockproof x-ray Ritter compress with instruments Ritter Motor Chair the Ritter Shockproof x-ray Ritter compressor Ritter Rest and Relief Stool Ritter Mobilrest Stool Ritter Fluorescent Light Ritter Sterilizer and Ritter Bone Surgery Engine

### SAFETY GAS MACHINE CO INC

In booth F-36 the Safety Gas Machine Co Inc is showing for the first time their new Cabinet Gas Apparatus which has some novel features They will also display their well known Augustana Models Representatives invite you to discuss your anaesthetic problems with them

### SHAMPAINE COMPANY

The Shampaine Company manufacturers of physicians and hospitals surgical furniture will feature their Steelux Examining and Treatment Tables Steelux Instrument Cabinets the well known Martin All-Purpose Hydraulic Chair-Table as well as the celebrated Perfection Major Operating Table in booth F-16 Factory representatives qualified to discuss all equipment problems will be on hand

### J SKLAR MANUFACTURING COMPANY

The exhibit in booth C 5 will feature an extensive display of American made stainless steel surgical instruments with particular emphasis given to various interesting special instruments produced exclusively by Sklar Hospital models of suction and pressure apparatus will also be shown

### C M SORENSEN CO., INC

The latest models of Ear Nose and Throat Equipment (treatment as well as surgical units) will be displayed in booth H 34 The DeLuxe will be furnished with coagulator and cutting current. Operating-room equipment has explosion-proof features Also on display will be the recently acquired Syfogen Naso-Therapy Units

### TAYLOR INSTRUMENT COMPANIES

See the animated Jumbo Tycos in booth H-12 which shows the internal construction of this blood pressure instrument and tells you why the Tycos remains accurate after years of continuous service Try out the popular Tycos hook type cuff on the model arm display to convince yourself how much faster and easier it is to use

### THE TECHNICON COMPANY

The Autotechnicon and Scopicon will be featured in booth F-23 The Autotechnicon is a machine for the automatic processing and staining of tissues The Scopicon is a microslide and transparency projector of uncommon versatility and efficiency Also on display will be a new cardiograph

## Diagnostic Equipment

### W A BAUM COMPANY INC

The finest Baumanometers ever made are now available in all their pre-war perfection All of the well-known models of the Lifetime Baumanometer will be on display A cordial invitation is extended to all doctors in attendance to inspect these master intruments at booth C-15

### BECK LEE CORPORATION

Keynoting fundamental accuracy in cardiac diagnosis the Beck-Lee Electrocardiograph exhibit will dramatize the essential criteria by which these scientific instruments must be judged Fundamental requirements including the quartz-string Einthoven galvanometer and independent timing by light will be graphically demonstrated at booth F-9

### CAMBRIDGE INSTRUMENT COMPANY INC

At booth A-13 will be exhibited the Cambridge Simplitrol Portable Electrocardiograph Cambridge Simplitrol Portable Electrocardiograph - Stethograph - Pulse Recorder also the Cambridge Plethysmograph which pneumatically records graphically the varying size of an extremity as determined by the state of fulness of its blood vessels

### THE MALTINE COMPANY

Thromboplastin Maltine the newest product to be released from the research laboratories of The Maltine Company will be displayed in booth A-11 Thromboplastin-Maltine was developed for use in clinical laboratories to determine the prothrombin clotting time of blood Prepared for diagnostic use only it is more potent and stable than thromboplastins formerly available

### SANBORN COMPANY

A complete demonstration of the new Sanborn "direct-writing electrocardiograph the Viso-Cardiette will be provided for visitors at booth E-2 You may experience the simplicity of this instrument s operation You will see the recording of the heart impulse on the instant it occurs and will be able to take with you the finished and permanent cardiogram

## Dietetic Products

### AMERICAN CAN COMPANY

You are cordially invited to visit the American Can Company s exhibit in booth F-11 where information will be available concerning those aspects of commercially canned foods which are of particular interest to the Medical Profession The American Can Company s new composite fibre-metal can for frozen foods will be featured in this exhibit.

### AMERICAN SEAL KAP CORPORATION

Booth H-9 will have a display explaining Enzylac a milk of low curd tension its methods of production and dietary significance

### THE BAKER LABORATORIES

Representatives will be in attendance in booth E-12 to welcome you and to discuss with you the merit of Baker s Modified Milk and Melodex The former is a completely prepared milk formula while Melodex (maltose and dextrin) is a low-cost carbohydrate in dry form made especially for use in the preparation of evaporated and fresh milk formulas

### THE BEST FOODS INC

In booth F-15 The Best Foods Inc will exhibit Nucoa the wholesome nutritious vegetable margarine which contains 15 000 units of Vitamin A to the pound Also on exhibit will be the famous Best Foods and Hellmann s Real Mayonnaise Representatives will welcome questions about the products

### CARNATION COMPANY

Be sure to visit the Carnation Company booth I-19 where you will see an attractive display presenting some interesting information on the various uses of Carnation Vitamin D Evaporated Milk for infant feeding child feeding and general diet purposes The method by which Carnation Milk is generously fortified with Vitamin D—400 U S P Units per reconstituted quart—will be explained Valuable literature will also be available for distribution

### CEREAL INSTITUTE INC

In booth H-25 the Cereal Institute Inc will present three factual topics of timely interest (1) An evaluation of cereal proteins in the national dietary demonstrating the importance of the grains as protein sources (2) The nutritional composition of breakfast cereals (3) A basic breakfast pattern as a step toward re-educating the public to the eating of an adequate morning meal

### THE DIETENE COMPANY

Completely new diets for use with Dietene s Accessory Feeding and Dietene Reducing Supplement will be on display in Booth G-16 These new diets are up to-date from a nutritional standpoint and are arranged to make it simple for patients to follow their diet with the least amount of special food preparation

### EVAPORATED MILK ASSOCIATION

You are cordially invited to register for a free copy of the new manual for physicians on the use of evaporated milk in infant feeding This booklet includes discussions of the significance of vitamin D fortification in pediatrics construction of infant feeding formulas feeding of newborns and of infants under special conditions supplementary foods complementary feedings and other phases of infant feeding Other material on the dietary uses of evaporated milk is available in booth C-10

### GENERAL FOODS CORPORATION

At long last Sanka the famous decaffeinated coffee is being introduced in instant form Not yet marketed Instant Sanka will be previewed at the A M A Convention You are cordially invited to be one of the first to try it. Just step over to Booth C-35 and enjoy a cup of delicious Instant Sanka the coffee that lets you sleep

### GERBER PRODUCTS COMPANY

You are cordially invited to visit the Gerber Baby exhibit This will include two ready-to-serve highly nutritious baby cereals a wide variety of Strained Foods for the infant Chopped Junior Foods for the toddler and Gerber s professionally

## Exhibitors

Bristol Labs N Y C C 38
Burdick Corp Milton Wis A 17 & A 19
Burroughs Wellcome & Co N Y C F 24

California Darlington Los Angeles E ½ I 22A
Cambridge Instrument Co N Y C A 13
Camel Cigarettes N Y C H 21 & H 30
Cameron Surgical Specialty Co Chicago H 13
Camp & Company S H. Jackson Mich E 13
Canad. Radium & Uranium Corp N Y C. LL 18
Carnation Company Milwaukee I 19
Castle Wilmot Rochester N Y A 26 & A 28
Cereal Institute Chicago 3 Ill H 25
Church & Dwight Co N Y C 14
Ciba Pharma Prods Summit N J C 33
Coca Cola Company Atlanta I 20
Collins Warren E Boston F 38
Colwell Publishing Co Champaign Ill A 30
Commercial Solvents Corporation N Y C H 23
Conformal Footwear Co St Louis F 34
Continental Hospital Service Cleveland LL-11
Cream of Wheat Corp Minneapolis F 21
Cutter Laboratories Berkeley Calif G 6 & G 8

Davies Rose & Co Boston A 2
Davis Company F A Philadelphia 3 Pa D 5
Davis & Geck Brooklyn N Y I 1A & F 10
Day s Ideal Baby Shoe Co Danvers Mass F 7
Denver Chemical Mfg Co N Y C F 28
DePuy Mfg Co Warsaw Ind A 16
Devereux Schools Devon Pa S ½ I 22
DeVilbiss Company Toledo D 7
Dietene Company Minneapolis G 16

edited service literature for young mothers Trained representatives will be in attendance to supply your requirements in booth F-27

### CHR HANSEN'S LABORATORY INC

In booth G-10 enlarged photos will illustrate the action of the rennet enzyme in forming softer finer milk curds Free literature describes dietary uses of rennet-custards in infant child, convalescent or postoperative feeding Complimentary packages of Junket' Rennet Powder and 'Junket Rennet Tablets will be presented to physicians who register

### H J HEINZ COMPANY

H J Heinz Company will display their complete line of Strained Foods for infants and Junior Foods especially designed for intermediate feeding in booth G-1 Their representatives would appreciate your recommendations regarding these foods Register for the new 12th edition 'Nutritional Charts 'The Nutritive Value of Vegetables' Nutritional Observatory', "Special Dietary Foods Book and 'Your Baby s Diary and Calendar"

### KELLOGG COMPANY

Kellogg s famous ready-to eat cereals important foods in normal and restricted diets will be displayed in booth D-11 All of these cereals contain valuable whole grain nutrients either natural or restored A new Diet Manual and Nutritive Value Charts will be available at the Kellogg booth

### LIBBY McNEILL & LIBBY

Libby s Strained and Homogenized Baby Foods will be featured at booth H-20 Physicians are invited to stop and discuss new findings on the greater availability of iron and ease of digestion of Libby's Council accepted foods for babies

### MEAD JOHNSON & COMPANY

Almost every physician thinks of Mead Johnson & Company as the maker of Dextri-Maltose Pablum Oleum Percomorphum and other infant diet materials—including the new precooked oatmeal cereal Pabena But not all physicians are aware of the many helpful services this progressive company offers physicians A visit to booths I G S, D-15 or C-16 will be time well spent

### M & R DIETETIC LABORATORIES INC

Similac, a modified powdered food for infants deprived either partially or entirely of breast milk will be displayed by M & R Dietetic Laboratories in booth C-1 Experienced representatives will be pleased to discuss the application of this product for both the normal and special feeding case

### NATIONAL ASSOCIATION OF MARGARINE MANUFACTURERS

Physicians proponents of good nutrition, will be interested in the scientific facts about margarine as a source of fat in the diet The National Association of Margarine Manufacturers have had their scientific consultants prepare a booklet which tells the factual basis for the assertion that margarine is a better table fat than butter Get one at booth 18

### NATIONAL DAIRY PRODUCTS COMPANY INC

A newcomer in the field of infant feeding FORMULAC, is a concentrated milk in liquid form completely fortified with those vitamins and minerals essential to normal sturdy growth National Dairy Products Co, Inc invite you to stop at booth C-27 for information on the clinical testing content and recommended employment of this food, or to ask for professional samples

### NATIONAL LIVE STOCK AND MEAT BOARD

You are invited to visit the National Live Stock & Meat Board booth H-32 and see the completely revised Food Value Charts The second edition of the "Nutrition Yardstick featuring plastic slides and other informative material on nutrition will also be displayed

### NESTLE S MILK PRODUCTS INC

Lactogen a powdered milk product and Dextrogen a liquid milk product for infant feeding will be featured in booths F-20 and F-22 Nestle s also presents 'Nutrition Briefs' a quarterly publication containing abstracts of the current literature on nutrition and "Your Baby's Record a valuable record for baby's first four years of life

### PET MILK SALES CORPORATION

A complete display of material will illustrate the time saving Pet Milk services available to physicians Specially trained representatives will be in attendance in booth I-13 to give you information about the production of Pet Milk and its use for infant feeding Miniature cans will be given to physicians visiting the exhibit

## Medical Books

### THE BLAKISTON COMPANY

An exhibit of unusual interest will be at booths B-1 and B-3 Diseases of the Retina, by Herman Elwyn will be on display War Neuroses, Men Under Stress, and Dr Bradley M Patten's Human Embryology are some of the new titles to be shown Physicians are invited to consult company representatives at the booth regarding new publications

### COLWELL PUBLISHING COMPANY

In booth A-30 the Colwell Publishing Company will feature the Daily Log for physicians, designed by a physician as a complete, compact record of the business side of a practice Experienced attendants will demonstrate the Daily Log and other aids to practice management

### F A DAVIS COMPANY

You are invited to visit booth D 5 and leisurely examine the F A Davis Company books Among the new ones are Alpers 'Clinical Neurology' Albee 'Surgery of the Spinal Column, McCrea 'Clinical Cystoscopy Urology Pillmore Clinical Radiology and the Cyclopedia of Medicine"

### GRUNE & STRATTON INC

Visit the exhibit in booth A-7 An Annual Review called PROGRESS IN NEUROLOGY AND PSYCHIATRY is the result of collaboration of more than 50 authorities in the field Urbach & Gottlieb s standard work ALLERGY is out in a revised second edition MONGOLISM AND CRETINISM by Benda is one of the important and challenging monographs of the year

### PAUL B HOEBER INC

See dummies of these forthcoming books, *Elman s* Parenteral Alimentation in Surgery, *Mengert s* Post Graduate Obstetrics, second editions of *Nielsen s* Textbook of Clinical Neurology New Publications second edition of *Nielsen s* Agnosia Apraxia, Aphasia *Cantor s* Ambulatory Proctology, *Fowler s* Hematology and many others. Visit HOEBER booth C-12 and browse around

### LEA & FEBIGER

This exhibit will feature in booth B 5 among some new works Soffer s "Diseases of the Adrenals', Quiring s "The Extremities Olkon s 'Essentials of Neuro-Psychiatry', Burch and Winsor s 'Primer of Electrocardiography" New editions will be shown of Katz s 'Electrocardiography' Katz s 'Exercises in Electrocardiographic Interpretation' Levinson and Macfate's 'Clinical Laboratory Diagnosis" Kovacs' Electrotherapy and Light Therapy"

### J B LIPPINCOTT COMPANY

You are cordially invited to visit the exhibit of Lippincott Selected Professional Books in booths B-6 and B-8 where many interesting new books and new editions of outstanding importance will be available for your inspection Trained personnel will be on hand to help you make a choice of books to meet your current needs

### THE MACMILLAN COMPANY

Visit this exhibit where books in medicine surgery and allied fields will be featured and available for your examination Among the many important books, in booth F-12, will be Nicola ATLAS OF SURGICAL APPROACHES TO BONES AND JOINTS Quigley PLASTER OF PARIS TECHNIQUE Napier PRINCIPLES AND PRACTICES OF TROPICAL MEDICINE

### THE C V MOSBY COMPANY

A complete line of medical publications including the following new books and new editions will be displayed Clendening Hashinger 'Methods of Diagnosis', Key Conwell "Fractures, Dislocations and Sprains , Tassman 'Eye Manifestations of *Internal Diseases*', Polyak *'The Human* Ear in Anatomical Transparencies', Sadler "*Modern Psychiatry*" Banyai *"Pneumoperitoneum Treatment'* You are cordially invited to visit booths 8-A and A 5

### OXFORD UNIVERSITY PRESS, NEW YORK INC

The Press from now on will carry a complete stock of every English medical publication and hopes to expand at the same time as a publisher of the better American medical monographs Visit the display in booth A-15

### W B SAUNDERS COMPANY

This publishing house will display in booths B-2 and B-4 an unusually number of new books and new editions, including Hyman's 4-volume work An Integrated Practice of Medicine , Bockus' 3-volume work on "Gastro-enterology" new (5th) edition of Beckman s 'Treatment 1946 Mayo Clinic Volume Allen, Barker & Hines 'Peripheral Vascular *Diseases*', and many others

### J W STACEY INC

In the West it s Stacey s for medical books and a visit to booth G-14 will explain why Here in addition to the customary textbooks you will find an interesting display of unusual and specialized mono-

## Exhibitors

Drug Products Co N Y C C 25
Dublin Laboratories (U S Vita) N Y C LL 22
Duke Laboratories Stamford Conn H 10
DuPont de Nemours & Co E J Wilmington 2539 Nemours Bldg LL-6 & LL 8
Durex Products Inc. New York City LL-10

E & J Mfg Co Phila I 9
Eastman Kodak Rochester 4 N Y 23 & 25
Eaton Laboratories N J C H 6 & H 8
Edwards J & Company Philadelphia LL 5
Emerson Company J H Cambridge Mass F 19
Endo Products Richmond Hill N Y G 3
Ethicon Suture Labs New Brunswick N J A 4
Evaporated Milk Association Chicago C 10

Fischer & Company H G Chicago C 37
Flint Eaton & Company Decatur Ill C 34
Foley Mfg Co Minneapolis F 18
Foregger Co N Y C. 10
*General Elec X Ray Chicago 28 30 32 34 36*
General Foods N Y C S ½ C 35
Gerber Products Company Fremont Mich F 27
Gomco Surg Mfg Corp Buffalo C-46
Cradwohl Laboratories St Louis 3 1
Grune & Stratton N Y C. A 7

Hamilton Mfg Company Two Rivers Wis. 21
Hanovia Chem & Mfg Co Newark 5 N J C 13
Hansen Chr Little Falls N Y G 10
Harrower Laboratory Glendale Calif LL-20
*Hawaiian Pineapple Co San Francisco* I 2
Heinz Company H J Pittsburgh G 4

graphs from publishers all over the country Ask to see the new View-master three dimensional color illustrations

### THE SURGICAL PUBLISHING COMPANY

The character personality and quality of the journal 'Edited by Practicing Surgeons to Meet the Needs of the Practicing Surgeon' will be depicted at booth LL-17 The printing illustrations, and editorial standard will be portrayed through "Translites" which illustrate briefly the many features of America s foremost surgical journal

### CHARLES C THOMAS PUBLISHER

Many new publications will be found at booth B-7 along with other stable and worth while books you have been favoring for many years. Of special interest will be Fulton Life of Harvey Cushing Collens and Boas The Modern Treatment of Diabetes Mellitus

### THE UNIVERSITY OF CHICAGO PRESS

The exhibiting of BOOKS FROM UNIVERSITY PRESSES is an out growth of the American Association of University Presses Each university press represented in booth LL-10, is a separate publishing company devoted to the production of important technical and scholarly works which might otherwise go unpublished, as well as general books of vital interest to all Americans.

### THE WILLIAMS & WILKINS COMPANY

This exhibit in booth C-3 provides the opportunity to examine famous medical books by American authors, plus many by outstanding British authors Including new editions of Stedman Practical Medical Dictionary Bailey Physical Signs, Topley & Wilson Bacteriology, Manson Tropical Diseases. Latest editions of Best & Taylor 'French', Watson-Jones

### THE YEAR BOOK PUBLISHERS

General physicians and specialists as well as all practitioners returning from the Service, will find the general-practice-manuals and clinical monograph of everyday usefulness in office, home or hospital practice See the display in booth A-3

## Office Furniture

### W D ALLISON COMPANY

Booth I-22 will be the location this year for the W D Allison Company s regular appearance at the Convention Representing the Allison line of Physicians Wood Furniture the display this year will include a suit of Monarch' Treatment and Examining Room furniture and the Allison-Hanes Rectal Table

### HAMILTON MANUFACTURING COMPANY

Improvements in the Hamilton DeLuxe NuTone Suite and Steeltone Suite of Modern Medical Furniture will be on display at booth 21 The Hamilton All-purpose Examining Table with which any top angle including the Trendelenberg positions is easily obtained will also be on display Deliveries of the all-purpose table cannot be made however until the present material shortages are overcome

## Pharmaceuticals

### ABBOTT LABORATORIES

You are cordially invited to visit the entirely new exhibit that has been prepared for this meeting Members of the Abbott medical and detailing staffs will be in booths C 6 and C-8, and will welcome an opportunity to discuss newer developments in the antibiotic anticonvulsant anesthetic allergenic, sulfonamide hematinic, hormone, vitamin and other fields

### AMERICAN HOSPITAL SUPPLY CORPORATION

One of the features of the display will be the new Aero-Klenz Hand Dispensing Unit which is gaining increasing popularity as a quick, economical means of overcoming malodorous conditions in every department of the hospital Representatives are prepared to demonstrate the new Aero-Klenz Hand Dispenser in booth H-27, and show visitors how this unit makes hospital work more pleasant

### AMES COMPANY INC

The Clinitest tablet method for detection of urine-sugar is a simple reliable test for use by the diabetic patient and in the laboratory The tablet reagent develops its own heat inside the test tube eliminating the need for burners or other equipment Exhibit in booth C-32

### THE ARLINGTON CHEMICAL COMPANY

Visitors to the exhibit of The Arlington Chemical Company, booth AA-2 will have an opportunity to demonstrate, to their own satisfaction that Aminoids the protein hydrolysate product for oral administration is extremely palatable. Aminoids will be served in one of the several vehicles suggested for use by the patient.

### ARMOUR LABORATORIES

You are invited to visit the Armour display in booths 13 and 15 The new Armour 'Atlas of Hematology" and books on 'The Thyroid Gland and Clinical Application of Medicinal Thyroid' and "The Pituitary Gland' are available to those members who have not as yet received their copies If you have not already requested your series of Armour drawings on 'Medical Life' ask about them at the Armour display

### AYREST McKENNA & HARRISON LTD

Premarin a highly potent preparation of naturally-occurring water-soluble conjugated estrogens (equine) will be featured in booth D-13 Premarin combines high potency with convenience of administration and is well tolerated by the patient It is supplied with the approval of the Research Institute of Endocrinology, McGill University and is accepted by the Council of Pharmacy and Chemistry of the American Medical Association

### DON BAXTER INC

The Baxter exhibit will feature the Vacoliter pioneer dispensing-container of ready-to-use parenteral solutions blood transfusion equipment and new accessories of special interest in parenteral therapy Trained representatives will be in booth C-28 to conduct demonstrations and discussions

### BILHUBER KNOLL CORPORATION

Among the medicinal chemicals displayed in booth E-7 are Metrarol circulatory and respiratory restorative and anti-anoxiant, Dilaudid analgesic and cough sedative, Theocalcin myocardial stimulant and diuretic Bromural, Euresol Pro capillis and other Council Accepted' products Your discussions on these prescription chemicals are invited

### GEORGE A BREON & COMPANY

The George A Breon Company will offer a quiet restful rendevous for weary conventioneers at booth I-17 The entire effect is that of a cool retreat where the cares of the day can be smothered under a blanket of relaxation

### BRISTOL LABORATORIES INC

The keynote of the Bristol Laboratories display at the American Medical Convention is a set of 'before and after photographs of case histories of penicillin therapy in 8" x 10" full color transparencies Package material of penicillin and other parenterals are also on display in booth C-38

### BURROUGHS WELLCOME & COMPANY INC.

Physicians are invited to this exhibit of a representative group of fine pharmaceuticals and chemicals in booth I-24 Of particular interest are GLOBIN INSULIN a new advance in diabetic control DIGONIN a pure stable crystalline glycoside of Digitalis lanata and DEXIN' High Dextrin Carbohydrate the milk modifier in which the non-fermentable portion predominates and 'LUBAFAX Brand Surgical Lubricant our newest preparation

### CHURCH & DWIGHT CO INC

This firm will exhibit its product ARM & HAMMER BICARBONATE OF SODA in booth 14 This is the 100th anniversary of the founding of the business which for a century has supplied the medical profession with bicarbonates at low cost

### CIBA PHARMACEUTICAL PRODUCTS

Among the products displayed in booth 23 will be PRIVINE HCl a potent long-acting nasal vasoconstrictor which has gained wide recognition in its field, NUPERCAINE, a well-recognized anesthetic agent for topical infiltration and spinal anesthesia. Representatives in attendance will gladly answer questions about these and other Ciba products

### COMMERCIAL SOLVENTS CORP

C S C. will present an exhibit in booth H-23 illustrating by means of full color transparencies, the gross and microscopic pathology of major conditions in which penicillin therapy is effective In addition, their various antibiotic products will be presented including the heat-stable Crystalline Sodium Salt of Penicillin-C S C which does not require refrigeration

### CUTTER LABORATORIES

New products displayed for the first time since the war will be featured at the Cutter Laboratories booths G 6 and G-8 Blood fraction products will be featured with the well-known pediatric immunizing agents and intravenous solutions in Saftiflasks The blood fraction products, available only to military physicians until a few months ago are derived from pooled human plasma

### DAVIES ROSE & COMPANY LIMITED

You are cordially invited to visit Booth A-2 where representatives will be pleased to explain and discuss the merits of this firms' various therapies

## Exhibitors

| | |
|---|---|
| Hoeber Paul B N Y C | C 12 |
| Heard Co T E E San Francisco | LL-17 |
| Hoffmann LaRoche Nutley N J | F 2 |
| Holland Rantos Co N Y C | A 22 |
| Hollister Stier Labs Spokane | G 15 |
| Hospital Liquids Chicago | A 14 |
| Hudnut Richard New York N Y | E 14 |
| Hygeia Nursing Bottle Buffalo | H 24 |
| Ilic Electric Corporation L. I. City N Y | C 30 |
| International Vitamin Corp., N Y C. LL 2 & LL-4 | |
| Iodine Educational Bureau N Y 5 N Y | H 29 |
| Johnson & Johnson New Brunswick N J | C 11 |
| Jones Metabolism Equipment Co Chicago | H 16 |
| Kelley Koett Mfg Co Covington Ky | F 29 |
| Kellogg Company Battle Creek | D 11 |
| Keystone View Co Meadville Pa N W | ½ 4 |
| Kidde Mfg Co Bloomfield N J | C 22 |
| Lakeside Laboratories Milwaukee | G 12 |
| Lea & Febiger Philadelphia | B 5 |
| Lederle Laboratories N Y C | 13 & 15 |
| Libby McNeill & Libby Chicago | H 20 |
| Liebel Flarsheim Co Cincinnati | H 15 |
| Lilly Eli Indianapolis | E 6 F 8 & E 10 |
| Linde Air Products Company N Y C | G 9 |
| Lippincott J B Phila 5 | B 6 & B 8 |
| Luzier's Inc Kansas City 3 Mo | I 7 |
| M & R Dietetic Labs Columbus 0 | C 1 |
| Macalaster Bicknell Co Cambridge Mass | LL-25 |
| Machlett Labs Springdale Conn W | ½ I 22A |

### THE DENVER CHEMICAL MFG COMPANY INC

Galatest dry reagent for the instantaneous detection of urine sugar and Acetone Test (Denco), dry reagent for the rapid detection of acetone in urine Physicians are cordially invited to see demonstration of these reagents at booth F-28

### DUREX PRODUCTS INC

Lactikol Jelly and Lactikol Creme have a background of nineteen years of clinic physician and hospital use for child spacing Durex Products Inc supplies a plunger applicator and also the Metri-Dose which is a syringe type applicator for measured dosage of both the Jelly and Creme Stop at booth LL-19 on the lower level

### EATON LABORATORIES INC

Eaton Laboratories Inc will exhibit ethical pharmaceutical specialties Several of these are new and improved advances in therapy Representatives will be present at booths H-6 and H-8 and will be pleased to discuss these new preparations

### ENDO PRODUCTS INC

Convention visitors are invited to view a simple procedure using Pendil for preparing water-in oil emulsions of penicillin and other water-soluble drugs in order to prolong their action To further the wider use of the metric system in prescribing a useful conversion calculator will be distributed to visitors at booth G 3

### FLINT EATON & COMPANY

A sparkling soluble form of calcium gluconate which encourages routine administration will be presented in the form of Calcium Gluconate Effervescent (Flint) at booth C-34 Children like the bubbly drink adults find it palatable even when the digestive system is upset as in pregnancy convalescence and old age

### THE HARROWER LABORATORY INC

For over a quarter of a century The Harrower Laboratory Inc has specialized in the field of endocrinology An expansion program has been set up and plans have been completed for additional research and control facilities See the exhibit in booth LL-20 on the lower level

### HOFFMANN LA ROCHE INC

Pharmaceutical prescription specialties of rare quality produced at Roche Park where vitamins are made by the ton will be exhibited in booth F-2 The medical profession s interest in Syntropan and its anti-spasmodic action the versatile parasympathetic stimulant Prostigmin and other scientific accomplishments will be satisfied by Hoffmann-La Roche representatives who will be in attendance to discuss clinical problems

### HOLLAND RANTOS COMPANY INC

You are cordially invited to visit the Holland-Rantos Company exhibition booth A-22 where the Council accepted Koromex Jelly will be displayed Representatives will be available to discuss with you the latest clinical data To all visiting physicians registering a number of copies of the Dickinson-Freret Charts and samples of Koromex Jelly will be given

### HOLLISTER STIER LABORATORIES

Physicians are cordially invited and should spend a few profitable minutes at booth G-15 Literature and complete up to the minute information on all matters pertaining to allergy will be available Hollister-Stier allergy products are Council accepted and are supplied through their personalized nation wide allergy service

### HOSPITAL LIQUIDS INC

The Filtrair line of Disposable Administration Sets and Intravenous Solutions will be featured at booth A-14 Every doctor whose patients receive parenteral therapy will be interested in the latest Filtrair developments in this field

### INTERNATIONAL VITAMIN CORPORATION

The International Vitamin Corporation will place on exhibit seventeen of its Council Accepted products in booths I L-2 and LL-4 You are cordially invited to give consideration to the fine products manufactured by I V C

### IODINE EDUCATIONAL BUREAU INC

The exhibit will call attention to Iodine's use in surgery and first aid with special emphasis on its place in medicine Samples of Iodine products which are official in the United States Pharmacopeia and National Formulary and products accepted by the Council on Pharmacy and Chemistry will be shown in booth H-29

### LAKESIDE LABORATORIES

This exhibit will feature the new mercurial diuretic Mercuhydrin Sodium (Meralluride Sodium) Important clinical reports of the past year outlining new concepts and approaches in the treatment of edema have brought out clearly (1) The clinical need for a mercurial diuretic well tolerated by muscle (2) The fact that Mercuhydrin is well tolerated by muscle Lakeside representatives will be in booth G-12 to discuss Mercuhydrin and other items of professional interest

### LEDERLE LABORATORIES INC

This exhibit features the theme Therapy Through Research' Kodachrome slides pertaining to various branches of research will be thrown on a central screen On either side of booths 13 and 15 are large hand painted murals and across the entire front fifteen stalls are arranged so visiting physicians may examine various products of research At a small center table Rh positive and negative tests will be demonstrated

### ELI LILLY AND COMPANY

The feature of the display will be a demonstration by members of the Lilly Research Staff of the injection of embryonated eggs and the harvesting of the viruses Prominent among the products prepared by this method are Influenza Virus Vaccine and Typhus Vaccine Also on display in booths F-6 E-8 and F-10 will be a representative assortment of Lilly Specialties

### MALLINCKRODT CHEMICAL WORKS

Mallinckrodt Chemical Works invites members and guests of the American Medical Association to visit Booth F-25 where will be displayed those basic chemicals used in prescription compounding as well as medical specialties and x-ray diagnostic media

### MERCK & COMPANY INC

In this exhibit will be found informative material on some of the newer antibiotic agents Toxicological data and discussions of bacterial fastness will be presented Interesting transparencies will show antibacterial activity and photomicrographs of the antibiotic products Visit booth F-5

### THE WM S MERRELL COMPANY

The feature of this exhibit will be a photomontage of drawings depicting Physicians of Five Eras hand-colored by the artist These drawings were reproduced on a recent series of mailings and caused considerable interest among physicians throughout the country Members and guests of the Association are cordially invited to visit booth H 14

### E S MILLER LABORATORIES INC

This exhibit will display aminophylline ampules and tablets, and other Council accepted and U S P pharmaceuticals. Visit booth C-21

### ORTHO PHARMACEUTICAL CORPORATION

The new Classic Exhibit, in which are featured Council-Approved products Ortho-Gynol Ortho Creme and the Ortho Diaphragm will be shown for the first time 'Medical Methods for the Control of Conception' will be distributed to interested physicians free of charge in booths A-25 and A-27

### PARKE DAVIS & COMPANY

This exhibit will feature attractive color transparencies depicting new and important developments in pharmaceuticals Representatives will be glad to discuss points of interest with visiting physicians Booths E-1 and E-3

### PITMAN MOORE COMPANY

The display in booth I-32 will feature a comprehensive showing of council accepted pharmaceutical and biological products including a number applicable to the allergies which are so prevalent at this season of the year A number of members of the scientific staff and of the company s medical service representatives will be in attendance to answer questions

### PREMO PHARMACEUTICAL LABORATORIES INC

The exhibit will consist of a display of Materia medica and the actual process of counting and filling tablets Be sure to visit booth A-23

### RARE CHEMICALS, INC

Testosterone Propionate Rare Chemicals the Council-Accepted androgenic preparation, will be displayed for the first time at an A M A convention in booth A-32 Other Rare products to be featured Acidolate non lathering liquid skin detergent and Dermolate a new companion preparation in lathering cake form Gitalin digitalis glycoside Salysal antirheumatic analgesic and antipyretic.

### RIEDEL DE HAEN INC

At booth C 40 the most recent developments in bile acid therapy will be featured Physicians are welcome to discuss with professional representatives the wide therapeutic applications of Decholin the original hydrocholeretic and the use of Decholin Sodium as a therapeutic and diagnostic agent

### SANDOZ CHEMICAL WORKS INC

For the non-narcotic relief of migraine physicians will be interested in Cynergen (Ergotamine tartrate) Calglucon original brand of calcium gluconate for palatable oral calcium therapy Digilanid the pure crystalline glycosides of digitalis lanta Scillaren and Scillaren B containing the cardiodiuretic principles of squill—these cardioactive glycosides are standardized gravimetrically Sandoptal an effective hypnotic and sedative

## Exhibitors

| | |
|---|---|
| Macmillan Company N Y C | F 12 |
| Maico Company Minneapolis | F 26 |
| Mallinckrodt Chem Works St Louis | F 25 |
| Maltine Company N Y 22 N Y | A 11 |
| | E 5 |
| Marcelle Cosmetics Chicago | C 29 & C-31 |
| Mattern Mfg Co F Chicago | E 11 |
| McKesson Appliance Co Toledo | |
| Mead Johnson Evansville Ind | D 15 C 16 F 6 F 8 |
| Medical Bureau Chicago | A 6 |
| Medical Fabrics Inc Paterson 1 N J | C 20 |
| Medical Film Guild N Y C | H 24A |
| Medical Mailing Service Chicago | 6 |
| Medical Protective Co Fort Wayne Ind | C 17 |
| Mennen Company Newark 4 N J | G 2 |
| Merck & Co Rahway N J | F 5 |
| Wm S Merrell Company Cincinnati | H 14 |
| Wm Meyer Company Chicago | H 11 |
| Miller Laboratories E S Los Angeles | C 21 |
| Mosby C V St Louis | A 5 & 8A |
| Mueller & Company V Chicago | G 14 |
| Nat Ass n Margarine Mfrs Wash D C. | 18 |
| National Dairy Council Chicago | H 28 |
| National Dairy Products Co N Y C | C 27 |
| Nat Inst of Diaper Services N Y C | LL 14 |
| National Live Stock & Meat Board Chicago | H 32 |
| Nestle s Milk Products N Y C | F 20 F 22 |
| N Y Medical Exchange New York City | LL 12 |
| North Amer Philips Co N Y City | LL-27 |
| Obrig Laboratories N Y C | S E ½ 4 |
| Ohio Chemical & Mfg Co N Y C | 29 31 33 |

### SCHENLEY LABORATORIES, INC

This exhibit will be devoted entirely to penicillin and penicillin products and features clinical illustrations of treated patients The complete apparatus for penicillin aerosol treatment of respiratory infections by inhalation will be demonstrated to interested physicians by well informed attendants in booth A-1 Descriptive literature concerning this treatment method and various Schenley Laboratories products will be supplied on request

### SCHERING CORPORATION

The Schering exhibit will feature Estinyl (Ethinyl estradiol) one of the most potent oral estrogens Priodax a new oral cholecystrographic aid for better gallbladder visualization and Neo-Iopax a safe urographic medium for clear detailed visualization in pyelography Members of the Schering professional service division will be in booth 8 to answer any pertinent inquiry

### G D SEARLE & COMPANY

You are cordially invited to visit the Searle booths G-5 and G-7 representatives will be happy to answer questions pertaining to Searle Products of Research Featured will be Searle Aminophyllin Metamucil and Diodoquin

### SHARP & DOHME

You are cordially invited to visit the Sharp and Dohme booths D-2 and D-4 This year's display will feature Lyovac Normal Human Plasma Sulfasuxidine, Delvinal Sodium, Ivyol Poison Ivy Extract Sulfamerazine, Tyrothricin Concentrate and a complete line of immunization biologicals Capable informed representatives will be present at all times

### THE SMITH DORSEY COMPANY

This exhibit will feature a large photograph of the new research and manufacturing laboratory now being constructed The latest developments in estrogen therapy will be one of the principal parts of the display and liver therapy will be discussed by representatives at booth G-13

### SMITH KLINE & FRENCH LABORATORIES

Benzedrine Inhaler N.N.R., Benzedrine Sulfate Tablets and Elixir, N.N.R. and Pentnucleotide N.N.R. are featured at this exhibit in booth D 9 Specially trained professional representatives will answer questions concerning the uses of these products in your practice

### E. R SQUIBB & COMPANY

A portable exhibit on "Therapy with Penicillin" will be presented in booths C-2 and C-4 This exhibit shows in photographs and cartoons with descriptive captions an outline of the underlying principles of penicillin therapy Designed for the guidance of the busy physician and for use in medical schools Twenty panels each forty inches long with removable aluminum standards can be set up anywhere available on loan

### FREDERICK STEARNS & COMPANY

You are cordially invited to visit the exhibit of Frederick Stearns & Company Division in booth H-4 Neo-Synephrine Hydrochloride products for intranasal parenteral and ophthalmic use will be featured Parenamine (Amino Acids Stearns)—a complete mixture of amino acids derived from the acid hydrolysate of casein fortified with pure dl-tryptophane to the extent of 1% of the total amino acids A professional staff will be in attendance to discuss these products with you

### VARICK PHARMACAL COMPANY INC

The theme of this exhibit will be the use of DIGITALINE NATIVELLE the original digitoxin, in single dose oral digitalization The panel, in booth F-30, will portray graphically by means of a clock-like figure the 3 to 6 hours required for digitalization A miniature showcase will contain specimens of the product

### WILLIAM R WARNER & COMPANY

The comparative action of various chemotherapeutic agents (penicillin, tyrothricin, sulfonamides and the methylene dyes) on local infections in animals will be included in the exhibit in booth F-14

### THE WARREN TEED PRODUCTS COMPANY

Council accepted products will be on display in booth A-18 The entire display will be illuminated by indirect lighting. Two of the units will contain transite pictures of scenes in the Warren-Teed laboratories and manufacturing departments

### WHITE LABORATORIES INC

An entirely new exhibit displaying White's Cod Liver Oil Concentrate products and other Council-Accepted vitamins, will be shown in booths H-1 and H-3 White Laboratories will display clinical material depicting interesting facts in vitamin research The exhibit is in charge of representatives who will endeavor to serve you in every way possible

### WINTHROP CHEMICAL COMPANY INC

You are cordially invited to visit the exhibit of Winthrop Chemical Company, Inc in booths D-6 D-8, D-10, and D-12 where colored models showing the causative agents of all the principal tropical diseases will be on display Your attention is particularly invited to that portion of the exhibit devoted to malaria where all forms of the malaria parasite including the exoerythrocytic will be shown

### WISCONSIN ALUMNI RESEARCH FOUNDATION

This exhibit in booth H-22 will be of a graphic scientific nature showing effects of different substances on blood clotting time Of interest too will be the showing of methods for assay of Vitamin D and other vitamins

### WYETH INC

Visit booth D-14 and get acquainted with a few of the new outstanding additions to the line of Wyeth Pharmaceutical Biological and Nutritional products

## Special Apparel

### S H CAMP & COMPANY

A series of illuminated transparencies, depicting various anatomical conditions before and after application of Camp Scientific Supports will be displayed The complete line of merchandise for prenatal postnatal visceroptosis, sacroiliac hernia and other specific conditions will be shown Experts from the Camp staff will be in attendance to answer questions in booth E-13

### THE CONFORMAL SHOE COMPANY

The exhibit display will illustrate how the Conformal shoe achieves snug custom fit and balanced support for each individual foot with its special patented plastic insole Visit booth F-34

### MRS DAY'S IDEAL BABY SHOES

Doctors are cordially invited to booth F-7 to inspect Mrs Day's Ideal Baby Shoes and to discuss their problems in this field A representative display of new Ideal Baby Shoes in the crib soft, intermediate and walking shoes covering the four stages of Babyhood will be exhibited

### J EDWARDS AND COMPANY

A very interesting exhibit of children's shoes for all age groups will be displayed in booth LL 5 in the lower level These shoes are the production of J Edwards & Co manufacturers of childrens shoes since 1900 and feature regular as well as corrective type shoes from tots to teen age children

### SPENCER INCORPORATED

The standard AAF G-Suit will be on display in booth E-4—successfully used in combat to minimize pilot blackout—developed by Spencer designers cooperating with Army Navy and scientific agencies Also to be displayed Spencer individually designed supports for spinal conditions visceroptosis and nephroptosis with symptoms antepartum postpartum and postoperative needs inoperable hernia and breast conditions

### THE VANTA COMPANY

VANTA garments for infants offer layette items without pins or buttons and for toddlers Self-Help garments all of which will be exhibited in booth LL-21 Originator of the Tie Vest Sun Suit K-band Baby Bess hose and other important features Vanta will show No-Fas-ning shirts and the latest advancements in proper clothing

## Surgical Supplies

### AMERICAN SAFETY RAZOR COMPANY

ASR Sanitary Bed Pan Covers are made of paper easily disposable, guarantee improved sanitary technique See this new item at booth LL-15 Also on view will be ASR Surgeon's Blades and Handles made by craftsmen who are lifelong specialists in the art of edge making

### BAUER & BLACK

Booth C-44 features Curity Hospital Dressings and Curity Sutures New Ostic Bandages and Splints developed to give prompt controlled setting anatomical molding greater initial and final strength save professional time An outstanding feature of Curity Suture Laboratories is free medical literature extract service with complete bibliography taken from past five years literature on variable conditions of surgical patient

## Exhibitors

| | |
|---|---|
| Ortho Pharma Corp Linden N J | A 25 & A 27 |
| Orthopedic Frame Co Kalamazoo Mich | LL 3 |
| Oxford University Press N Y C | A 15 |
| Pac Coast Med Bur San Francisco | N ½ F 40 |
| Parke Davis & Co Detroit | E 1 & E 3 |
| Pelton & Crane Co Detroit | C 19 |
| Pet Milk Sales Corporation St Louis | F 13 |
| Philip Morris N Y C | H 2 I 1 I 3 & I 5 |
| Picker X Ray Corporation N Y C | D 1 & D 3 |
| Pitman Moore Company Indianapolis | F 32 |
| Premo Pharmaceutical Labs N Y C | A 23 |
| Prior Company W F Hagerstown Md | B 10 |
| Procter & Gamble Ivorydale Ohio | G 11 |
| Professional Equip Chicago | F 42 & F 44 |
| Prometheus Electric Corp N Y C | E 9 |
| Pyramid Rubber Co Ravenna Ohio | C 18 |
| Radium Chemical Co N Y C | A 21 |
| Rare Chemicals Harrison N J | A 32 |
| Riedel-de Haen N Y C. | C-40 |
| Ritter Company Rochester 3 N Y | 7 & 9 |
| Safety Gas Machine Co Chicago | F 36 |
| Sanborn Company Cambridge | F 2 |
| Sandoz Chemical Works N Y C | C 36 |
| Sanit All Products Corp Greenwich Ohio | 16 |
| Saunders Company W B Phila | B 2 & B 4 |
| Schenley Laboratories N Y C | A 1 |
| Schering Corporation Bloomfield N J | 8 |
| Schmid Julius N Y C | 20 & 22 |
| Searle & Company G D Chicago | G 5 & G 7 |
| Shampaine Company St. Louis | F 16 |
| Sharp & Dohme Phila | D 2 & D 4 |
| Siebrandt Mfg Co Kansas City 3 Mo | C 24 |
| Sklar Co J L I City N Y | C 5 |

### THE DENVER CHEMICAL MFG COMPANY INC

Calatest, dry reagent for the instantaneous detection of urine sugar and Acetone Test (Denco), dry reagent for the rapid detection of acetone in urine Physicians are cordially invited to see demonstration of these reagents at booth F-28

### DUREX PRODUCTS INC

Lactikol Jelly and Lactikol Creme have a background of nineteen years of clinic physician and hospital use for child spacing Durex Products Inc supplies a plunger applicator and also the Metri-Dose which is a syringe type applicator for measured dosage of both the Jelly and Creme Stop at booth I L-19 on the lower level

### EATON LABORATORIES INC

Eaton Laboratories Inc will exhibit ethical pharmaceutical specialties Several of these are new and improved advances in therapy Representatives will be present at booths H-6 and H-8 and will be pleased to discuss these new preparations

### ENDO PRODUCTS INC

Convention visitors are invited to view a simple procedure, using Pendil for preparing water-in-oil emulsions of penicillin and other water-soluble drugs in order to prolong their action To further the wider use of the metric system in prescribing a useful conversion calculator will be distributed to visitors at booth G 3

### FLINT EATON & COMPANY

A sparkling soluble form of calcium gluconate which encourages routine administration will be presented in the form of Calcium Gluconate Effervescent (Flint) at booth C-34 Children like the bubbly drink adults find it palatable even when the digestive system is upset as in pregnancy, convalescence and old age

### THE HARROWER LABORATORY INC

For over a quarter of a century The Harrower Laboratory Inc has specialized in the field of endocrinology An expansion program has been set up and plans have been completed for additional research and control facilities See the exhibit in booth LL-20 on the lower level

### HOFFMANN LA ROCHE INC

Pharmaceutical prescription specialties of rare quality produced at Roche Park where vitamins are made by the ton will be exhibited in booth F-2 The medical profession s interest in Syntropan and its anti spasmodic action the versatile parasympathetic stimulant Prostigmin, and other scientific accomplishments will be satisfied by Hoffmann-La Roche representatives who will be in attendance to discuss clinical problems

### HOLLAND RANTOS COMPANY INC

You are cordially invited to visit the Holland-Rantos Company exhibition booth A-22 where the Council accepted Koromex Jelly will be displayed Representatives will be available to discuss with you the latest clinical data To all visiting physicians registering a number of copies of the Dickinson-Freret Charts and samples of Koromex Jelly will be given

### HOLLISTER STIER LABORATORIES

Physicians are cordially invited and should spend a few profitable minutes at booth G-15 Literature and complete up to the minute information on all matters pertaining to allergy will be available Hollister-Stier allergy products are Council accepted and are supplied through their personalized nation wide allergy service

### HOSPITAL LIQUIDS INC

The Filtrair line of Disposable Administration Sets and Intravenous Solutions will be featured at booth A-14 Every doctor whose patients receive parenteral therapy will be interested in the latest Filtrair developments in this field

### INTERNATIONAL VITAMIN CORPORATION

The International Vitamin Corporation, will place on exhibit seventeen of its Council Accepted products in booths I L-2 and LL-4 You are cordially invited to give consideration to the fine products manufactured by I V C

### IODINE EDUCATIONAL BUREAU INC

The exhibit will call attention to Iodine's use in surgery and first aid, with special emphasis on its place in medicine Samples of Iodine products which are official in the United States Pharmacopeia and National Formulary and products accepted by the Council on Pharmacy and Chemistry will be shown in booth H-29

### LAKESIDE LABORATORIES

This exhibit will feature the new mercurial diuretic Mercuhydrin Sodium (Meralluride Sodium) Important clinical reports of the past year, outlining new concepts and approaches in the treatment of edema have brought out clearly (1) The clinical need for a mercurial diuretic well tolerated by muscle, (2) The fact that Mercuhydrin is well tolerated by muscle Lakeside representatives will be in booth G-12 to discuss Mercuhydrin and other items of professional interest

### LEDERLE LABORATORIES INC

This exhibit features the theme 'Therapy Through Research" Kodachrome slides pertaining to various branches of research will be thrown on a central screen On either side of booths 13 and 15 are large hand painted murals and across the entire front fifteen stalls are arranged so visiting physicians may examine various products of research At a small center table Rh positive and negative tests will be demonstrated

### ELI LILLY AND COMPANY

The feature of the display will be a demonstration by members of the Lilly Research Staff of the injection of embryonated eggs and the harvesting of the viruses Prominent among the products prepared by this method are Influenza Virus Vaccine and Typhus Vaccine Also on display in booths E-6, E 8 and F-10 will be a representative assortment of Lilly Specialties

### MALLINCKRODT CHEMICAL WORKS

Mallinckrodt Chemical Works invites members and guests of the American Medical Association to visit Booth F-25 where will be displayed those basic chemicals used in prescription compounding as well as medical specialties and x-ray diagnostic media

### MERCK & COMPANY INC

In this exhibit will be found informative material on some of the newer antibiotic agents Toxicological data and discussions of bacterial fastness will be presented Interesting transparencies will show antibacterial activity and photomicrographs of the antibiotic products Visit booth F-5

### THE WM S MERRELL COMPANY

The feature of this exhibit will be a photomontage of drawings depicting Physicians of Five Eras, hand-colored by the artist These drawings were reproduced on a recent series of mailings and caused considerable interest among physicians throughout the country Members and guests of the Association are cordially invited to visit booth H-11

### E S MILLER LABORATORIES INC.

This exhibit will display aminophylline ampules and tablets and other Council accepted and U S P pharmaceuticals Visit booth C-21

### ORTHO PHARMACEUTICAL CORPORATION

The new Classic Exhibit in which are featured Council-Approved products Ortho-Gynol, Ortho Creme and the Ortho Diaphragm will be shown for the first time 'Medical Methods for the Control of Conception," will be distributed to interested physicians, free of charge in booths A-25 and A-27

### PARKE DAVIS & COMPANY

This exhibit will feature attractive color transparencies depicting new and important developments in pharmaceuticals Representatives will be glad to discuss points of interest with visiting physicians Booths E-1 and E-3

### PITMAN MOORE COMPANY

The display in booth F-32 will feature a comprehensive showing of council accepted pharmaceutical and biological products, including a number applicable to the allergies which are so prevalent at this season of the year A number of members of the scientific staff and of the company's medical service representatives will be in attendance to answer questions

### PREMO PHARMACEUTICAL LABORATORIES INC

The exhibit will consist of a display of Materia medica, and the actual process of counting and filling tablets Be sure to visit booth A-23

### RARE CHEMICALS, INC

Testosterone Propionate "Rare Chemicals' the Council-Accepted androgenic preparation will be displayed for the first time at an A M A convention in booth A-32 Other Rare products to be featured Acidolate non-lathering liquid skin detergent and Dermolate a new companion preparation in lathering cake form Gitalin, digitalis glycoside Salysal, anti rheumatic analgesic and antipyretic

### RIEDEL DE HAEN INC

At booth C-40, the most recent developments in bile acid therapy will be featured Physicians are welcome to discuss with professional representatives, the wide therapeutic applications of Decholin the original hydrocholeritic and the use of Decholin Sodium as a therapeutic and diagnostic agent.

### SANDOZ CHEMICAL WORKS INC

For the non-narcotic relief of migraine physicians will be interested in Cynergen (Ergotamine tartrate), Calglucon original brand of calcium gluconate for palatable oral calcium therapy, Digilanid, the pure crystalline glycosides of digitalis lanta Scillaren and Scillaren B, containing the cardiodiuretic principles of squill—these cardioactive glycosides are standardized gravimetrically, Sandoptal an effective hypnotic and sedative

## Exhibitors

| | |
|---|---|
| Macmillan Company N Y C | F 12 |
| Maico Company Minneapolis | F 26 |
| Mallinckrodt Chem Works St Louis | F 25 |
| Maltine Company N Y 22 N Y | A 11 |
| Marcelle Cosmetics Chicago | E 5 |
| Mattern Mfg Co F Chicago | C 29 & C-31 |
| McKesson Appliance Co Toledo | E 11 |
| Mead Johnson Evansville Ind | D 15 C 16 F 6 F 8 |
| Medical Bureau Chicago | A 6 |
| Medical Fabrics Inc Paterson 1 N J | C 20 |
| Medical Film Guild N Y C | H 24A |
| Medical Mailing Service Chicago | 6 |
| Medical Protective Co Fort Wayne Ind | C 17 |
| Mennen Company Newark 4 N J | G 2 |
| Merck & Co Rahway N J | F 5 |
| Wm. S Merrell Company Cincinnati | H 14 |
| Wm Meyer Company Chicago | H 11 |
| Miller Laboratories E S Los Angeles | C 21 |
| Mosby C V St Louis | A 5 & 8A |
| Mueller & Company V Chicago | G 14 |
| Nat Ass n Margarine Mfrs Wash D C | 18 |
| National Dairy Council Chicago | H *3 |
| National Dairy Products Co N Y C | C *7 |
| Nat. Inst of Diaper Services N Y C | LL-14 |
| National Live Stock & Meat Board Chicago | H 32 |
| Nestle s Milk Products N Y C | F 20 F 22 |
| N Y Medical Exchange New York City | LL-12 |
| North Amer Philips Co N Y City | LL-27 |
| Obrig Laboratories N Y C | SE ¼ 4 |
| Ohio Chemical & Mfg Co N Y C | 29 31 33 |

### SCHENLEY LABORATORIES INC

This exhibit will be devoted entirely to penicillin and penicillin products and features clinical illustrations of treated patients The complete apparatus for penicillin aerosol treatment of respiratory infections by inhalation will be demonstrated to interested physicians by well informed attendants in booth A-1 Descriptive literature concerning this treatment method and various Schenley Laboratories products will be supplied on request

### SCHERING CORPORATION

The Schering exhibit will feature Estinyl (Ethinyl estradiol) one of the most potent oral estrogens Priodax, a new oral cholecystographic aid for better gallbladder visualization and Neo-Iopax a safe urographic medium for clear detailed visualization in pyelography Members of the Schering professional service division will be in booth 8 to answer any pertinent inquiry

### G D SEARLE & COMPANY

You are cordially invited to visit the Searle booths G 5 and G-7 representatives will be happy to answer questions pertaining to Searle Products of Research Featured will be Searle Aminophyllin Metamucil and Diodoquin

### SHARP & DOHME

You are cordially invited to visit the Sharp and Dohme booths D-2 and D-4 This year's display will feature Lyovac Normal Human Plasma Sulfasuxidine, Delvinal Sodium, Ivyol Poison Ivy Extract Sulfamerazine Tyrothricin Concentrate and a complete line of immunization biologicals Capable informed representatives will be present at all times

### THE SMITH DORSEY COMPANY

This exhibit will feature a large photograph of the new research and manufacturing laboratory now being constructed The latest developments in estrogen therapy will be one of the principal parts of the display and liver therapy will be discussed by representatives at booth G-13

### SMITH KLINE & FRENCH LABORATORIES

Benzedrine Inhaler, N.N.R., Benzedrine Sulfate Tablets and Elixir N.N.R., and Pentnucleotide, N.N.R. are featured at this exhibit in booth D-9 Specially trained professional representatives will answer questions concerning the uses of these products in your practice

### E R SQUIBB & COMPANY

A portable exhibit on "Therapy with Penicillin" will be presented in booths C-2 and C-4 This exhibit shows in photographs and cartoons with descriptive captions an outline of the underlying principles of penicillin therapy Designed for the guidance of the busy physician and for use in medical schools Twenty panels each forty inches long with removable aluminum standards can be set up anywhere available on loan

### FREDERICK STEARNS & COMPANY

You are cordially invited to visit the exhibit of Frederick Stearns & Company Division in booth H-4 Neo-Synephrine Hydrochloride products for intranasal parenteral and ophthalmic use will be featured Parenamine (Amino Acids Stearns)—a complete mixture of amino acids derived from the acid hydrolysate of casein fortified with pure dl-tryptophane to the extent of 1% of the total amino acids A professional staff will be in attendance to discuss these products with you

### VARICK PHARMACAL COMPANY INC

The theme of this exhibit will be the use of DIGITALINE NATIVELLE the original digitoxin in single dose oral digitalization The panel in booth F-30, will portray graphically by means of a clock-like figure the 3 to 6 hours required for digitalization A miniature showcase will contain specimens of the product

### WILLIAM R WARNER & COMPANY

The comparative action of various chemotherapeutic agents (penicillin tyrothricin sulfonamides and the methylene dyes) on local infections in animals will be included in the exhibit in booth F-14

### THE WARREN TEED PRODUCTS COMPANY

Council accepted products will be on display in booth A-18 The entire display will be illuminated by indirect lighting Two of the units will contain translite pictures of scenes in the Warren-Teed laboratories and manufacturing departments

### WHITE LABORATORIES INC

An entirely new exhibit displaying White's Cod Liver Oil Concentrate products and other Council-Accepted vitamins, will be shown in booths H-1 and H-3 White Laboratories will display clinical material depicting interesting facts in vitamin research The exhibit is in charge of representatives who will endeavor to serve you in every way possible

### WINTHROP CHEMICAL COMPANY INC

You are cordially invited to visit the exhibit of Winthrop Chemical Company Inc in booths D 6, D-8, D-10 and D-12 where colored models showing the causative agents of all the principal tropical diseases will be on display Your attention is particularly invited to that portion of the exhibit devoted to malaria where all forms of the malaria parasite including the exoerythrocytic will be shown

### WISCONSIN ALUMNI RESEARCH FOUNDATION

This exhibit in booth H-22 will be of a graphic scientific nature showing effects of different substances on blood clotting time Of interest too will be the showing of methods for assay of Vitamin D and other vitamins

### WYETH INC

Visit booth D-14 and get acquainted with a few of the new outstanding additions to the line of Wyeth Pharmaceutical Biological and Nutritional products

## Special Apparel

### S H CAMP & COMPANY

A series of illuminated transparencies, depicting various anatomical conditions before and after application of Camp Scientific Supports will be displayed The complete line of merchandise for prenatal postnatal visceroptosis sacroiliac hernia and other specific conditions will be shown Experts from the Camp staff will be in attendance to answer questions in booth E-13

### THE CONFORMAL SHOE COMPANY

The exhibit display will illustrate how the Conformal shoe achieves snug custom fit and balanced support for each individual foot with its special patented plastic insole Visit booth F-34

### MRS DAY'S IDEAL BABY SHOES

Doctors are cordially invited to booth F-7 to inspect Mrs Day's Ideal Baby Shoes and to discuss their problems in this field A representative display of new Ideal Baby Shoes in the crib soft intermediate and walking shoes covering the four stages of Babyhood will be exhibited

### J EDWARDS AND COMPANY

A very interesting exhibit of children's shoes for all age groups will be displayed in booth LL-5 in the lower level These shoes are the production of J Edwards & Co manufacturers of childrens shoes since 1900 and feature regular as well as corrective type shoes from tots to teen age children

### SPENCER INCORPORATED

The standard AAF G-Suit will be on display in booth E-4—successfully used in combat to minimize pilot blackout—developed by Spencer designers cooperating with Army Navy and scientific agencies Also to be displayed Spencer individually designed supports for spinal conditions visceroptosis and nephroptosis with symptoms antepartum postpartum and postoperative needs inoperable hernia and breast conditions

### THE VANTA COMPANY

VANTA garments for infants offer layette items without pins or buttons and for toddlers, Self-Help garments all of which will be exhibited in booth LL-21 Originator of the Tie Vest Sun Suit K-band Baby Bess hose and other important features, Vanta will show No-Fas-ning shirts and the latest advancements in proper clothing

## Surgical Supplies

### AMERICAN SAFETY RAZOR COMPANY

ASR Sanitary Bed Pan Covers are made of paper easily disposable, guarantee improved sanitary technique See this new item at booth LL-15 Also on view will be ASR Surgeon's Blades and Handles made by craftsmen who are lifelong specialists in the art of edge making

### BAUER & BLACK

Booth C-44 features Curity Hospital Dressings and Curity Sutures New Ostic Bandages and Splints developed to give prompt, controlled setting anatomical molding greater initial and final strength save professional time An outstanding feature of Curity Suture Laboratories is free medical literature extract service with complete bibliography taken from past five years literature on variable conditions of surgical patient

## Exhibitors

| | |
|---|---|
| Ortho Pharma Corp Linden N J | A 25 & A 27 |
| Orthopedic Frame Co Kalamazoo Mich | LL 3 |
| Oxford University Press N Y C | A 15 |
| Pac Coast Med Bur San Francisco | N ½ F-40 |
| Parke Davis & Co Detroit | E 1 & E 3 |
| Pelton & Crane Co Detroit | C 19 |
| Pet Milk Sales Corporation St. Louis | F 13 |
| Philip Morris N Y C | H 2 I 1 I 3 & I 5 |
| Picker X Ray Corporation N Y C | D 1 & D 3 |
| Pitman Moore Company Indianapolis | F 32 |
| Premo Pharmaceutical Labs N Y C. | A 23 |
| Prior Company W F Hagerstown Md | B 10 |
| Procter & Gamble Ivorydale Ohio | G 11 |
| Professional Equip Chicago | F 42 & F 44 |
| Prometheus Electric Corp N Y C | E 9 |
| Pyramid Rubber Co Ravenna Ohio | C 18 |
| Radium Chemical Co N Y C | A 21 |
| Rare Chemicals Harrison N J | A 32 |
| Riedel-de Haen N Y C. | C 40 |
| Ritter Company Rochester 3 N Y | 7 & 9 |
| Safety Gas Machine Co Chicago | F 36 |
| Sanborn Company Cambridge | E 2 |
| Sandoz Chemical Works N Y C | C 36 |
| Sanit All Products Corp Greenwich Ohio | 16 |
| Saunders Company W B Phila | B 2 & B 4 |
| Schenley Laboratories N Y C | A 1 |
| Schering Corporation Bloomfield N J | 8 |
| Schmid Julius N Y C | 20 & 22 |
| Searle & Company G D Chicago | G 5 & G 7 |
| Shampaine Company St Louis | F 16 |
| Sharp & Dohme Phila | D 2 & D 4 |
| Siebrandt Mfg Co Kansas City 3 Mo | C 24 |
| Sklar Co J L I City N Y | C 5 |

### DAVIS & GECK INC

Davis & Geck Inc will conduct a motion picture program in booths I-1A and F-10 Subjects will be taken from the Surgical Film Library and will include several recent additions The library consists of over 250 carefully edited subjects showing modern developments in surgery Films are available to medical and surgical societies without charge

### DEPUY MANUFACTURING COMPANY

You are invited to look at the new set of screw drivers displayed at booth A-16 With the DePuy Master Screw Driver you cannot drop the bone screw See the Lorenzo Lag Screw which can be used for surgical neck fractures of the femur or intertrochanteric fractures and also the new improved Lorenzo Subtrochanteric Plate with the oval slot

### DUKE LABORATORIES INC

This exhibit will display Elastoplat the cotton-woven adhesive-surfaced stretchable bandage used whenever compression and support are required. Mediplast and Elastroplast Coverlets—small dressings for minor injuries cuts burns and abrasions—will also be shown at booth H-10

### *ETHICON SUTURE LABORATORIES*

Skilled operators will show visitors at booth A-4 how Ethicon sutures are examined for knot pull strength on Incline-Plane testers at Ethicon Suture Laboratories Consultants will also welcome physicians and show them tantalum wire, skull plates, foil screws and hemostasis clips used in the rehabilitation of tens of thousands of war veterans

### GOMCO SURGICAL MANUFACTURING CORPORATION

The exhibit of Gomco Surgical Manufacturing Corporation will feature the Thermotic Drainage Pump which by non-mechanical postoperative drainage conditions Also on display in booth C-46 will be the Hospital Suction and Ether unit which features the rubber-mounted explosion proof motor and switch

### MEDICAL FABRICS INC

Pressoplast bandages and elastic dressings are now being made with natural rubber for the first time since the war days You are cordially invited to visit the display in booth C-20

### SIEBRANDT MANUFACTURING COMPANY INC

A new type Portable Fracture Table which will serve for reduction and alignment of the various conditions required in fracture treatment, will be shown at booth C-24 The exhibits outstanding feature is a full length Cassette Tunnel for holding all sizes of x-ray Cassettes for either pelvic spinal or cervical examination without disturbing the patient.

### THE TOWER COMPANY INC

In booth C-23 fracture equipment and two comparatively new products—Airelite, the light, strong porous waterproof glass plastic bandage and the Roger Anderson orthopedic table—will be demonstrated This revolutionary table operates on anatomical centers and has a special attachment for spinal operations

### ZIMMER MANUFACTURING COMPANY

In booth A-29 there will be displayed and demonstrated many new items of interest to the surgeon specializing in bone surgery and to the medical profession in general

## Toilet Preparations

### ALMAY INCORPORATED

Almay cordially invite you to stop at booth I-15 and discuss their full line of highest quality Hypoallergenic Cosmetics as well as Raw Material and Clinical Testing Sets used for the development of personalized cosmetics for the difficult allergic case Almay s Ointment Bases and Coloring Agent will also be on display

### RICHARD HUDNUT

The exhibit will feature not only DuBarry Beauty Preparations but will also present information of interest to doctors about the famous DuBarry Home Success Course including "before and after" photographs and x-rays of students of the course There will be a complimentary kit presented to every physician who registers at the Richard Hudnut booth E-14

### LUZIER S INCORPORATED

Cosmetics and perfumes will be on display in booth I-7 These preparations are selected to suit individual cosmetic requirements and preferences In specific cases, raw materials may be had for patchtesting. Officials of Luzier s Inc , will be present to explain this cosmetic service in detail

### MARCELLE COSMETICS INC

Hypo-allergenic cosmetics formulated for allergic persons, will be featured in booth E-5 Members of the organization will discuss the cosmetic needs of the medical profession. Formularies brochures and cosmetics will be available to allergists, dermatologists and all physicians interested in allergy

### THE MENNEN COMPANY

Register at The Mennen Company Exhibit. They will show their well established line of products, together with several new products that have recently been released Visit booth G-2

### THE PROCTER & GAMBLE COMPANY

A new time-saving service for doctors will be introduced at booth G-11 This service will consist of a series of printed instructional leaflets in pad form containing answers to many routine questions that patients ask concerning home care The first leaflet will be Instructions for Routine Care of Acne

### WESTWOOD PHARMACAL CORP

Drop in at booth C-20 for complimentary supplies of LOWILA CAKE and LOWILA LIQUID the soapless detergents for skin cleansing and household cleaning These lather in the hardest water, even in sea water

## X-Ray & Radium

### CANADIAN RADIUM & URANIUM CORPORATION

High-purity Radium is available to the medical profession in any form New types of containers and late developments in accessory equipment will be shown at booth LL-18 on the lower level Physicians are invited to call

### E. I DU PONT DE NEMOURS & COMPANY INC

The X-Ray and Patterson Screen Divisions of E I du Pont de Nemours & Co., Inc will exhibit x-ray products including the newly developed Fluoro-Film for mass chest survey in booths LL-6 and LL-8 Salon photographs made with Du Pont Defender films and printed on Defender printing and projection papers will also be shown

### H G FISCHER & COMPANY

After-the-war models of shockproof x-ray and electro surgical medical equipment are still largely in the making. You are cordially invited to inspect the new FISCHER units already available FISCHER representatives will be glad to answer any questions and to supply information regarding the complete FISCHER line You will be welcome at booth C-3,

### GENERAL ELECTRIC X RAY CORPORATION

G E will show a transportable Photo-Roentgen unit for 70 m m roll film single and stereoscopic, also for cut films 4" x 5 single or 4" x 10" stereoscopic It easily packs away in 10 sturdy carrying cases. Yes automatic x-ray film processing and fixation is possible See this apparatus demonstrated at booth 28-30 32 34 and 36.

### THE KELLEY KOETT MANUFACTURING CO

Physicians are cordially invited to inspect the Keleket Photocron Unit using 70 m.m film for mass x-ray surveys. Keleket representatives will be in booth F-29 to provide information on displayed products, and answer all questions about x-ray apparatus of interest to physicians.

### MACHLETT LABORATORIES, INC.

Two recent x-ray developments of this firm will be exhibited in booth I-22A. The Dynamax "25 -AA Rotating Anode Tube has twin filaments with 1.5 mm superimposed focal spots The AAG-50 (at 50 MA) provides high intensity soft x radiation in excess of 2 000 000 R units a minute

### F MATTERN MANUFACTURING COMPANY

This firm will display the new motor driven table of their single tube model MX deluxe unit Also shown will be the new shockproof two tube and two transformer FX table unit Also the two tube one transformer 200 M A unit built by them for the U S Army but now equipped with a Machlett dynamax (rotating anode) tube. Visit booths C-29 and C-31

### THE WM MEYER CO

In both H-11 The Wm Meyer Company will exhibit some of their post war x ray models including a new Combination Vertical Fluoroscopic-Radiographic Unit which provides more features than heretofore offered in units of this type also a new *Mobile Office and Bedside* X Ray Unit

### PICKER X RAY CORPORATION

Included in the display of various types of x-ray equipment in booths D 1 and D-3 will be the new Picker Minograph This has been developed in cooperation with leading authorities of the Public Health Service to provide an efficient transportable machine for mass chest radiography There will also be shown for the first time the new Picker 250 KV self-contained flexible therapy outfit

*(Continued on advertising page 106)*

## Exhibitors

| | |
|---|---|
| Smith Dorsey Company Lincoln Neb | G-13 |
| Smith Kline & French Laboratories Phila | D 9 |
| Sorensen Co C M N Y C | H 34 |
| Spencer Inc New Haven | E-4 |
| Squibb & Sons E R N Y C. | C 2 & C-4 |
| Stacey Inc J W San Francisco | C 14 |
| Standard X Ray Company Chicago | 17 |
| Stearns & Company Frederick, Detroit | H-4 |
| Surgical Publishing Co Chicago 11 | LL 13 |
| Swift & Co Chicago | LL-16 |
| Tampax Inc New York 17 N Y | F 17 |
| Taylor Instrument Cos Rochester N Y | H-12 |
| Technicon Company N Y C | F 23 |
| Thomas Charles C Springfield Ill | B 7 |
| Toldey The Co Fort Wayne 8 Ind. | LL-23 |
| Tower Company Seattle | C 23 |
| Univ of Chicago Press Chicago Ill. | LL 10 |
| Vanta The Company Newton 58 Mass | LL-21 |
| Varick Pharmacal Co N Y C. | F 30 |
| Warner & Co William R N Y C | F 14 |
| Warren Teed Prods Columbus 8 | A-18 |
| Westinghouse I-10 I 12, I 14 I 16 & I 18 | |
| Westwood Pharmacal Corp Buffalo | C *6 |
| White Labs Newark | H 1 & H 3 |
| Williams & Wilkins Baltimore | C 3 |
| Winthrop Chem. N Y C D 6 D 8 D 10 & D 12 | |
| Wis Alum Res Found Madison Wis | H 22 |
| Wyeth Incorporated Philadelphia | D 14 |
| X-Ray Prod Corp., Los Angeles | S ½ F-10 |
| Year Book Publishers Chicago | A 3 |
| Zimmer Mfg Co Warsaw Indiana | A *9 |

# MEDICINE AND THE WAR

## ARMY

### NUMBER OF MEDICAL OFFICERS RELEASED

The Office of the Surgeon General recently stated that, up to May 1, 1946, 32,100 medical officers and 41,700 nurses had been released from service

### BRIGADIER GENERAL SIMMONS HONORED

The honorary degree of Doctor of Science was conferred on Brig Gen James S Simmons U S Army, chief of the preventive medicine service Office of the Surgeon General and dean-elect of the Harvard School of Public Health, on April 13 at the sesquicentennial commemoration of the founding of the University of North Carolina

### STUDY PREVENTIVE MEASURE FOR RESPIRATORY DISEASES

Experiments are being conducted by the Army Medical Department in treating GI blankets with a light oil solution in an attempt to offset the prevalence of respiratory diseases

In selected barracks at Fort Belvoir, Virginia, and Aberdeen Proving Ground, Maryland, the preventive measure is being tested now Previous experiments were made in Camp Carson, Colorado and Fort Bragg North Carolina, from 1943 to 1945, under the direction of the Army Epidemiological Board

The treatment calls for the spreading on the barracks floors of a light oil which has a paraffin base. The liquid resembles cylinder oil and is odorless and colorless It spreads evenly and is readily absorbed The theory behind the treatment is that the oil will trap dust and other respiratory germs by absorbing them Once a soldier coughs the expelled germs will settle on his blanket or on the floor and be anchored instead of drifting about the room to infect others

### ARMY AWARDS AND COMMENDATIONS

#### Colonel Arthur S W Touroff

Col Arthur S W Touroff, New York, was recently awarded the Legion of Merit 'for exceptionally meritorious conduct in the performance of outstanding services as thoracic consultant to the 12th (U S) Hospital Center and thoracic surgeon in charge of the thoracic surgery section, 155th General Hospital from June 6, 1944 to June 7, 1945 Colonel Touroff's outstanding skill, untiring effort and devotion to duty resulted in the saving of many lives, the prevention of permanent disability in many cases and the shortening of the period of incapacity among the wounded. His judgment and skill far beyond the average, resulted in the rendering of highly superior treatment to the many hundreds of battle casualties coming under his care. Colonel Touroff made an outstanding contribution to the successful Allied operations and served to reflect great credit on himself and the United States Army" Dr Touroff graduated from Columbia University College of Physicians and Surgeons, New York, in 1925 and entered the service Sept. 23 1942

## VETERANS

### COMPLETE PLANS FOR EIGHT VETERANS ADMINISTRATION HOSPITALS

Work will start immediately on plans and specifications for eight hospitals for the Veterans Administration, which were recently completed. A survey for a new 1 000 bed hospital at Albany N Y, was also started and for additions or conversions at five other hospitals The location size, type and estimated cost of the eight hospitals for which plans are authorized are

Iron Mountain, Mich., 250 bed general medical $2,555 037, Seattle, 300 bed general medical, $3 351,216, Wilkes-Barre, Pa., 475 bed general medical, $3,703,463, Decatur Ill, 250 bed general medical $2,768 258, Shreveport, La. 450 bed general medical, $3,715 361, Big Spring, Texas 250 bed general medical $2,570 753, Miles City, Mont. 100 bed general medical, $1 052,312, Fresno, Calif., 250 bed general medical $2 634 676

Field survey for the new hospital at Albany N Y, will include making soil bearing tests and borings to determine the type of underlying structure among other engineering data. The hospital, estimated cost of which is $10,423 706, will have 800 beds for general medical patients and 200 beds for neuropsychiatric cases

The field surveys to be made on conversions and additions to established hospitals with the estimated costs of making such changes, are as follows

Montgomery, Ala. conversion of a 268 bed hospital to a tuberculosis hospital, $711,215, Tuskegee, Ala, addition to the hospital there of 164 beds for neuropsychiatric cases, $3 729 768, Columbia, S C, addition of 200 beds for general medical purposes $2,466 062 Brecksville, Ohio conversion of a 269 bed hospital and addition of 131 beds all for tuberculous patients, $1,376,193, Gulfport, Miss, conversion of a 164 bed hospital for neuropsychiatric cases, $2 003 722

All contracts for this work will be let to civilian architects, engineers and constructors through the district and division engineers in charge of territory in which the hospital is located.

### HOSPITALIZED VETERANS OFFERED U S ARMED FORCES INSTITUTE COURSES

Arrangements were recently completed to provide educational opportunities through the USAFI for personnel in veterans hospitals Some ninety odd correspondence and self-teaching courses prepared by the USAFI will be made available to hospitalized veterans in accordance with arrangements made with the Veterans Administration. The courses will be followed up by corresponding end of-course tests such as are regularly given to personnel on active duty

The Veterans Administration has planned that lessons and tests submitted will be graded by the University of Wisconsin, which now grades lessons submitted by military personnel Registration of courses, grading of lessons, administration and grading of tests and the recording of course completions for possible accreditation purposes will be the complete responsibility of the Medical Rehabilitation Service of the Veterans Administration. The Army supplies at one time bulk shipments to named veterans' hospitals

Generally, personnel in veterans' hospitals have been unable to participate in educational programs Such personnel could not enroll for services of the United States Armed Forces Institute. (USAFI services are limited to military personnel on active duty Veterans who had enrolled for courses prior to discharge may, under circumstances, complete such courses) As veterans could not take advantage of educational programs provided for them until they had been separated from the veterans' hospitals, this arrangement is limited to hospitalized veterans

### APPOINTED CONSULTANT TO VETERANS ADMINISTRATION

Dr Lewis J Moorman, Oklahoma City, was recently appointed consultant by the Veterans Administration in line with its policy to bring civilian medical consultant service into the Veterans Medical Program

# ORGANIZATION SECTION

## THE TAFT-SMITH-BALL NATIONAL HEALTH BILL

### Analysis of S 2143

*Prepared by the Bureau of Legal Medicine and Legislation, American Medical Association*

On May 3, 1946 Senator Taft, Ohio, for himself and Senator Smith, New Jersey, and Senator Ball, Minnesota, introduced S 2143, a bill to "coordinate the health functions of the federal government in a single agency, to amend the Public Health Service Act for the following purposes to expand the activities of the Public Health Service, to promote and encourage medical and dental research in the National Institute of Health and through grants-in aid to the states, to construct in the National Institute of Health a dental research institute and a neuropsychiatric institute, and for other purposes" The bill was referred to the Senate Committee on Education and Labor, before which is pending the current version of the Wagner-Murray-Dingell bill

S 2143, forty-six pages in length, contains three titles Title I would create a National Health Agency to which would be transferred designated health activities now carried on by the federal government Title II proposes amendments to the Public Health Service Act to provide for (1) general medical service for families and individuals with low income, (2) dental health services for school children and families and individuals with low income and (3) medical, dental and neuropsychiatric research The third title proposes amendments to existing laws made necessary by the bill and would permit payroll deductions from the salaries of government employees to facilitate their participation in nonprofit medical, hospital and dental care plans

#### BILL AS VIEWED BY SENATOR TAFT AND SENATOR SMITH

In introducing S 2143, Senator Taft said that it represented a completely and entirely different philosophy of approach from the plan proposing universal federal compulsory health insurance. Under that plan, Senator Taft contended,

> every person in the United States—not only those unable to pay but every one—must contribute a percentage of his payroll or otherwise to a compulsory federal fund for which he is supposed to receive medical service. That means that between $3 000 000 000 and $5 000 000 000 would pour into the federal treasury in Washington and would then be expended by a vast administrative organization in paying all the doctors in the United States The doctors would be directed as to what they could do in the way of furnishing medical service how often they could call for what kind of diseases they could call what kind of medicine they could prescribe if it were an expensive medicine and all the details of medical service In effect all the doctors in the United States would become employees of the federal government That is not only socialization of medicine but it is a complete nationalization of the medical profession

By contrast, Senator Taft described the operation of his bill as follows

> The proposal I submit would fill up the gaps in the service performed by the present system So under the existing system with its freedom of doctors and the freedom of medicine which we have enjoyed and which has made this country almost outstanding in the progress of medical science we would retain those characteristics and enable every person in the United States to receive adequate medical services
>
> Mr President the bill proposes therefore fundamental differences from the other plan First it would place the entire responsibility on the states and on the *local governments where it now rests. Instead* of federalizing the whole undertaking and turning over this tremendous field to bureaucrats in Washington it would place as I have said the responsibility under the state and local governments. In the second place it attempts to provide only for those who are unable to pay for essential medical service leaving those who are able to pay free to do as they choose with reference to obtaining medical service The bill would encourage the development of health insurance funds for persons who may wish to take advantage of such insurance and protect themselves against the future occurrence of some form of catastrophic illnesses

Senator Smith also emphasized the point of view that S 2143 puts the responsibility directly up to the states to determine their own health programs with aid from the federal government and in justification of this method of approach said

> All through our history we have profited by the fact that we had forty eight states which were in a sense, laboratories in which new programs and methods could be put into effect In carrying out the proposed program we will not be required to go to the federal government for a centralized control We will ask the states to show us the way and thereby enable all our people to be protected through a medical and health program Those who are proposing this bill wish to obtain the best health system which can be obtained for the people of this country We are thinking particularly in terms of those in the lower income brackets I submit that the method of trial and error the method of evolution in our progress in difficult and complicated subjects such as this and our desire to have wholehearted support of the medical profession represents the proper approach to a blueprint for the future.

#### NATIONAL HEALTH AGENCY

Title I of the bill would create in the executive branch of the government an independent agency to be known as the National Health Agency, to be administered by a national health administrator appointed by the President by and with the advice and consent of the Senate His salary will be $15,000 a year

*Qualifications of Administrator*—The administrator may not engage in any other business, vocation or employment. He must be a citizen and must either be a doctor of medicine with at least eight years of experience in the commissioned corps of the United States Public Health Service or a doctor of medicine licensed to practice in one or more states who has had at least five years of active practice and three years of experience in a responsible position in medical research, teaching or administration

*Purposes and Duties of Agency*—The purpose of the agency will be to promote the general welfare of the people by aiding and fostering progress in the field of health and by centralizing in the agency the activities of the federal government relating to health It will be required to (1) encourage the development throughout the nation of health services and facilities, (2) advise and cooperate with other agencies and departments of the federal government and with state governments and agencies, and with private agencies functioning in the field of health, (3) collect and analyze statistics and make studies, investigations and reports on conditions, problems and needs in the field of health in the United States and in other countries, and to disseminate and make available information in this field, (4) make reports and recommendations with respect to the most efficient policies and methods for the promotion of health and related services, including recommendations with respect to legislation and matters of administrative policy, and (5) carry out the specific duties entrusted to it by the Congress

The agency will have responsibility for governmental activities having to do with (1) the administration of funds appropriated as grants to states for medical care, dental care, hospital facilities and other health activities, (2) the prevention of disease through water purification, sewage treatment and elimination of lake and stream pollution, (3) the promotion of maternal, antepartum and child care, and the study and dissemination of information on child growth, development and nutrition, (4) the protection of health by promoting purity standard potency and truthful and informative labeling of foods, drugs and cosmetics, (5) the training and rehabilitation of persons vocationally handicapped, and (6) such related mat

ters as shall aid the states and the people in the maintenance of adequate and efficient health facilities and otherwise promoting the national health

*Transfer of Functions to Agency*—The following existing agencies and their functions powers and duties will be transferred to the National Health Agency the United States Public Health Service, St Elizabeths Hospital, the Food and Drug Administration, the Office of Vocational Rehabilitation, the functions and duties of the Children's Bureau concerned with the administration of title V, parts 1 and 2, of the Social Security Act, and the functions and duties of the Division of Health Studies in the Bureau of Research and Statistics of the Social Security Board

The director of the Bureau of the Budget will be directed to make a study of the activities of other departments and agencies of the federal government to determine whether any of their activities relating to health should be transferred to the agency The study is to be completed by June 30, 1947 and a report of its results submitted to the Congress

Nothing in the title would effect a transfer to the agency of any powers, functions or duties exercised by the Army, the Navy or the Veterans Administration

*Units of Agency*—In the agency there will be the following units (1) the Office of the administrator, (2) the Public Health Service, which in turn will assume the jurisdiction of St Elizabeths Hospital and Freedman's Hospital, (3) the Food and Drug Administration, (4) the Office of Vocational Rehabilitation, (5) the Office of Maternal and Child Health, (6) the Office of Health Statistics, and (7) such other constituent units as the administrator finds necessary

The Surgeon General of the Public Health Service will be appointed as provided in section 204 of the Public Health Service Act. The heads of other constituent units of the agency will be appointed by the administrator

*Surgeon General to Act in Absence of Administrator*—In the absence of the administrator or in case of vacancy in the office, the Surgeon General of the Public Health Service will act as administrator until that official returns to duty or until the vacancy is otherwise filled When the Surgeon General does so act, the Deputy Surgeon General will act as Surgeon General in accordance with the provisions of the Public Health Service Act.

*Advisory Council on Maternal and Child Care*—Within the Office of Maternal and Child Health there will be an Advisory Council on Maternal and Child Care to be appointed by the administrator This council will advise and consult with the head of the Office of Maternal and Child Health in the formulation and administration of the medical and technical activities of the office. It will be composed of eight members, at least three of whom must be doctors of medicine who are specialists in obstetrics or pediatrics The term of office of a member will be four years with the exception of those initially appointed, whose terms of office will be staggered. The administrator will designate one member to be chairman. Each member will receive compensation at a rate fixed by the administrator but not in excess of $25 a day and will be entitled to an allowance for necessary traveling and subsistence expenses while serving away from his place of residence

*Reports by Administrator*—The administrator will be required to submit to the Congress and to the President a report in writing annually giving an account of all moneys received and disbursed, describing the work done by the agency and making such recommendations as he may deem necessary

*Appropriations*—There will be authorized to be appropriated for the administrative expenses of the agency for each fiscal year such sums as may be necessary

*Effective Date of Title*—This title will take effect on July 1, 1946 The administrator, however, may be appointed by the President, and his appointment confirmed by the Senate, at any time after the enactment of the title, but such appointment will not become effective until the effective date of the title.

### MEDICAL SERVICES FOR LOW INCOME GROUPS

Title II of the bill would add a new title to the Public Health Service Act, title VII, to assist the states to provide general health, hospital and medical services for families and individuals with low income. An appropriation of $200,000,000 for each of five fiscal years would be authorized for making payments to states which have submitted and had approved by the Surgeon General state plans for providing these services During and after this five year period the Congress will, it is contemplated, review the program and determine the amount to be authorized thereafter

*State Plans*—Any state desiring to participate in this program may submit a plan to the Surgeon General Such a plan must

1 Designate a single state administrative agency which, after 1948, must be the state health agency

2 Provide for the designation of a state health advisory council which must include representatives of nongovernmental organizations or groups, and of state agencies concerned with health, medical or hospital services, including representatives of state medical associations, voluntary nonprofit medical and hospital associations or other groups interested in the improvement and better distribution of health and medical services

3 Contain satisfactory evidence that the state agency will have authority to carry out the plan

4 Set forth a statewide program designed and calculated to provide, within five years, hospital, surgical and medical services in hospitals, clinics or similar institutions for all families and individuals having insufficient income to pay the whole cost of such services and health inspection services for children in elementary or secondary schools A plan may also, at the option of the state, provide medical care in the home or physicians' offices for such families and individuals and may also provide for the furnishing of services by means of payment of premiums or partial premiums by the state on behalf of families and individuals unable to pay the whole cost of such insurance to any voluntary health, medical or hospital insurance fund operated not for profit. Such plan must provide for the collection of proper charges of less than the total cost of such services from persons able to pay in part. The plan may include and take account of services to be rendered by governmental subdivisions of the state and by private organizations operating not for profit and may provide for the payment to such institutions by the state or subdivision for services so rendered A plan may also include annual payments to physicians practicing in areas which, without such payments, would be unable to provide sufficient income to attract a physician A plan so submitted must be based on a statewide survey of existing medical, surgical and hospital care and must describe in detail the extension of such services to the end that they be furnished without discrimination on account of race, creed or color to all persons unable to pay in full for the services

5 Describe the financial participation required from the state and its governmental subdivisions to put the plan into effect for a five year period Such financial participation shall be at least twice the amount of federal money to be made available to the state under the legislation

6 Set forth the relative need of the various proposals contained in the plan and provide for the proper priority between such proposals

7 Provide the method of administration of the plan, including the establishment and maintenance of personnel standards on a merit basis, but the Surgeon General will have no authority with respect to the selection, tenure of office or compensation of any individual employee.

8 Provide for the making of reports by the state agency to the Surgeon General and for the accessibility of state records

9 Provide that the state agency will review its plan from time to time and submit to the Surgeon General any necessary modifications

*Approval of State Plans*—If a state plan fulfils the conditions specified in the preceding paragraphs, it must be approved by the Surgeon General If a plan is disapproved for failure to comply with the conditions named the National Health Council must on request of the state agency afford it an opportunity for hearing If the council decides that the plan does comply with the conditions, the Surgeon General must approve it.

The bill specifically prohibits the Surgeon General from disapproving any plan because he may disapprove of the *methods*

proposed, if the program is designed and calculated to provide, at the end of the five year period, hospital, surgical and medical services in hospitals, clinics or medical or similar institutions for all persons having insufficient income to pay the whole cost of such services and if it provides health inspection services for all children in elementary or secondary schools at a cost within the probable financial resources of the state with federal aid The intent is expressed in the bill that the state shall devise in each case the *methods* by which the desired end is to be attained

*Allotments to States*—Each state with an approved plan will be entitled to an allotment for each fiscal year of a sum bearing the same ratio to $200,000 000 as the product of (*a*) the population of such state and (*b*) its percentage of tax-paying ability bears to the sum of the corresponding products of all the states having approved plans The percentage of tax-paying ability of a state will be that percentage which bears the same ratio to 50 per cent as the per capita income of the continental United States, exclusive of Alaska, bears to the per capita income of the state, except that it will in no case be more than 66⅔ per cent or less than 25 per cent. Sums allotted to a state for a fiscal year and remaining unencumbered at the end of the year will remain available to the state for the next fiscal year

*Withholding of Allotments*—Allotments to states may be discontinued with the approval of the administrator if the Surgeon General, after reasonable notice and opportunity for hearing to the state agency, finds (1) that the agency is not complying substantially with the provisions of its plan, (2) that any federal funds have been diverted or (3) that the state and its governmental subdivisions have failed to provide toward the carrying out of the plan at least twice as much money as received from the federal government. A dissatisfied state whose allotments have been discontinued may appeal to the United States circuit court of appeals for the circuit in which the state is located.

*Regulations, National Health Council*—The Surgeon General is authorized to make such administrative regulations as he finds necessary and in administering the program will be required to consult with the National Health Council consisting of the Surgeon General ex officio as chairman and eight members appointed by the administrator Five of the appointed members must be persons who are outstanding in fields pertaining to health activities, at least three of whom shall be doctors of medicine. The other three appointed members must be persons familiar with the needs for medical care in urban or rural areas Each appointed member will hold office for a term of four years except the members first taking office, whose terms will be staggered Appointed members will be ineligible to serve continuously for more than two terms but may be reappointed if they have not served two consecutive terms immediately preceding reappointment. Special and technical committees may be appointed by the council Appointed council members and members of special committees will receive compensation at rates fixed by the administrator but not to exceed $25 a day plus an allowance for actual and necessary travel and subsistence expenses The council will meet as frequently as the administrator deems necessary, but not less than once each quarter If three or more members so request, the administrator will be required to call a meeting of the council

*Miscellaneous*—If the Surgeon General believes that the purposes of this title would be promoted by a conference of representatives from state health agencies, he may call such a conference as provided in the Public Health Service Act

Except as otherwise specifically provided, nothing in the title may be construed as conferring on any federal officer or employee the right to exercise any supervision or control over the administration, personnel, maintenance or operation of any health services with respect to which any federal funds are expended

### DENTAL HEALTH SERVICES

Another new title to be added to the Public Health Service Act, title *VIII*, proposes federal funds to assist the states to provide dental inspection for school children and necessary dental care for those school children and other individuals and families unable to pay the whole cost of such care. For the fiscal year ending June 30, 1947 the sum of $8,000 000 will be authorized, for the fiscal year ending June 30 1948, $12,000 000, for the fiscal year ending June 30, 1949, $16 000,000 and for the next two fiscal years the sum of $20,000,000 each.

*State Plans*—For a state to take advantage of this title, it must submit a plan to the Surgeon General for his approval The requirements with respect to such a plan parallel closely the requirements specified for a plan for general medical services in that it must designate a single state administrative agency, provide for a dental advisory council, describe the financial participation required from the state and its governmental subdivisions, and so on One requirement is that the plan must set forth a statewide program designed and calculated within five years to provide for the annual inspection of the teeth of all children in the elementary and secondary grades of public and private schools and must provide for the care and treatment, including prophylaxis, filling, x-ray, extraction and related care, other than straightening, of the teeth of those children in the elementary and secondary schools whose family or guardian has insufficient income to pay for the whole cost of such services, as certified to the state agency by the principal or other head of the school at which the child is in attendance A state plan may, at the option of the state, provide dental care for those families and individuals in the state having insufficient income to pay the cost of such service

*Miscellaneous*—The other sections of this title follow in the main comparable sections in the title having relation to general medical services

### RESEARCH

Title II contains three parts relating to research in the fields of general medical health, neuropsychiatry and dentistry

*General Medical Health Research*—The following appropriations will be authorized for researches, demonstrations and training in the field of general medical health for each of five years beginning with the fiscal year ending June 30, 1947 for grants-in-aid through the National Institute of Health to universities and similar institutions for general medical research, not to exceed $2,000,000, and for medical research in, and operation of, the National Institute of Health, not to exceed $2,500,000

*Neuropsychiatric Research*—There will be authorized to be appropriated the following sums for research and scholarships in the field of neuropsychiatric health for the fiscal year ending June 30, 1947 for grants-in-aid for research and scholarships in neuropsychiatric health not to exceed $150 000 and for research and scholarships in neuropsychiatric health within the Institute of Neuropsychiatric Research not to exceed $300 000 For the following fiscal year these appropriations will be increased by $150,000 and $400,000 respectively and for each fiscal year thereafter the appropriation for grants in aid may not exceed $500,000 and for research and scholarships in neuropsychiatric health within the institute not in excess of $700 000.

There will be established in the National Institute of Health a division to be known as the National Institute of Neuropsychiatric Research, and there will be created a National Advisory Council on Mental Research consisting of the Surgeon General ex officio as chairman and six additional members to be appointed without regard to civil service laws by the Surgeon General with the approval of the administration The six appointed members will be selected from leading medical or scientific authorities who are outstanding in the study, diagnosis or treatment of mental or neuropsychiatric disorders, at least three of whom must be doctors of medicine and the others thoroughly familiar with neuropsychiatric conditions and problems in the United States Each appointed member will hold office for a term of three years except the original members, whose terms of office will be staggered Each appointed member will receive not in excess of $25 a day while attending conferences or meetings of the council or while otherwise serving at the request of the Surgeon General and an allowance for traveling and subsistence expenses

The National Institute of Neuropsychiatric Research, in cooperation with the National Council on Mental Research, will be specifically authorized to

1 Conduct, assist and foster research, investigation, experiments, demonstrations and studies relating to the causes, diagnosis, treatment and prevention of neuropsychiatric diseases and disorders

2. Promote the coordination of research conducted by other public and private agencies and make grants-in-aid to such public or private agencies

3 Provide scholarships in the institute and in other institutions receiving grants-in-aid

The National Advisory Council on Mental Research will have the following functions

1 To review research projects or programs submitted to or initiated by it relating to the study of the causes, diagnosis, treatment and prevention of neuropsychiatric diseases and disorders and to certify approval to the Surgeon General of any such projects which show promise of making valuable contributions to human knowledge in this field

2 To collect information as to studies which are being carried on and with the approval of the Surgeon General to make available such information through appropriate publication

3. To review applications from universities, hospitals, neuropsychiatric or similar institutions, whether public or private, or from individuals, for grants-in-aid

4 To recommend to the Surgeon General for acceptance conditional gifts and to make other recommendations to the Surgeon General with respect to carrying out the provisions of this part of the bill

The surgeon general may recommend to the administrator acceptance of conditional gifts for study, investigation or research, and donations of $50,000 or over may be acknowledged by the establishment within the National Institute of Neuropsychiatric Research of suitable memorials to donors

An appropriation not in excess of $4,500 000 will be authorized for the erection and equipment of suitable and adequate hospital, laboratory and related facilities for the use of the institute, the facilities to be constructed in or near the District of Columbia

*Dental Research*.—The provisions of the bill relating to dental research parallel those relating to neuropsychiatric research A National Institute of Dental Research will be established as a division in the National Institute of Health, which will function in cooperation with the National Dental Health Council in a comparable manner to that in which the National Advisory Council on Mental Research will cooperate with the National Institute of Neuropsychiatric Research An appropriation of $1,000,000 will be authorized for the erection and equipment of a suitable and adequate building and other facilities in or near the District of Columbia, for the use of the National Institute of Dental Research.

It is contemplated that for the year ending June 30, 1947 there will be appropriated a sum not to exceed $75,000 for grants in aid for dental research and training and not to exceed $175,000 for research and scholarships within the National Institute of Dental Research For the next year the appropriation for grants-in-aid may not exceed $150,000, and for research and scholarships $250,000 Thereafter the appropriation may not exceed $300,000 annually each for grants-in-aid and for research and scholarships

PAYROLL DEDUCTIONS

Title III provides that on the direction of any officer or employee of the government of the United States, requesting the government to deduct from the salary of such employee a fixed sum or percentage to be paid to any public or private health insurance fund, such sum or percentage shall be deducted and paid as directed by the employee or officer The term United States' is defined to include all departments, bureaus, agencies and other divisions of the government and also corporations the stock of which is wholly owned by the government. The term "public or private health insurance fund' will include any nonprofit organization undertaking to insure persons against the expense of hospital, medical or dental services or any other service connected with health

# National Health Program

## PLATFORM ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

*One of the ten points in this platform will be published each week*

**7 A program for national health should include the administration of medical care, including hospitalization, to all veterans, such medical care to be provided preferably by a physician of the veteran's choice, with payment by the Veterans Administration through a plan mutually agreed on between the state medical association and the Veterans Administration**

# Medical Legislation

## MEDICAL BILLS IN CONGRESS

### U S Employees' Compensation Act

The Senate Committee on Education and Labor has reported, with amendments, S 178, proposing to amend the United States Employees' Compensation Act to permit chiropractors to treat employees entitled to the benefits of that act.

### Optometry Corps

President Truman has vetoed H R 3755, proposing to establish an Optometry Corps in the Medical Department of the Army In the opinion of the President the creation of such a corps would be out of harmony not only with the present structure of the Medical Corps but also with the contemplated organization of the Medical Department of the postwar army

### Army Medical Department

H R 6175, introduced by Representative Lane Massachusetts, provides that for the purposes of promotion longevity pay and retirement there shall be credited to officers of the Medical Department of the Army all service as interns in army hospitals performed in a civilian-employee status

### Miscellaneous

H R 6369, introduced, by request by Representative McMillan, South Carolina, provides for the voluntary admission and treatment of mental patients at St. Elizabeths Hospital

H R 6385, introduced, by request by Representative McMillan South Carolina, proposes to regulate the manufacture, sale, distribution and use of barbiturates in the District of Columbia

President Truman has submitted to the Congress a supplemental estimate of appropriation for the fiscal year 1946 in the amount of $2,148 800 for use by the Department of Labor in making grants to states for continuation of the E. M I C program (H Doc. 554)

H R. 6305 has passed the House, proposing to make permanent the provisions of the act of July 11 1941 prohibiting prostitution in the vicinity of military and naval establishments

The Senate Committee on Education and Labor has reported with amendments, H R 4512, proposing to provide for research relating to psychiatric disorders and to aid in the development of more effective methods of prevention, diagnosis and treatment of such disorders

By request, Representative Rankin, Mississippi, has introduced H R. 6272, proposing that a veteran's pension compensation or retirement pay shall not be reduced during his hospitalization or domiciliary care.

H R 6089, introduced by Representative Hand New Jersey, would require the Veterans Administration to furnish to all honorably discharged veterans of World War II who are certified by the administration to be true paraplegic cases, specially designed automobiles to enable the veterans to engage in useful occupations

Hearings are being held by the House Committee on Foreign Affairs on H R 4502, a bill introduced by Representative Neely, West Virginia, proposing an appropriation of $100,000,000 for use in research to discover means of curing and preventing cancer

## STATE LEGISLATION

### Louisiana

*Bill Introduced*—H 87 proposes to authorize the department of institutions to construct, purchase or otherwise acquire, equip and maintain hospital facilities for the care of persons suffering from chronic illnesses (excepting mental illness and tuberculosis) and defines the term "chronic illness" as "a disabling illness of anticipated long duration requiring medical and/or nursing care." It also proposes an appropriation for the aforementioned purposes

### Missouri

*Bill Passed*—H 830 passed the senate May 13 It proposes that county courts be authorized to promulgate such rules, regulations or ordinances as will tend to enhance the public health and prevent the entrance of infectious, contagious, communicable or dangerous diseases into the county

## Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St Chicago 10 Secretary

American Academy of Tuberculosis Physicians, San Francisco June 30 Dr Oscar S Levin, P O Box 7011 Denver 6 Colo Secretary
American Association for the Study of Goiter, Chicago June 20 23 Dr Thomas C Davison, 478 Peachtree St N E, Atlanta 3, Ga Secretary
American Association for the Surgery of Trauma San Antonio, Texas June 26-28 Dr Gordon M Morrison 520 Commonwealth Ave, Boston Secretary
American Association for Thoracic Surgery Detroit May 29 31 Dr Richard H Meade Jr Kennedy General Hospital, Memphis 15 Tenn, Secretary
American Association of Genito Urinary Surgeons Stockbridge Mass June 20-22 Dr Charles C Higgins 2020 E 93d St Cleveland 6 Secretary
American Association of Plastic Surgeons Toronto Canada June 3-4 Dr Frederick A Figi 102 Second Ave S W Rochester Minn Secretary
American Association of the History of Medicine, Atlantic City May 26-27 Mr W B McDaniel II 19 S 22d St. Philadelphia 3, Secretary
American Broncho-Esophagological Association, Chicago, May 31 Dr Paul H Holinger 700 N Michigan Ave., Chicago 11 Secretary
American College of Allergists San Francisco June 28 30 Dr Fred W Wittich 401 LaSalle Medical Bldg Minneapolis 2 Secretary
American College of Chest Physicians, San Francisco June 27 30 Mr Murray Kornfeld 500 N Dearborn St Chicago 10 Executive Secretary
American College of Radiology, San Francisco June 29 Mr Mac F Cahal 20 N Wacker Drive Chicago 6 Secretary
American Dermatological Association Hot Springs Va., June 10-14 Dr Harry R Foerster, 208 E. Wisconsin Ave Milwaukee Secretary
American Federation for Clinical Research, Atlantic City, May 28 Dr Richard H Lyons University Hospital, Ann Arbor Mich Secretary
American Laryngological Association Chicago May 29 30 Dr Arthur W Proetz 3720 Washington Blvd, St Louis 8 Secretary
American Laryngological, Rhinological and Otological Society, Chicago May 27 28 Dr C Stewart Nash 277 Alexander St Rochester 7 New York, Secretary
American Medical Women's Association San Francisco June 29 30 Dr Beulah Cushman 25 E Washington St. Chicago Secretary
American Neurological Association San Francisco June 26-28 Dr Henry Alsop Riley 117 E 72d St, New York 21 Secretary
American Ophthalmological Society, San Francisco, June 26-28 Dr Walter S Atkinson 129 Clinton St Watertown, N Y Secretary
American Orthopedic Association Hot Springs Va June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2 Secretary
American Otological Society Chicago May 31 June 1 Dr Gordon D Hoople 713 E. Genesee St, Syracuse N Y Secretary
American Physiotherapy Association Black Mountain N C June 16-22 Miss Margaret A. O'Neill 1790 Broadway New York 19 Secretary
American Proctologic Society San Francisco June 30 Dr Harry E Bacon 2031 Locust St Philadelphia 3 Secretary
American Psychiatric Association Chicago, May 27 30 Dr Winfred Overholser St Elizabeths Hospital Washington 20 D C., Secretary
American Radium Society San Francisco June 28 29 Dr Edward H Skinner 1103 Grand Ave Kansas City 6, Mo Secretary
American Society for Clinical Investigation, Atlantic City, May 27 Dr Eugene A Stead Jr, Grady Hospital Atlanta 3 Ga Secretary
American Society of Clinical Pathologists, San Francisco, June 27 30 Dr A S Giordano 531 N Main St. South Bend Ind, Secretary
Association for the Study of Internal Secretions San Francisco June 28 29 Dr Henry H. Turner, 1200 N Walter St., Oklahoma City, Secretary
Association of American Physicians Atlantic City, May 28 29 Dr Joseph T Wearn 2065 Adelbert Road, Cleveland 6, Secretary
Idaho State Medical Association Boise June 17 20 Dr F B Jeppesen 105 N 8th St., Boise, Secretary
Maine Medical Association Poland Spring June 23 25 Dr Frederick R. Carter 142 High Street Portland 3 Secretary
National Gastroenterological Association New York June 19 21 Dr G Randolph Manning 819 Broadway New York 14 Secretary
National Tuberculosis Association Buffalo N Y, June 11 13 Dr Charles J Hatfield 1790 Broadway, New York 19, Secretary
New Mexico Medical Society Santa Fe June 6-8 Dr L. B Cohenour, 221 W Central Ave Albuquerque Secretary
North Dakota State Medical Association Bismarck May 26-28 Dr L. W Larson 221 Fifth St Bismarck, Secretary
South Dakota State Medical Association Aberdeen June 1-4 Dr Roland G Mayer 225½ S Main St Aberdeen Secretary

## Washington Letter

*(From a Special Correspondent)*

May 20, 1946

### Public Reported to Be Unfamiliar With Wagner-Murray-Dingell Bill

George Gallup, director of the American Institute of Public Opinion, whose syndicated Gallup Poll is published daily in newspapers here and elsewhere throughout the country, reports that the general public has not yet become familiar with the Wagner-Murray-Dingell medical insurance bill Mr Gallup states that fewer than four in every ten persons polled had heard or read about it, and opinion was almost evenly divided on whether people would get better medical care if the government should take over a health insurance program The Washington chapter of the Physicians Forum has challenged the Medical Society of the District of Columbia to a June debate on the bill

### Veterans Administration Undertakes Program for Brain Injuries

Dr Pearce Bailey, chief neurologist during wartime of the Philadelphia Navy Hospital, will direct a special medical program for veterans suffering from brain, spinal cord or nerve injuries and from epilepsy which the Veterans Administration is launching About one third of the 45,000 patients in veterans hospitals are reported to be suffering from organic neurological disorders, and 20,000 servicemen are under treatment in army and navy hospitals The council of the American Neurological Association will serve as an advisory board, and the American Epilepsy League will assist the program

### Court Appointment of Medical Witnesses

Associate Justice James M Proctor of the District of Columbia court suggested at a meeting of the Medical Society of the District of Columbia that courts should appoint a group of physicians to serve as expert medical witnesses He said that such a panel "would lend public confidence in the administration of justice" and would "relieve members of the medical profession from embarrassment and from suspicion that their testimony was governed by the side that paid them" Justice Proctor spoke on a three man panel at the conclusion of a talk by Dr James M Gannon, Washington surgeon, on "The Expert Medical Witness"

### Health Plans Proposed for Interstate Industries

Outgrowth of John L Lewis's battle for a huge health fund to be administered solely by the union is a Senate proposal that every industry engaged in interstate commerce be required to inaugurate worker health programs Senator Pepper, Democrat of Florida, says that an argument for health plans is the fact that workers lost more time by illness than by strikes The idea of requiring industries to set up health programs is a counter proposal to the move by Senator Byrd, Democrat of Virginia, to outlaw union collection and control of any such health and welfare fund as Lewis has demanded from the soft coal mine operators

### Artificial Limb Trial Resumes Sessions

The eight remaining defendants in the antitrust trial of artificial limb manufacturers, three individuals and five companies, have waived jury trial Federal Judge Bower Broaddus of Oklahoma opened proceedings May 9 but recessed them to permit a defense lawyer to return to Minnesota to argue another case. Thirty firms and thirty three individuals pleaded nolo contendere, were found guilty and will be sentenced May 24 Earlier, charges against seven other defendants had been dismissed for various reasons

### Army Defends Delays in Discharge of Dentists

The Office of the Surgeon General of the Army has released a defense of its policy of holding discharge requirements for dentists to thirty-nine months' service while doctors are released in thirty months The disparity was criticized by dental officers as an injustice, but army officials explained that it had to be done because replacements were not available. Doctors can now be replaced Since V-E day 9,424 of about 15,000 dentists in service have been released

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*—ED.)

*(Continued from page 239)*

United States Senate, Committee on Education and Labor

APRIL 18 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Pepper, Ellender and Donnell

### Statement of Dr Ernst P Boas, Chairman Of the Physicians Forum

DR. BOAS The Physicians Forum unequivocally supports the bill under consideration, S 1606 As practicing physicians we know better than any other group of fellow Americans the present deficiencies in medical care, the needless suffering and death constantly occurring throughout this land because of bad distribution and scarcity of doctors and hospitals in many communities We know that many persons cannot afford to buy ordinary medical care and that few can cope with the costs of catastrophic illness

No one challenges the principle of the use of public funds for the prevention of disease. But the prevention of disease today involves much more than the old line activities of the public health officer—sanitation and vaccination. Today the chronic, so-called degenerative diseases, such as the heart diseases high blood pressure, diabetes, cancer and chronic rheumatism, are the great hazards to life and health Today we can no longer say "This, on the one hand, is preventive medicine, a proper function of government, and this, on the other hand, is curative medicine, the function of the practitioner of medicine whose services must be bought in the open market." These two aspects of sickness control have become merged, preventive medicine begins with measures of personal hygiene and health examinations conducted by the medical practitioner So it is a logical and natural step to turn to government for funds to extend adequate medical care to all citizens of this country Because of the uneven distribution of wealth in the United States the federal government must assume responsibility The increasing mobility of our population also makes it necessary that health plans be national in scope, so that the worker will not lose his benefits when he moves from one state to another

The administrative and organizational features of the bill are well conceived. Quite properly the Surgeon General of the United States Public Health Service is the administrator The opponents of this legislation have raised the cry that the Surgeon General would become the "medical dictator' of the nation Nothing could be further from the truth

It is also falsely charged that all details of medical care would be run from Washington by a horde of bureaucrats Once more the provisions of the bill itself give the lie to this argument Actually all that the federal government would do is what is necessary to the success of any national plan—collect the money and set up minimum standards to be followed by all doctors and hospitals Decentralization of administration is assured by the instruction that the Surgeon General utilize as far as possible the services of state and local advisory and technical committees to advise in administration The bill does not affect the present setup of medical practice. Doctors may refuse patients, patients may choose doctors Unfortunately, even the fee-for-service system of payments to practitioners is allowed if practitioners so elect. We say 'unfortunately," because it is an accepted fact, based on experience, that no health insurance plan has been able to function with fullest efficiency under the fee-for-service system It creates a huge amount of paper work for physicians and the administration, and it leads to inevitable abuse by doctor and patient. We predict that physicians will be the first to repudiate this method of payment.

*(Dr Boas emphasized the virtues of group practice)*

Additional provisions are needed in the bill to safeguard the physicians rights and privileges There should be some specific provision assuring that the income of physicians will conform on the average to levels at present current in more prosperous communities of the United States, with due consideration to the fact that income levels should actually be somewhat higher than they are today, because the physician will be paid for much of the work he today does without compensation There should be provisions enabling the physician to pursue postgraduate study and to take appropriate vacations without loss of income

The essence of the arguments presented by the opponents of this bill is that it would bring about a system of "state medicine" or "socialized medicine." What is this great bugaboo we have been taught to fear? The terms as used today have an emotional, not a factual, connotation, they are catchwords employed to arouse emotional resistance to plans to improve or change the methods of distributing medical care. Chief among those opposed to national compulsory health insurance is the American Medical Association and its satellite the National Committee of Physicians The American Medical Association has always opposed public action in any field of medical care except in the case of the indigent It is common knowledge that it opposed the establishment of workmen s compensation insurance, of the Blue Cross hospital insurance plans and until recently it relentlessly fought plans for voluntary medical care insurance

The American Medical Association is in fact serving as a guild battling to retain the economic privileges of the medical profession In this campaign it has allied itself with businesses that are purveyors of commercial aspects of medical care—with pharmaceutical houses, makers of surgical instruments and appliances and certain insurance companies and through the agency of the National Physicians Committee it has obtained substantial funds from these sources to carry on its propaganda

While the American Medical Association accepts and encourages the business transformation that the modern industrial era has brought about in the practice of medicine, the Physicians Forum recognizes the evils that this change has entailed their destructiveness to the medical profession and their harm to the patients whom it serves Through such a national health program as is proposed in S 1606 most of the financial handicaps that have prevented the extension of good medical care to all citizens will be lifted and physicians will be free to rededicate themselves fully to the prevention of disease and the treatment of the sick.

SENATOR MURRAY Doctor you have mentioned the National Physicians Committee Will you tell us what the National Physicians Committee is and how it was set up?

DR BOAS The National Physicians Committee is an outgrowth of Mr Gannet s Committee on Constitutional Government. Originally, I have forgotten when I think in 1939 he called together a large number of physicians and urged them to establish such a committee to back his general policies, and out of this grew the National Physicians Committee

SENATOR MURRAY Are these physicians members of the American Medical Association?

DR BOAS Yes I think all of the officers of the National Physicians Committee are prominent members of the American Medical Association, ex-presidents and other officers, and the House of Delegates of the American Medical Association in repeated resolutions has approved of the activities of the National Physicians Committee.

*(Through questions by Senator Murray Dr Boas attacked the National Physicians Committee and voluntary insurance plans)*

SENATOR ELLENDER What is the membership of the Physicians Forum? DR. BOAS Approximately one thousand

SENATOR ELLENDER I notice that you say that all the members of that group belong to the American Medical Association or to the National Medical Association. DR BOAS That is right.

SENATOR ELLENDER How many belong to the American Medical Association of that group? DR BOAS I cannot tell you for certain, but I imagine that we have only about 40 or so who belong to the National Medical Association

SENATOR ELLENDER To the National Medical Association? DR. BOAS Yes, sir, that is the medical association of the Negroes The reason we have that provision in is that all doctors can join the American Medical Association only through their county societies In the North, Negroes are admitted to county societies, so they can join the American Medical Association, and in the South they cannot, and so they are unable to join the American Medical Association, so that is why we have that provision

SENATOR ELLENDER To what extent did your group help in perfecting the legislation we now have under consideration? DR BOAS Well, we presented analyses of the first Wagner-Murray-Dingell bill, criticizing various aspects of it, and sent them here to Washington to the Senators and to the Social Security Board, and we had a number of subsequent conferences with them about certain details, and some of our recommendations were accepted and some were not.

SENATOR ELLENDER As among the doctors of the country, the Physicians Forum has been the mainspring back of this legislation that we are now considering? DR. BOAS Really, this was a committee of physicians for the improvement of medical care I think the Physicians Forum and the Committee of Physicians have been the two physicians' organizations supporting this

SENATOR ELLENDER Which is this other? DR BOAS The Committee of Physicians

SENATOR ELLENDER What is that? DR BOAS The Committee of Physicians for the Improvement of Medical Care was established, I cannot tell you the exact date

SENATOR ELLENDER Before or after this? DR BOAS It was before

SENATOR ELLENDER What is the membership, do you know? DR BOAS They have only a relatively small committee, but then they have a large number—

SENATOR ELLENDER Of how many? DR BOAS About twenty-five, and then they have a large number of physicians who subscribe to their principles and proposals

SENATOR ELLENDER They, of course, also backing this legislation that we are now considering? DR BOAS Yes, sir

SENATOR ELLENDER To what extent did that committee aid in preparing or submitting data for the legislation we are now considering? DR BOAS They acted much as we did

SENATOR ELLENDER Where is your membership confined to, in what states? DR. BOAS About two thirds of them are in New York State, and the rest are scattered throughout the country from Maine to California.

SENATOR ELLENDER Two thirds from New York State so that you have about in the neighborhood of three hundred from the rest of the country? DR BOAS Yes

SENATOR ELLENDER When you say "Doctors may refuse patients" you mean all doctors that are qualified to practice in any state, or do you mean doctors that will submit to the plans that may be prepared through the Surgeon General? DR BOAS What I meant in that statement specifically was that an individual doctor has the privilege of refusing an individual patient. In other words, if a man elects to serve under the insurance fund and patient X says 'I want you" and the doctor does not like that, the doctor says "I prefer not to take you on," but in addition to that, of course, no doctor is compelled to serve under the insurance scheme That is quite voluntary

SENATOR ELLENDER I am glad that you admit that, doctor DR BOAS I think it is right in the bill

SENATOR ELLENDER So that if he does not desire to join, as it were or submit to the rules and regulations that may be agreed on at Washington, he cannot be used, as it were, by patients who pay in and who are entitled to the service? DR. BOAS A doctor who is not enrolled with the insurance fund cannot treat patients who are insured and receive payment from the insurance fund.

SENATOR ELLENDER So in order for a doctor to be able to serve, he will have to submit to this plan There is no alternative? DR. BOAS In order to be able to serve the insured people? SENATOR ELLENDER Yes DR. BOAS Unless they choose him voluntarily

SENATOR ELLENDER And also unless they pay extra? DR. BOAS Yes, sir

SENATOR ELLENDER So they would be paying into the fund a certain percentage of their salary and if they desired to obtain the services of a doctor of their own choosing who is not a member of the plan or who has not joined this plan, they will have to pay two ways? DR. BOAS That is right.

SENATOR ELLENDER So there is no question in your mind about that? DR. BOAS That is a fact

SENATOR ELLENDER Now, how do you say, or what did you mean when you said "Doctors may refuse patients and patients may choose doctors"? You limit that, of course, to the doctors who submit to the plan and to the patients who, by virtue of paying out of their salaries so much, are entitled to services? DR BOAS I would say limited to the doctors who voluntarily enroll in the plan But as a matter of fact we know I think of experience that, if this legislation was to go into effect, within a few years between 80 and 90 per cent of the doctors of this country would enroll

SENATOR ELLENDER They would be forced to, I grant you that I agree to that, if you put this thing over, if this law is enacted as it is now written, I am sure of that, but it will not be on a voluntary basis It will be a question of necessity, they will have no other alternative or else starve to death

SENATOR ELLENDER Well, Dr Boas, if a third of the doctors of the country refuse to join the plan, that means to say that the two thirds that do join are going to have the greater part of the work to do, will it not? DR BOAS No, they would have more work to do than they could handle.

SENATOR ELLANDER They would be paid in proportion to the amount of work they do, and therefore their rate of income would necessarily increase, would it not? DR BOAS Under such circumstances it would.

SENATOR ELLENDER Do you not think that that is possible unless all join? DR. BOAS Well, I am quite sure that the overwhelming majority of doctors would join

SENATOR DONNELL You are the chairman of the Physicians Forum? DR BOAS That is right

SENATOR DONNELL Is that the chief executive officer of the Forum, or is there a president also? DR. BOAS No, that is the chief executive officer of the Forum

SENATOR DONNELL And you have been occupying that office for how long? DR BOAS Six years

SENATOR DONNELL Do you know the number of members approximately that the Forum has, we will say in the Central West, in Missouri and Kansas and in Nebraska and states of that type? DR BOAS I do not think that we have very many, I think we just have a scattering in these particular states We have a fair number in Illinois

SENATOR DONNELL Your members are largely in states having the largest cities, is that right? DR. BOAS I suppose that that is correct, yes, sir

SENATOR DONNELL I believe you said about six hundred of them are in New York State? DR. BOAS Yes, sir

SENATOR DONNELL That would leave, as Senator Ellender pointed out, about three hundred scattered over the rest of the country? DR BOAS Yes, sir

SENATOR DONNELL You are also a member of the American Medical Association, are you not? DR. BOAS I am

SENATOR DONNELL In fact, I believe you stated in your testimony that all the members of the Physicians Forum are members either of the American Medical Association or of the National Medical Association? DR BOAS Yes, sir

SENATOR DONNELL And the National Medical Association is constituted of Negroes? DR BOAS That is correct

SENATOR DONNELL Now, Doctor, when the President issued his message of November 19, 1945 you sent him a telegram, did you not? DR. BOAS Yes, sir

SENATOR DONNELL In which you said right at the outset "Our membership, composed largely of practicing physicians throughout the country who belong to the American Medical Association most warmly commend you for your able and comprehensive message to the Congress on the state of the nation's health" You were not in any sense criticizing the American Medical Association in that statement, were you? DR. BOAS No

SENATOR DONNELL Were you using that sentence with respect to membership in the American Medical Association as indicating any hostility to the Association or as indicating any feeling that the Association was not an organization of high standing? DR. BOAS No

SENATOR DONNELL It does consist, does it not, Doctor, of approximately 125,000 of the physicians and surgeons of the country? DR. BOAS Certainly

SENATOR DONNELL And you have been a member of it and still are a member of it? DR. BOAS I am

SENATOR DONNELL Now, you say in your statement that the American Medical Association is in fact serving as a guild, battling to retain the economic privileges of the medical profession Do you regard it as inconsistent at all that ou should remain in that association if its purposes are to "serve as a guild,

battling to retain the economic privileges of the profession"? DR BOAS The American Medical Association has a good many functions Its educational and clinical functions have, on the whole, been excellently carried out and my only point of disagreement with the American Medical Association is in this field of medical economics, and I see no reason to withdraw from it but as a matter of fact, one of the reasons why the Forum was established was that many doctors were rather shocked by the public statements of the American Medical Association in this field and felt it necessary that a group of doctors should be established who could have their own avenues for expressing radically different opinions

SENATOR DONNELL And yet it remains true does it not, Doctor, to be a member of the American Medical Association is not regarded as a reproach against a physician but rather as an indication of his interest and standing in the profession? DR BOAS That is certainly correct

SENATOR DONNELL And, as you have said, along scientific and educational lines of medical nature and surgical nature you regard the work of the Association as eminently helpful to the nation, do you not? DR BOAS Absolutely

SENATOR DONNELL And you simply disagree with the Association on this particular policy with respect to compulsory health insurance and matters of that type? DR BOAS That is right.

(*Senator Donnell questioned Dr Boas on the Committee on the Costs of Medical Care*)

SENATOR DONNELL Now, Doctor, in your statement which you have given to us here you feel that the American Medical Association, as you say, is in fact serving as a guild battling to retain its economic privileges What do you mean by 'economic privileges" there? DR. BOAS Well today the practice of medicine is a highly individualistic activity I guess doctors are more independent and more dictatorial within their own little spheres than any other people, which arises out of the nature of their work and their relationship to patients If a doctor is successful in developing a special practice and gaining recognition in one way or another, he can have a very substantial income, as we know, and it is these successful doctors who to a large extent are the ones who are governing the policies of the American Medical Association, and there is no doubt that although the lot of the average doctor would be improved by a bill such as this the very large incomes of some surgeons and specialists would in the long run be deflated

SENATOR DONNELL Do you think, Doctor, that the average member of the American Medical Association with whom you have come in contact realizes that this bill S 1606 or a plan of that type would improve the average economic welfare of the practitioners? DR. BOAS No he does not, because he is given no opportunity to learn You see the medical press is closed to any discussion of this bill here The American Medical Association and the state journals and the county journals, with a very few exceptions, refuse to publish any opinions favoring this bill and they publish only destructive attacks on the bill, many of which are very inaccurate. So that the average doctor has very little opportunity to know what it is all about

(*Senator Donnell led Dr Boas to admit that the House of Delegates as a representative body speaks for the members of the American Medical Association*)

SENATOR DONNELL How is the Physicians Forum financed, Doctor? DR BOAS By voluntary contributions

SENATOR DONNELL Do you know what the annual budget is? DR. BOAS It has varied from year to year according to our income

SENATOR DONNELL Yes? DR BOAS For many years we relied almost exclusively on contributions from the doctor members In the past year we have been more successful in getting some large voluntary contributions

SENATOR DONNELL Do you recall approximately the total income of the Physicians Forum in the year 1945? DR. BOAS I should estimate it at approximately $12 000

SENATOR DONNELL About $12,000 and do you know what it has run so far this year, 1946? DR BOAS Well we just had an affair at which we raised money and which I imagine will have to carry us through most of the year

SENATOR DONNELL How much did you raise at that affair? DR. BOAS $6 000

SENATOR DONNELL $6 000 DR BOAS And otherwise we have got in maybe 2 or 3 thousand.

SENATOR DONNELL Is the affair to which you refer a Physicians Forum dinner at the Hotel Waldorf Astoria held on April 11? DR. BOAS Yes

SENATOR DONNELL There was an invitation sent out to that by you to the general effect as follows The Forum is holding a dinner at the Waldorf Astoria on Thursday, April 11 to honor Senator Wagner, Senator Murray and Representative Dingell Tickets, $7 50 Your formal invitation, with the names of other distinguished guests, will reach you in a few days Meanwhile, please file this note in your diary ' That went out to a list of gentlemen, did it not? DR BOAS It did

SENATOR DONNELL And at that meeting these funds were raised to which you refer Now, Doctor, in addition to your own organization there are numerous others giving expression of views favorable to S 1606 as, for illustration the Committee on Medical Care. Do you know that organization? I believe Mr Michael M Davis is chairman Do you know that organization? DR BOAS I think you have the title incorrect

SENATOR DONNELL Possibly I do DR. BOAS There is the Committee on the Nations Health, in which Dr Davis was active

SENATOR DONNELL There is also the Committee on Research and Medical Economics, that committee for which Mr Michael M Davis signs in some capacity on its letterhead You are familiar with that organization? DR BOAS As far as I know they are a research group They have not done any propaganda or public education at all

SENATOR DONNELL This particular group the Committee on Research and Medical Economics, is located at 1790 Broadway New York, and Mr Michael M Davis is the chairman? DR BOAS Either that or the executive secretary

SENATOR DONNELL And you are on the board yourself? DR BOAS Yes

SENATOR DONNELL And there is an editorial board of the *Quarterly Journal* and you are on that board? DR. BOAS Yes but the *Quarterly Journal* is a suspended publication

SENATOR DONNELL And I ask you Doctor, if this committee issued a booklet consisting of some thirty-four pages which I hold in my hand entitled "Principles of a Nationwide Health Program' Did it issue that booklet? DR BOAS Yes

SENATOR DONNELL Your name appears on the outside? DR BOAS As one of the participants

SENATOR DONNELL And among the others are Mr I S Falk, Mr Basil C MacLean Mr Michael M Davis and Dr John P Peters Was Dr Peters on that committee? DR. BOAS This was a temporary group to study these principles

SENATOR DONNELL But it did issue this report and it is stated 'This report, with its twenty-nine sponsors is published with the cooperation of the Committee on Research and Medical Economics ? DR BOAS That is true.

SENATOR DONNELL The expenses of the conference and this publication were met by gifts contributions for this purpose is that true? DR BOAS Yes

SENATOR DONNELL Do you know of a so-called organization called the Group Health Organization?

SENATOR MURRAY Senator before you leave that I would like to have the witness furnish the committee with a copy of this report for our records that the Senator has been examining

DR. BOAS Yes, sir I am sure we can

SENATOR DONNELL Do you recall, Doctor, who made the major gifts referred to in this foreword of the health program committee conference? DR. BOAS I do not know I had nothing to do with the financial end

SENATOR DONNELL I will ask you if you know also of an organization which had a telegram sent in here yesterday addressed to the Committee for the Nations Health Do you know that organization? DR BOAS Yes

SENATOR DONNELL Are you a member of that also? DR. BOAS I am

SENATOR DONNELL And Dr Peters is also in that organization is he not? DR. BOAS I believe so

SENATOR DONNELL Doctor I cite these as illustrative of the fact that not all of the information being given out with respect to this bill is coming from opponents There is likewise a very active campaign being made by numerous people who believe in the bill too That is right, is it not? DR ROAS That is right

SENATOR DONNELL Doctor, in your testimony you refer to the argument that the opponents of the legislation have raised as you stated that the Surgeon General would become the medical dictator of the nation and you state nothing could be further from the truth And then you say the bill provides that he is responsible to the Federal Security Administrator" Do you mean to imply by that that if there is any dictatorship it does not vest in the Surgeon General but rather in the federal security administrator? Is that what you mean? DR BOAS No My meaning was that that was one safeguard and the advisory council was a further safeguard, as well as the general setup of the bill

SENATOR DONNELL Now as a matter of fact, Doctor, even the appointment of the members of the advisory council is confined to persons who meet the approval of the federal security administrator, is it not? DR BOAS It is

SENATOR DONNELL Would you say, Doctor, that the quality of medical care that has been given, generally speaking, under the English compulsory insurance has been of as high a type as American physicians generally give to their patients? DR BOAS Probably not

SENATOR DONNELL Doctor, have you read *Barron's National Business and Financial Weekly* for April 8, 1946? DR. BOAS No

SENATOR DONNELL Are you acquainted with a lady by the name of Elizabeth W Wilson? DR. BOAS No

SENATOR DONNELL Who has written an article entitled "Hazards of Compulsory Health Insurance Enormous Prospective Costs of Political Medicine Not Well Understood"? Have you read that? DR BOAS I think I glanced through it the other day

SENATOR DONNELL Was Miss Wilson at one time with the Social Security Administration here in Washington? DR. BOAS I have no idea

SENATOR DONNELL I will read you the closing four sentences of that and ask you to state whether or not you are informed as to the correctness or incorrectness of the facts alleged therein. She says

> It is not surprising that the workers distrusted this type of medicine In 1936 about 600 000 British workers renounced their right to medical care under the insurance system by failing to register on the panel In the same year one third of the French workers who were eligible for insurance did not qualify for it These facts underscore the question as to the medical success of health insurance

Doctor I am not asking you to state whether you agree with the conclusion, but are her historical facts with respect to British and French workers as set forth in this excerpt of it correct or not? DR BOAS I have no idea on that.

(*Senator Donnell questioned Dr Boas on the right of free choice under the bill*)

SENATOR DONNELL So to that extent there is a restriction on the right and power of the people to get on that panel? That is true, is it not?

DR BOAS Yes But there is virtue in that restriction, because the only reason for that restriction is because we know if a doctor sees too many patients—and we have doctors who see 50 or 60 patients a day—they practice very sloppy medicine. Whether they do it under any system, it is not good for the patient

SENATOR DONNELL But the thought I was driving at is that there is a restriction, regardless of whether it is meritorious or justified, here is a restriction? DR BOAS There is a restriction

SENATOR MURRAY And that situation exists today That is to say, that a doctor who becomes quite famous cannot take everybody He cannot take the practice of the entire community even though he is sought by the entire community

DR. BOAS What actually happens, Senator Murray, is that when a doctor becomes so successful that he has more patients than he can handle he jacks up his fees and therefore he eliminates the free choice of physician, because the poorer people cannot come to him

SENATOR MURRAY We cannot adopt that system in this bill, so we adopt the other device of protecting the patients and giving them good service by this method? DR BOAS Yes

SENATOR DONNELL Now, regardless of the merit or demerit of the suggestion in the bill, doctor, the fact remains, does it not that today without this bill being in effect if you or I get sick and go to Dr Jones, if Dr Jones in his judgment thinks he can take us there is no legal restriction against his doing so? DR BOAS There is not

SENATOR DONNELL There is no legal restriction against our trying to get on his list? DR BOAS That is true

SENATOR DONNELL It is true that he may find that he cannot take us which after all, is his judgment rather than the Surgeon General's action, or his deputy's, to say whether he does or does not take a patient? DR BOAS Yes

SENATOR DONNELL Whereas under the bill S 1606 there is a restriction to the extent I have indicated? That is correct, is it not? DR BOAS That is correct.

SENATOR DONNELL So your statement, from which I quoted, "All people will have free choice of physicians," et cetera, will have to be interpreted with that exception I have mentioned, at least, would it not? DR. BOAS Yes

SENATOR DONNELL I want to inquire about something which I am free to say I do not know, and I am asking for enlightenment. I want to ask you whether or not you think that a person under this bill would have the right to select an osteopath to perform services for him or are osteopaths included within the term "physician" as mentioned in the bill? I might amplify that by asking you to tell us whether or not you think services in osteopathy would be included under the term "personal health service benefits" inasmuch as that is defined in section 214 as "includes general medical benefit, special medical benefit, general dental benefit, special dental benefit, home nursing benefit, laboratory benefit and hospitalization benefit." So that my question, which is entirely too long, resolves itself into two questions First, whether or not osteopaths are included in your opinion within the term "physician" and, in the second place, whether or not the services they render are "personal health service benefits" to which persons are entitled under this bill? DR BOAS I do not know that I can answer that categorically I believe they would be covered by the individual state laws, as I recall the section, and I cannot find it immediately

SENATOR MURRAY Is that section 205 (a)? page 45 DR. BOAS There is a statement that "any physician, dentist or nurse legally qualified by a state to furnish any services included as personal health service benefits under this bill shall be qualified to furnish such services as benefits"

SENATOR DONNELL May I interpolate this at that point, so that you may have the thought in my mind before you. I observe that language "any physician, dentist or nurse legally qualified by a state " That raises the question "Is an osteopath a "physician"? I assume that he is 'Any physician, dentist or nurse legally qualified by a state to furnish any services included as personal health service benefits " The term "personal health service benefits' is defined, as I indicated, to include "general medical benefit, special medical benefit, general dental benefit, special dental benefit home nursing benefit, laboratory benefit and hospitalization benefit.' The query in my mind is, even though a physician qualified by a state is within this bill, inasmuch as there is a further qualification that it is only those physicians who are qualified to furnish general medical benefits, or special medical benefits whether or not osteopaths are included in the term "physician in view of those remarks on the meaning of the term "personal health service benefits" That is the thought in my mind. DR BOAS All I can say is I hope not

SENATOR DONNELL You hope they are not. Your thought would be if they are included that the bill should be amended and exclude osteopaths, is that right? DR BOAS I think that would be preferable

SENATOR DONNELL Do you have any idea how many osteopaths there are or how many persons are patients? DR. BOAS I do not know, sir

SENATOR DONNELL I take it it runs into the millions, probably, of persons who are patients of osteopaths DR BOAS I really do not know

SENATOR DONNELL We will leave aside the number There are certainly quite a considerable number of people who believe in osteopathy and go to osteopaths? DR BOAS Yes

SENATOR DONNELL Doctor, may I ask you what you think of the fairness or unfairness of a bill which would require every person, whether he believes in not going to medical doctors but in going to osteopaths that requires him to contribute to a fund here which could only be used according to your hopes in the payment of medical doctors as distinguished from osteopaths? Do you think it fair, if you and I believe in osteopathy and want to go to an osteopath that we will have to pay into this fund and then go and spend our money separately for osteopathy?

DR BOAS I think two answers can be given to that. First of all you can make the analogy between education and recognize the fact that everybody believes in school taxes although they may send their children to private schools or parochial schools, and nobody contests the justice of that. I believe health is of just as fundamental interest to the nation and life as education and that therefore universal support of the health facilities is a justified general tax Now the trouble with the rest of the argument, if you accept osteopaths you might accept chiropractors and naturopaths and all that Medicine and the practice of medicine is a scientific proposition it is not a matter of belief It is a matter of fact. Anybody who has given scientific and objective study to the matter knows that these other systems of medicine are not based on fact but on fancy As a matter of fact, the few osteopathic schools remaining are adopting more and more of a general medical curriculum, and it is just a matter of time before they will be absorbed in medicine Every osteopath I have spoken to regrets that he is not an M D I do not think the exclusion of these special cults is objectionable at all

SENATOR ELLENDER At this point, Mr Chairman I would like to insert into the record a statement from the Louisiana State Medical Society on this matter

SENATOR MURRAY That may be done

*(To be continued)*

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS EDUCATION AND PUBLIC HEALTH)

## CALIFORNIA

**New Executive Secretary**—Mr Joseph F Donovan for the past four years public relations director and advertising manager of the Joshua Hendy Iron Works Sunnyvale has been appointed executive secretary of the Santa Clara County Medical Society, a newly created position Headquarters of the society will be set up temporarily on the fifth floor of the St Claire Building, San Jose, pending other plans to be announced later

**Albert Soiland Creates Cancer Foundation**—Dr Albert Soiland Los Angeles who founded the Los Angeles Tumor Institute, gave his entire life savings to establish the Albert Soiland Cancer Foundation Assets will consist of nearly a million dollars, including the California Medical Building, Los Angeles, and its $50,000 a year income. Two physicians who had been Dr Soiland's senior associates for nearly twenty-five years, William E Costolow and Orville N Meland, both of Los Angeles, and Shirley E Meserve, personal attorney for Dr Soiland, will be trustees in the foundation It is planned first to endow fellowships for promising young doctors in cancer research in recognized medical schools of the country, and later it is hoped that hospital beds can be provided for cancer patients Dr Soiland graduated at the University of Southern California School of Medicine, Los Angeles, in 1900 The announcement of the new foundation was released just prior to Dr Soiland's sailing for Norway, where he died May 14 His obituary appears in this issue, page 350

## ILLINOIS

**State Medical Election**—At the meeting of the Illinois State Medical Society held in Chicago, May 14-16, Dr Irving H Neece, Decatur, was chosen president-elect and Dr Robert S Berghoff, Chicago, was inducted into the presidency Other officers include Drs Chauncey C Maher and John P O Neil, both of Chicago, vice presidents, and Dr Harold M Camp, Monmouth secretary-treasurer At this meeting the society voted to retain a public relations firm for its medium to the public and the press

### Chicago

**H Prather Saunders Joins College of Surgeons**—Dr H Prather Saunders, who recently returned from service in the navy, has been appointed assistant director of the American College of Surgeons, effective March 16 Dr Saunders was formerly secretary of the Chicago Medical Society serving as president in 1942

**Personal**—Lieut. Col Vincent P Graham, who has been chief of x-ray services at Camp Grant, Vaughan General Hospital and the Regional Hospital at Fort Ord since 1942 has been appointed assistant professor of roentgenology at the University of Chicago School of Medicine.——Dr Lester S King, recently released from the army has been appointed pathologist and director of laboratories on a full time basis at the Illinois Masonic Hospital serving also as director of the educational program.——William H Taliaferro, Ph D, recently received an honorary doctor of science degree from the University of North Carolina——Dr Max Thorek was recently elected an honorary member of the Société Gastroenterologique, Brussels, Belgium

**Community Rehabilitation Center**—On May 13 a special program was held to acquaint interested groups with rehabilitation center programs, their physical structure and equipment, financial setup, personnel and administration, and services rendered The program was held under the sponsorship of the Institute of Medicine of Chicago, Chicago Medical Society, Chicago Hospital Council, Council of Social Agencies of Chicago and Midwestern Section of the Congress of Physical Medicine. Among the speakers were

Dr Harold Storms, Toronto Ont, Canada Physical Structure and Equipment of a Rehabilitation Center
Dr Frank H Krusen Rochester, Minn Personnel and Administration of a Rehabilitation Center with Especial Reference to the Baruch Committee s Report.
Miss Belle Greve Cleveland Services Rendered in a Rehabilitation Clinic with Comments on UNRRA Help in War Torn Greece.
Col John R. Smith Jr New York Financial Setup of a Rehabilitation Center
Miss Marjorie Taylor Milwaukee Color Films Showing the Curative Workshop in Milwaukee in Action

## INDIANA

**State Board in New Offices**—The Indiana State Board of Medical Registration and Examination is now located at 627 K. of P Building, Indianapolis, according to an announcement May 2 With three new members and four reappointments, effective April 30, the present membership of the board is Dr Hobart C Ruddick, Evansville, president, Dr Will A Thompson, Liberty, vice president, Dr Paul R Tindall, Shelbyville, secretary C B Blakeslee, D O, Indianapolis, treasurer, Ruth Kirk, Indianapolis executive secretary, Dr William N Wishard Jr, Indianapolis, Dr Hugh W Eikenberry, Indianapolis, and C F Aumann, D C, Indianapolis

## IOWA

**Walter Bierring**—In tribute to his many services Dr Walter L Bierring, Des Moines, state health commissioner, secretary-treasurer of the Federation of State Medical Boards and editor of its bulletin, has been appointed professor emeritus of the theory and practice of medicine, State University of Iowa College of Medicine, Iowa City Dr Bierring held this professorship from 1903 to 1910, when he accepted a similar appointment at Drake University He had been professor of pathology and bacteriology at Iowa from 1893 to 1903 Dr Bierring graduated at Iowa in 1892 Since then he has been most active in developing improved standards in licensure laws locally and nationally He has been president of the National Board of Medical Examiners, of the Iowa State Medical Society and of the American Medical Association, serving the latter as chairman of the Section on Pathology and Physiology in 1907 and as chairman of the Section on Medicine in 1919 For a number of years he was chairman of the American Board of Internal Medicine.

## KANSAS

**School of Psychiatry**—A booklet has recently been made available concerning the Menninger Foundation School of Psychiatry, which was inaugurated Oct 1, 1945 and considerably enlarged with expanded clinical facilities in December 1945 because of the transfer of the Winter General Hospital from the army to the Veterans Administration The booklet describes the program of psychiatric education and the development of the psychiatric school The Menninger Foundation was incorporated in Topeka late in 1941 (THE JOURNAL, Jan. 10, 1942, p 154) It aims to provide psychiatric education, especially the training of young physicians in psychiatry, to encourage research in psychiatric and psychologic fields, to make available psychiatric treatment for patients in the low income bracket and to prevent mental illness, especially through development of child psychiatry and the application of psychiatric knowledge to education and child rearing In May 1944 the foundation opened a new building for research and education in psychiatry at 3614 West Sixth Avenue Topeka (THE JOURNAL, Sept. 16 1944 p 180)

## MAINE

**Personal**—Dr William Holt, Portland, was elected president of the Maine Cancer Society at a meeting in Augusta recently——Dr Albert D Foster Falmouth Foreside, medical director, retired, U S Public Health Service, was appointed health officer of Portland January 23——Dr John G Metzgar, Augusta, has been named health officer of Augusta——Dr Delmer A Craig has resigned as medical director of the Eastern Maine General Hospital Bangor, to become associated with Charles F Neergaard, consultant in hospital planning, organization and management, New York

## MASSACHUSETTS

**New Professor of Surgery at Tufts**—Dr C Stuart Welch, Albany N Y, recently released from military service, has been appointed professor of surgery of Tufts College Medical School, filling the vacancy that occurred with the recent retirement of Dr James J Hepburn Dr Welch graduated at Tufts in 1932

**Frank Lahey Awarded Bigelow Medal**—Dr Frank H Lahey, Boston, received the Henry Jacob Bigelow Medal of the Boston Surgical Society at a meeting May 10 Dr Lahey was presented with the medal by Dr Donald Munro, Boston, president of the society, after he had given an address on "Surgery of the Thyroid."

**Cured Cancer Clinics**—Several clinics for patients cured of cancer were conducted in April at the Massachusetts State Department of Health The clinics were designed to advise physicians regarding cancer, its symptoms, diagnosis and treatment and were conducted in Beverly, Boston (Boston Dispensary

and Beth Israel Hospital) Brockton Fall River Fitchburg Gardner Greenfield, Lawrence New Bedford Salem Westfield (State Sanatorium) Worcester and Wrentham (Pondville Hospital at Norfolk)

## MICHIGAN

**Dr Beckett Joins University Hospital** —Dr Morley B Beckett Allegan, who was in charge of health activities in Allegan County under the auspices of the W K. Kellogg Foundation, Battle Creek, has been appointed assistant medical director of the University Hospital Ann Arbor Dr Beckett was released from service in the army in January

**Physician Honored** —A portrait of Dr Arthur K. Northrop, Detroit, was presented to the Mount Carmel Mercy Hospital, Detroit March 20, in honor of his completion of fifty years in the practice of medicine The picture is the gift of the staff and hangs in the library of the staff at the hospital He was also given a plaque for organizing and directing the obstetric service at Mount Carmel Hospital, a gold watch by the nurses of the obstetric division and a service plaque and citation from the staff of Mount Carmel

**Hospital Observes Twenty-Fifth Anniversary** —The Highland Park General Hospital celebrated its twenty-fifth anniversary April 24 Among the speakers were

Dr Edward N Cook Rochester Minn Streptomycin
Dr Priscilla White Boston Diabetes in Pregnancy
Dr James R Goodall Montreal Quebec, Canada Newer Aspects of Endometriosis
Dr Carl Wiggers Cleveland Functional Consequences of Coronary Occlusion
Dr Samuel F Marshall Boston Surgical Treatment of Gastric Lesions
Dr Fred W Rankin Lexington Ky Notes on the Surgical Management of Cancer of the Colon and Rectum

In the evening at the Wardell-Sheraton Hotel an oil portrait of Dr Frank C Witter chief of staff in surgery was presented to the hospital Dr Flinn F Morse Detroit, was toastmaster

## MISSISSIPPI

**Hospital News** —The North Mississippi Hospital was dedicated at special ceremonies recently Among the speakers were Frank Belk, attorney Dr Felix J Underwood, Jackson, executive officer of the state board of health and Dr Van Buren Philpot, Houston, surgeon in charge at the hospital

**Personal** —Dr Frank L Fisher, for more than two years company physician to the Alabama Dry Dock and Shipbuilding Company Mobile Ala, has been named to a similar position with the Ingalls Shipbuilding Corporaton Pascagoula He will also direct the entire medical program among the employees

## MONTANA

**State Board of Medical Examiners** —Dr John H Garberson Miles City, was recently elected president of the Montana State Board of Medical Examiners succeeding Dr Cedric H Nelson Billings Dr Patrick E Kane Butte was elected vice president and Dr Otto G Klein Helena reelected secretary

## NEW MEXICO

**Pediatric Society Formed** —The New Mexico State Pediatric Society was recently organized at a meeting in Albuquerque. Officers include Drs Meldrum K Wylder, president Charles F Fishback, vice president, and Ly Werner, secretary-treasurer, all of Albuquerque

## NEW YORK

**Meeting of School Physicians** —The New York State Association of School Physicians will hold its next meeting and conference at Saratoga Springs June 24 Dr Michael Levitan, Rome, is chairman of the publicity committee and Dr C Adele Brown, 105 East 6th Street, Oswego secretary treasurer

**Nutrition Fund Set Up at Cornell** —The H Edward Babcock Fund for the Promotion of Studies in Nutrition named for the chairman of the board of trustees Cornell University Ithaca was established May 4 at the university in the amount of $25 000 The fund was subscribed by associates and was presented to Mr Babcock newspapers reported

**The Clough Memorial Award** —Dr Milton M Ashley, Rochester who graduated at Harvard Medical School Boston in 1945, is the recipient of the 1945 Harry D Clough Memorial Award of the Rochester General Hospital The prize was established in 1943 by Dr Harry D Clough for presentation to the house officer whose case presentations general interest and contributions to the weekly staff conferences are judged as outstanding by the award committee Winners of the award receive $25 and their names are placed on the award plaque in the staff conference room

## New York City

**Women's Medical Association.** —New officers of the Women's Medical Association of New York City elected May 8, included Drs Elaine P Ralli, president, and Adelaide Romaine, vice president. This association which is 46 years old and has a membership of 350 women physicians, plans to establish permanent headquarters

**Dinner to Corneille Heymans** —Dr Corneille Heymans winner of the Nobel Prize in 1938 for his work on the circulation and respiration, was guest of honor at a dinner April 18 in the Commodore Hotel, New York given by Dr Maurice L. Tainter, Rensselaer, N Y, research director of Winthrop Chemical Company, Inc Dr Heymans is professor of pharmacology at the University of Ghent, Belgium and medical director of Belgian relief Other guests were Drs Otto Loewi Nobel laureate in 1936 for his work on transmission of nerve impulses and research professor of pharmacology at New York University College of Medicine, Ernest P Pick formerly professor of pharmacology at the University of Vienna and now clinical professor of pharmacology at Columbia University College of Physicians and Surgeons Harry Gold, professor of pharmacology Cornell University Medical College, Elmer H Loughlin, Long Island College of Medicine, Brooklyn, and George B Wallace, professor emeritus of pharmacology, New York University School of Medicine. The daughter of Dr Heymans was also a guest.

**Symposium on Industrial Medicine** —The department of medicine, New York Post-Graduate Medical School, announces a symposium on industrial medicine, June 10-14 under the direction of Drs Harry J Johnson and Frank R. Ferlaino In addition to various members of the staff of the medical school, the following guest speakers will participate

Dr Anna Baetjer Baltimore Women in Industry in the Postwar Era Their Particular Medical Problems
Dr Frederick R Flinn, Gases and Vapors Discussion of Sulfur Dioxide Ammonia Formaldehyde Carbon Tetrachloride Benzol Toluol and the Fluorides
Dr Thomas Gentry Medical Problems of the Air Passenger
Dr Eugene J Gillespie Washington D C Mass X Ray Surveys Detection of Tuberculosis in Industry
Dr Martin I Hall Bristol Conn Preventive Medical Measures Within the Plant.
Dr Alonzo J Lanza, Industrial Hygiene
Dr Raphael Lewy Standard Methods of Disability Evaluation
Dr Earl Lutz Detroit A Comprehensive Health Maintenance Program.
Dr Howard A Rusk Reemployment of the Disabled Veteran
Dr Charles R Williams The Control of Occupational Diseases Through Cooperation Between Physician and Industrial Hygienist.

Additional information may be obtained from the Director of the School 309 East 20th Street, New York 3

## OHIO

**Physician Sentenced for Tax Fraud** —On April 24 Dr Julius J Raab Cleveland was sentenced to eighteen months in the penitentiary for 'confessed tax fraud" according to the Cleveland *Press* The sentence was revealed during an investigation by federal agents to check Greater Cleveland income tax evasions it was stated Dr Raab was reported to have admitted that he evaded income tax payments of $9 082 but subsequently paid them with interest and penalties amounting to a total of $13 500 two years before he was indicted The evasions occurred between 1941 and 1943 and Jerome B Curtis, his attorney argued that, because this was not a prolonged evasion Dr Raab should be given special consideration by Judge Emerich B Freed Assistant District Attorney Frances B Kavanagh told Judge Freed that Dr Raab had admitted to revenue agents during the eighteen month investigation that half of his income came from abortions according to the press reports

**New Building for Fels Research Institute** —The Samuel S Fels Fund of Philadelphia announces the erection of a new research laboratory building on the Antioch College campus at Yellow Springs The new building to cost about $400 000 exclusive of equipment is to house the activities of the Samuel S Fels Research Institute, which was established by Mr Fels in 1929 and originally financed by him In 1936 its maintenance was taken over by the Samuel S Fels Fund of Philadelphia. It was established that year to sponsor research among other things in various diseases digestive functions and behaviorism. To carry out the primary objective of the institute that is a developmental study of man his structure function and behavior in relation to heredity and environment, a multidisciplined approach has been used covering medicine genetics physiology nutrition biochemistry, physical anthropology psychology and anatomy In addition to laboratories for each of the fields mentioned, the new building will contain offices library space and an experimental nursery school A new scientific advisory board has been created consisting of Robert Yerkes, Ph.D, pro-

fessor of psychobiology, Yale University School of Medicine, New Haven Conn, Dr Alexander A Weech B K. Rachford professor of pediatrics, Cincinnati University College of Medicine, Edmund V Cowdry, Ph D, professor of anatomy, Washington University School of Medicine, St Louis, and Dr Maurice B Visscher professor of general physiology, University of Minnesota Medical School, Minneapolis The institute is under the direction of Dr Lester W Sontag, Yellow Springs

## OKLAHOMA

**Spring Clinic**—The Moton Clinical Society will conduct a spring clinic at the Variety Health Center, Tulsa, June 6-7 Among the speakers will be

Dr Rafael Hernandez Nashville Tenn, Neurology in General Practice.
Dr Matthew Walker Nashville Intestinal Obstructions
Dr Felix R Park Philadelphia Cardiac Clinic
Drs Frank L Flack and Leo Lowbeer both of Tulsa Abdominal Pregnancies
Dr Ben H Nicholson Oklahoma City Pediatrics in General Practice.

**Fund for Advancement of Medical Science**—The Alumni Association of the University of Oklahoma School of Medicine, Oklahoma City, has created the Fund for Advancement of Medical Science The council of the alumni association which is serving as a temporary board for the fund, has selected Dr John H Lamb, Oklahoma City, as the chairman and Mark R. Everett Ph.D, Oklahoma City, secretary-treasurer Dr Lee K. Emenhiser, Oklahoma City, president of the Alumni Association and the following councilors will continue to serve on the temporary board until such time as the organization is made permanent Drs Clifford A Traverse, Alva, James E Ensey Altus Lee R Wilhite, Perkins, Otis G Hazel, Oklahoma City Roy E Emanuel Chickasha Ralph A McGill, Tulsa, John M Carson, Shawnee Matt A. Connell, Picher, Elbert H Shuller, McAlester, and Patrick H Lawson Marietta The board will sponsor an endowment fund of $3 100 000 to establish a research institute. The construction and maintenance would cost $3,100 000 on an estimated ten year program $2 000 000 of which must be raised initially A survey of the project will be completed before a campaign for funds is to be started officially The *Journal of the Oklahoma State Medical Association* reported that a number of donations had already been received for the Fund for the Advancement of Medical Science. Dr Lamb has allocated his contribution for the creation of a research fellowship for pharmacology in memory of the late Dr Arthur B Chase, formerly professor of clinical medicine at the University of Oklahoma. The *Journal* also reported that Dr Coyne H Campbell Oklahoma City established the John Archer Hatchett Memorial Research Fund to support research fellowships at the medical school before the alumni project was begun.

## PENNSYLVANIA

**Eye Society Gives Funds to Service Members**—The Reading Eye, Ear, Nose and Throat Society has distributed its war fund both principal and interest, as outright gifts to its members who were in the armed forces Each one was given $644

### Philadelphia

**Alfred Richards Honored**—On May 3 at a dinner at the University of Pennsylvania Club New York Alfred N Richards Sc.D, vice president of the University of Pennsylvania in charge of medical affairs and since 1941 chairman of the committee on medical research of the Office of Scientific Research and Development, Washington D C received the William Guggenheim Honor Cup The cup which is awarded each year to some person who has brought distinction to the university, was presented to Dr Richards in recognition of his war services and especially his role in the production of penicillin for wartime uses E L Hoskins president of the club made the presentation of the honor cup on which each year is inscribed the name of a person whose activities have benefited the nation and have brought added fame to the University of Pennsylvania Dr Richards was recently awarded the medal of merit by President Truman in recognition of his wartime contribution as chairman of the committee on medical research in the Office of Scientific Research and Development.

### Pittsburgh

**Biochemist Given Lilly Award.**—On April 12 Max A Lauffer Ph.D, associate professor of physics University of Pittsburgh was presented with the $1 000 Eli Lilly and Company Award in biologic chemistry for his work on viruses The presentation was made during a meeting of the American Chemical Society

## GENERAL

**College of Radiology**—The 1946 session of the American College of Radiology will be held at the Palace Hotel San Francisco June 29 Dr Lowell S Goin Los Angeles president of the college, will deliver his official address at the annual banquet. The day s meeting will be devoted to business transactions no scientific papers will be presented

**Manufacturers' Association**—The American Pharmaceutical Manufacturers' Association will hold its 1946 meeting at Banff Springs Hotel, Lake Louise, June 10-12 The manufacturers' group plans to hold one session with the Canadian Medical Association, the first time a joint meeting of the pharmaceutical industry and the medical profession has been held on this basis This is the first time the manufacturers association has met in Canada

**Electroencephalographers Draw Up Constitution.**—At the second regular meeting of the Eastern Association of Electroencephalographers at the Institute of Living Hartford Conn April 12 a constitution and by-laws were adopted creating a new office of vice chairman, to which position Herbert H Jasper Sc D, of the Neurological Institute of Montreal was elected The Eastern Association of Electroencephalographers was formed March 1 (THE JOURNAL, March 30, p 888) The next meeting of the group will be at the Neurological Institute, New York, June 1

**New President-Elect for Tuberculosis Association**—Dr William P Shepard, San Francisco was unanimously chosen president elect of the National Tuberculosis Association by the association's board of directors which met in Chicago March 9 Dr Shepard will assume the presidency of the organization succeeding Will Ross Milwaukee, at the close of the annual meeting at Buffalo June 11-13 Election of Dr Shepard third vice president of the Metropolitan Life Insurance Company followed the resignation, for reasons of ill health of Dr Victor F Cullen, State Sanatorium Md. Dr Cullen was named president-elect at a meeting of the association s executive committee in New York last June

**Special Society Elections**—At a recent meeting of the American Association for Cancer Research in Atlantic City William U Gardner, Ph D New Haven was chosen president, John J Bittner, Ph D, Minneapolis vice president and Charles W Hooker, Ph D New Haven acting secretary-treasurer——At the fifth assembly of the International College of Surgeons in Lima, Peru March 25-27 Dr Francisco Graña was named president-elect and Dr Albert A Berg, New York was installed as president. Dr William W Babcock, Philadelphia was named senior vice president, Dr Herbert Acuff, Knoxville, treasurer and Dr Max Thorek Chicago treasurer

**Commonwealth Fund Activities**—Dr David P Barr professor of medicine Cornell University Medical College New York, and physician in chief of New York Hospital has been elected to the board of directors of the Commonwealth Fund it was announced March 29 The directors also have voted $381 817 to continue a rural hospital program begun in 1926 Most of this fund will be used to improve medical services and hospital facilities in the region surrounding Rochester N Y Appropriations just made for medical research and medical education total $170 140 The largest of these is for a long term study of growth and development by the child research council at the University of Colorado Beneficiaries in New York include Memorial Hospital for the Treatment of Cancer and Allied Diseases which received a grant for the continued study of certain biochemical problems associated with cancer

**Fellowships Offered**—The National Committee for Mental Hygiene, Inc., offers fellowships for training in child guidance clinic psychiatry The training is for positions in community clinics where psychiatrists, psychologists social workers and others collaborate in the treatment of children suffering from emotional or mental illness Some of the fellowships are for two years some for one. The stipend is $2 600 to $3 000 for the first year and more for the second. Prerequisites are graduation from an approved medical school a general internship and two years of general psychiatry Military psychiatry will be accepted for at least a part of the two years Opportunity is provided for the fellow to develop his own skills in a well organized service with the support of a carefully planned training program and adequate supervision The training centers are selected on the basis of standards which have been established by the National Association of Child Guidance Clinics For further information write to Dr Milton E. Kirkpatrick, director, Division on Community Clinics, the National Committee for Mental Hygiene, Inc. 1790 Broadway, New York 19

# Deaths

**Albert Soiland** ⊕ Los Angeles, leader in roentgenology, died May 14 in Stavanger, Norway, where he had gone recently for a visit.

Dr Soiland was born in Stavanger May 5, 1873 He came to the United States in 1883, studied at the University of Illinois and graduated at the University of Southern California School of Medicine, Los Angeles, in 1900 Dr Soiland immediately became interested in cancer and its treatment, carrying on graduate work in European clinics He founded the Los Angeles Tumor Institute and is credited with the establishment in 1904 of the department of radiology at his alma mater He was one of the founders of the American College of Radiology, serving later as its president. He had also been president of the Radiological Society of North America, a member of the American Roentgen Ray Society American Radium Society and the Military Surgeons of World War, fellow of the American College of Physicians, Los Angeles Clinical and Pathological Society and honorary fellow of the Northern Society for Medical Radiology in Europe He was a specialist certified by the American Board of Radiology and a director and member of the senior staff of the California Hospital He was identified with yachting, founding the Newport Harbor Yacht Club He was commodore of many other yacht clubs and introduced the transpacific yacht races to Hawaii, which are being resumed this year

Dr Soiland was sponsor of the plan to establish the Section on Radiology of the American Medical Association, serving as its chairman in 1926 and representing it at the International Radiological Congress in Zurich, Switzerland, in 1934 He was a delegate from California to the American Medical Association from 1921 to 1931 and delegate from the Section on Radiology from 1933 to 1936

In 1933 *Radiology* dedicated its May issue to Dr Soiland in acknowledgment of his achievements in radiology and in recognition of his sixtieth birthday In 1943, in tribute to his seventieth birthday, he was guest of honor at a dinner given by the radiologic section of the Los Angeles County Medical Association His many years of service to the navy was acknowledged on this occasion He served in World Wars I and II, heading radiologic installations in navy hospitals on the Pacific coast during the latter Dr Soiland carried the rank of captain in the medical corps of the U S Naval Reserve.

Prior to his recent departure for Norway, he announced the setting apart of his life savings to establish the Albert Soiland Cancer Foundation, described in this issue, page 347

**Howard Lilienthal** ⊕ New York, Harvard Medical School, Boston, 1887, born in Albany, N Y, Jan 9, 1861, served as lecturer on surgery and as consulting surgeon at the New York Polyclinic Medical School and Hospital, for many years professor of clinical surgery at the Cornell University Medical College, member of the American Surgical Association, American Association for the Advancement of Science, American Society for the Control of Cancer Societe International de Chirurgie and the Military Order of the World War, of which he had been surgeon general, past president of the Medical Society of the County of New York, American Association for Thoracic Surgery, New York Society for Thoracic Surgery, New York Surgical Society and the New York Physicians Art Club fellow of the New York Academy of Medicine, corresponding member of the Academie de Chirurgie a member of the founders group and fellow of the American College of Surgeons, a lieutenant colonel in the medical corps of the U S Army and director of the Mount Sinai Hospital unit in France during World War I cited for the Distinguished Service Medal in 1921, member of the founders group of the American Board of Surgery for many years surgeon and consulting surgeon at Mount Sinai Hospital and Bellevue Hospital, on the occasion of his eightieth birthday the January-February 1941 issue of the *Journal of the Mount Sinai Hospital* was dedicated to him, author of "Imperative Surgery" and "Thoracic Surgery', contributed to Binnie's Treatise on Regional Surgery in 1917 and Ochsner s Surgical Diagnosis and Treatment in 1920, member of the advisory editorial board of the *Journal of Thoracic Surgery* died in the Jersey City Medical Center, Jersey City, N J, April 30, aged 85

**Louis Hamman** ⊕ Baltimore Johns Hopkins University School of Medicine, Baltimore, 1901, born in Baltimore Dec. 21 1877 an intern and resident physician from 1901 to 1903 at the New York Hospital when he entered practice in Baltimore, becoming affiliated with his alma mater first as assistant, instructor and associate in medicine, associate professor of clinical medicine and associate professor of medicine specialist certified by the American Board of Internal Medicine member and past president of the American Climatological and Clinical Association and the Association of American Physicians, member of the American Society for Clinical Investigation fellow of the American College of Physicians, corresponding secretary of the International Antituberculosis Association, in 1944 appointed foreign corresponding member of the Society of Internal Medicine of the Asociacion Médica Argentina, Buenos Aires delivered the Roger S Morris Memorial Lecture at the University of Cincinnati College of Medicine, visiting physician on the medical staff of the Johns Hopkins Hospital and Dispensary and consultant in chief, department of medicine, at the Johns Hopkins Hospital, where he died April 28, aged 68, of myocardial infarction

**Robert Love Anderson** ⊕ Pittsburgh, Western Pennsylvania Medical College, Pittsburgh, 1907 born in 1885, associate professor of urology at his alma mater, now known as the University of Pittsburgh School of Medicine, specialist certified by the American Board of Urology, Inc., member of the House of Delegates of the American Medical Association in 1939, 1940, 1942, 1943 and 1944, member of the American Urological Association, fellow of the American College of Surgeons, past president of the Medical Society of the State of Pennsylvania, serving as a member and chairman of its board of trustees, for many years a member of the board of directors of the Allegheny County Medical Society, which he had served as president, treasurer and in other capacities, a medical officer during World War I, member of the staffs of the Southside Hospital, Children's Hospital Presbyterian Hospital, Women's Hospital and the Magee Hospital where he died February 1, aged 61, of coronary thrombosis

**Philip Joseph Savage,** New London, Conn, University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1921, born in New London, Conn, June 9, 1893, member of the American Medical Association, on the staff of the Lawrence and Memorial Associated Hospitals for many years, served with the Depot Brigade during World War I, in August 1927 joined the Connecticut National Guard, receiving a commission as captain in the medical corps, being attached to the 192d Field Artillery began active duty as a major in the medical corps, Army of the United States (National Guard), in February 1941, trained with the 43d division at Camp Shelby, Miss., and subsequently assigned to the Army Air Corps, saw duty in England and the African invasion, contracted amebic dysentery while overseas, relieved from active duty Aug 29, 1944, retaining status in National Guard died Aug 2, 1945, aged 52

**Abraham Strauss** ⊕ Cleveland, Johns Hopkins University School of Medicine, Baltimore, 1912, born in Pawtucket, R. I, in 1887, specialist certified by the American Board of Radiology, Inc, and the American Board of Surgery, member of the Radiological Society of North America, Inc., American College of Radiology and the American Radium Society, fellow of the American College of Surgeons, treasurer of the Cleveland Medical Library Association and a trustee of the Cleveland Health Museum director, 1942-1943, Academy of Medicine of Cleveland, of which he had been secretary and on many committees and academy sections, an officer in the medical corps with the British Expeditionary Forces from May 1917 until he was taken prisoner by the German forces the next March chief of the department of surgery of Mount Sinai Hospital died at his home in Cleveland Heights, January 30, aged 58, of heart disease.

**Edgar Davidson Oppenheimer** ⊕ New York Columbia University College of Physicians and Surgeons New York, 1907, born in New York, May 10 1883, specialist certified by the American Board of Orthopaedic Surgery, Inc., member of the American Academy of Orthopaedic Surgeons, fellow of the American College of Surgeons, served overseas as a battalion medical officer with the Mount Sinai Base Hospital during World War I, consulting orthopedist at the Children s Country Home in Westfield N J consultant at the Betty Bacharach Home for Afflicted Children in Longport, N J, affiliated with the Elizabeth General Hospital, Elizabeth, N J, Hebrew Sheltering and Guardian Orphan Asylum in Pleasantville Lexington School for the Deaf, Home for Hebrew Infants, Hebrew Orphan Asylum, Beth Israel, Hillside and New York City Cancer Institute hospitals, died April 29, aged 62, of coronary thrombosis

**Allen Coburn,** Homer, Ohio, Starling Medical College, Columbus 1905, served during World War I, died December 16, aged 76

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

April 27, 1946

### Maternity Service and the National Health Service Bill

The Royal College of Obstetricians and Gynecologists has submitted to members of Parliament a memorandum expressing with considerable concern its views as to the proposals in the National Health Service bill for the administration of the maternity service The memorandum states that it has long been recognized that one of the major defects in our existing services is the duality and, in some places, the multiplicity of control and responsibility that exists In a recent report on a national maternity service the college gave evidence for its conviction that the care of the pregnant woman, whether at home, at the clinic or in the hospital, is a responsibility that cannot be discharged with maximum safety to the two lives at stake if it is shared between different administrative bodies The argument that the uninterrupted continuity of control which is essential for safety can be achieved within a dual system by suitable administrative adjustments is opposed to the lessons of obstetric history The college notices with grave concern that the proposals in the bill will seriously endanger existing schemes in which unitary control prevails and which are being successfully operated by certain local authorities and voluntary agencies

The college is convinced that the special conditions which apply to maternity make it imperative that each administrative unit must embrace the various elements of the service It welcomes the proposals for the setting up of regional medical boards, for by regional planning alone can adequate provision and equitable distribution of maternity hospital accommodation and specialist service be secured But the advantages of this planning will be gravely reduced if it fails to weld together the hospital and the specialist, on the one hand, and the domiciliary and antepartum services, on the other hand In conclusion the memorandum states that the importance of complete coordination in reducing maternal and infant mortality is so great that the provision of a coordinated scheme for all aspects of maternity work must be placed unequivocally on one authority at regional level

### The Demographic Consequences of the War

It will probably be many years before the full consequences of the greatest war in history can be fully estimated An important report on the demographic consequences has been made by the international committee for the Study of the European Demographic Consequences of the War The loss of life to the Germans was 3½ million but to their opponents four times as great, nearly 15½ million Russia sustained the greatest loss, 7 million Poland lost nearly 4½ million, nearly all civilians, as the result of massacre or ill treatment The British losses of life amounted to 400 000 290,000 in armed forces, 62 000 among civilians and 45,000 in the merchant navy Like the Germans but unlike the rest of Europe, because the country was not occupied, the British military casualties far exceeded the civilian

Hitler had a definite demographic policy—to increase the German population and decrease the populations of other peoples This he carried out with the usual German ruthless efficiency Even before the war he did everything possible to stimulate the German marriage and birth rate During the war the mass exploitation of the millions of slave workers deported from other European countries allowed the industrial conscription of German women to be avoided so that they could be left to breed The deportation of foreign labor separated men from their wives and reduced the birth rate in the other countries The report estimates this separation at 11 to 12 million, which includes prisoners of war Hitler's population policy was pursued further on other lines by cutting to starvation level the food of peoples in occupied countries and by their mass massacre The final and astonishing conclusion of the committee is that while the population of the occupied countries has decreased the population of Germany has actually increased from 65 to 74 million as a consequence of the war This increase is explained by the postwar deportation of Germans on a large scale from Poland and Czechoslovakia

### Penicillin and Yellow Fever Vaccine by Flying Boat

The Ministry of Health has published new regulations which provide for an increased standard of purity for preparations of penicillin to be used for parenteral injection, by exclusion of the crude filtrates permitted previously Penicillin is to be issued only in the form of a dry salt or other dry substance, or *in some form approved by the Licensing Authority* The minimum potency of penicillin is increased to 300 units per milligram for preparations in a solid form and to 2,000 units per cubic centimeter for preparations in solution

Monthly consignments of penicillin and yellow fever vaccine are to be carried by British Overseas Airways Corporation to Bahrein on the Persian Gulf for the government hospital there. Instructions have been given to the staffs along the route with regard to the vaccine, which has to be maintained at the correct temperature during its passage through the tropics The officials will be responsible for adding ice at intervals of approximately sixteen hours The vaccine will be packed in England at the correct temperature in half gallon vacuum flasks

## ITALY

*(From Our Regular Correspondent)*

NAPLES, March 28, 1946

### Prices of Medicaments

American drugs are in great demand in Italy Unscrupulous people have profited by this by establishing a black market with enormous profits A fall in prices may be expected soon as the result of the production of Italian drugs which could not be produced during the war A secondary factor for the lowering of prices for American drugs is the fear of people in the black market of losing money This depends on the official monetary exchange as recently fixed by authorities of the Allied Forces and the Italian government Prior to February $1 was worth 100 Italian lire, since February the dollar has been worth 225 lire One sterling pound in paper could be purchased before February for 400 lire, whereas now it costs 900 lire. However before February the exchange of lire into dollars and sterling pounds was limited to those who could fulfil certain commercial requirements, which people in the black market lacked. As they needed money of the Allied Forces for illegal purposes they bought against the laws and at illegal prices, ranging from 300 to 400 lire for $1 and 13,000 lire for a sterling pound The black market now pays 250 lire for $1 and 5,500 lire for a sterling pound (gold) These lowering values may signify an improvement of economic conditions in Italy

American drugs are now more scanty than during the occupation of the Allied Forces Several pharmaceutic institutions are beginning to prepare Italian drugs to be put on the market soon During allied occupation drugs were provided to hospitals, university clinics and pharmacies of large cities Later the supply to pharmacies was stopped, and hospitals and clinics received minimal drug supplies At this time the black market in drugs grew For instance, hospitals and clinics for the poor obtained a bottle with 100,000 units of penicillin for 500 lire, whereas private patients paid from 5,000 to 8,000 lire through

the black market for the same amount. In Milan and Turin a bottle of 100,000 units of penicillin purchased through the black market cost 12 000 lire a few months ago, whereas now it costs about 6,000 lire (200,000 units of penicillin costs 8,000 lire)

Insulin was another substance exploited by the black market Insulin is supplied in necessary amounts for clinical use in diabetic clinics of the universities A bottle containing 200 units of American insulin may be obtained in these centers for 60 lire. When these centers are short of insulin, the black market price varies from 300 to 1,000 lire.

Tablets of multiple vitamins formerly were sold at 1,000 lire per bottle of 100 tablets A flask of thiamine hydrochloride solution containing 50 mg of vitamin B now costs 500 lire

National production of liver extracts fulfils the needs of the people Italians recently learned of the great therapeutic value of folic acid from the article by Dr Spies which appeared in the February 16 issue of the *Lancet* It will be available in Italy in the near future.

Synthetic hormones are widely used in Italy Twenty-five mg of testosterone propionate from America costs 500 lire through the black market Hormones, especially synthetic hormones of any class, should be imported to Italy, because national centers are not as yet prepared to carry on complete work in this field because of the conditions created by war The vitamins most needed in Italy are E, K and vitamins of the B group (especially pyridoxine) The following have not been used as yet in Italy extracts from fresh spleen for therapy of cutaneous allergy, thiouracil, radioactive phosphorus and Bogomolets' antirheumatic serum Experimental researches recently started in some Italian serotherapeutic institutions in which inoculation of horses by means of extracts of human organs is in progress

Pentothal, at first received without confidence is now very much liked The price through the black market (the only available place to obtain it) is 1,000 lire per flask.

### Penicillin

The Societa italiana di biologia sperimentale recently held a meeting to discuss penicillin Dr Davoli reported results of work on the effects of penicillin on bacteria Concentrated penicillin (Gerger's method) has a bacteriostatic effect on *Escherichia coli Eberthella typhosa, Salmonella paratyphi* A, Salmonella paratyphi B, Proteus OX19, Bacterium shigae, Vibrio cholerae, Brucella paramelitensis and Brucella paraabortus The bacteriostatic effect clearly shows in the culture plates of agar-bacteria by the inhibition of the growth The rate of action of penicillin is more clearly defined on Staphylococcus pyogenes than on Bacillus anthracis, Bacillus subtilis and Corynebacterium diphtheriae The effect of Penicillium notatum in the Czapek-Dox culture medium (without corn syrup) on B shigae and Proteus (gram negative bacteria) appears earlier than in those of Staphylococcus pyogenes in the same cultures However, the effect remains unchanged in the former, whereas it increases to high values in the latter In cultures of the fungus in a decoction of "alpha alpha" medical herb medium the effect of penicillin on Staphylococcus pyogenes appears earlier than on either B shigae or Proteus

Drs A Pardi and G Calamari reported negative results from the use of yellow penicillin on carriers of diphtheria. The therapy consisted in local application of the substance or else vaporizations with a penicillin solution containing from 2 to 10 Oxford units for each cubic centimeter of the solvent The treatment began shortly after disappearance of the local symptoms lasted for a long time and failed.

### Reestablishment of Mail for Medical Journals

Mailing of medical and scientific journals to Italy has been reestablished. Italian physicians received all the four January 1946 issues of THE JOURNAL early in February

### Medical Journals

*Il Policlinico, Riforma Medica* and several other medical journals which were discontinued during the war have reappeared since the beginning of the year They are published under auspices of the presidents of the Faculties of Medicine of Bologna, Naples, Milan, Pavia and Rome

## MEXICO CITY

*(From Our Regular Correspondent)*

April 13 1946

### Health Center and Tropical Medicine Training Station in Boca del Rio

On the immediate outskirts of the village of Boca del Rio in the state of Veracruz in full tropical country, a special field station of the School of Public Health and Hygiene and of the Institute of Tropical Diseases was built and equipped by the Direccion de Cooperación Interamericana de Salubridad (Office of Inter-American Cooperation in Public Health) supported by the Institute of Inter-American Affairs in Washington, D C, and the Secretaria de Salubridad y Asistencia in Mexico City The president of Mexico, accompanied by ministers and many distinguished guests, dedicated the building on February 21 Dr Pilar Hernández Lira, M P H, was appointed director of the center and station and Drs E Harold Hinman and Gustavo Baz were in charge of the addresses

The structure, which is C shaped, is located on a small beach about 7 miles from the city of Veracruz The building provides three types of activities (1) a full time health service for the inhabitants of Boca del Rio and surrounding villages and farms, (2) a center for research and study of tropical ailments and problems of warm climate and (3) an institution for the training of personnel in tropical medicine and in rural public health and welfare

Hospital space for 12 beds is available along with one student laboratory and two small fully equipped research laboratories A dental unit, outpatient clinic, pharmacy and offices are situated on the first floor of the building Dormitory space on the second floor will accommodate twenty physicians, who may attend the station either for research or as students Dining rooms, kitchen, laundry and other facilities are available. A working library, an animal house and a small serpentarium complete this field health station and research center, which undoubtedly will attract quite a number of investigators and students from all the Americas

### Resignation of Dr Manuel Martinez Baez, Undersecretary of Public Health and Welfare

Dr Manuel Martinez Baez, former director of the Institute of Public Health and Hygiene and professor of parasitology in the National University and the School of Public Health and Hygiene in Mexico resigned, February 28, as undersecretary of public health and welfare to assume a new position as special representative of Mexico in the U N O Section of Education, Culture and Science. Before his departure he was awarded the Dr Eduardo Liceaga medal for distinguished and meritorious services in the field of public health, especially of international character He has represented Mexico in several meetings and he is still an officer of the Pan American Sanitary Bureau Dr Baez was replaced by Dr Octavio S Mondragon, formerly "official mayor" in the Federal Department of Health and Welfare and private physician to President Avila Camacho

### Scientific Meetings for 1946 in Mexico

The Mexican Society of Hygiene, of which Dr Angel de la Garza Brito is president and Dr Manuel Marquez Escobedo executive secretary, is planning to meet during the third week of August. The election of new officers for the governing council and sections of the society will take place along with scientific sessions

The first National Congress on Public Health and Welfare will be held in Mexico City during the last week of August. The Institute of National Assemblies of Surgeons and the Mexican Society of Anesthetists will hold jointly the seventh meeting of the institute and the first National Congress on Anesthesiology to commemorate the discovery of anesthesia

### Inauguration of New Hospital in Veracruz by Mexican Red Cross

Gen Manuel Avila Camacho, constitutional president of Mexico, his wife and Mr Alejandro Quijano, LL D, President of the Red Cross chapter in Mexico, presided at the inauguration of a 50 bed emergency hospital and old age home in Veracruz The hospital was built with private funds and government help and cooperation In the same grounds a maternity clinic will be built to fill the urgent needs of the city of Veracruz

### Dr Salvador Zubiran Appointed Dean of the National University of Mexico

On the resignation of Mr Genaro Fernandez Macgregor, LL D, February 22, the Council of the National University of Mexico appointed Dr Salvador Zubiran as dean Dr Ignacio Gonzalez Guzman, hematologist, resigned as dean of the Faculty of Medicine and was replaced by Dr Salvador Gonzalez Herrejon, chief of the campaign against malaria in the Secretaria of Public Health and Welfare.

## BRAZIL

*(From Our Regular Correspondent)*

RIO DE JANEIRO April 22 1946

### Influence of Digitalis on Blood Clotting

Drs Luis V Decourt and Ennio C. Barbato of the Department of Clinical Medicine of the University of São Paulo have reported their investigations on the influence of digitalis on the blood clotting time They wished to ascertain the exact thromboplastic action of digitalis Three groups were observed, the first, 16 cardiac patients with different functional capacities who received digitalis in therapeutic doses the second, 16 normal persons, who received during three days 9 cat units of digitalis (3 units a day) the third, 4 cardiac patients treated without the use of digitalis (rest in bed, therapeutic dehydration and adequate diet) The determination of the blood clotting time has been done by the method of Lee-White. Determinations were made before the use of digitalis and then every fourth day during the time the drug was being administered to the patients

In 15 of 16 cardiac patients of the first group the clotting time showed a definite reduction the average time of seven minutes and twenty seven seconds (minimum four minutes, maximum eleven minutes), was reduced to five minutes and thirty seconds (minimum three and one-half minutes, maximum eight minutes) No relation was found between the degree of reduction of clotting time and the functional capacity of the heart or venous pressure. The reduction of the clotting time was present only during the use of digitalis and reverted to its previous value after the drug was discontinued. Comparable results were obtained in the second group of 16 normal persons The third group of 4 cardiac patients who did not receive digitalis showed no change in the clotting time, in spite of rest dehydration and reduction in the venous pressure.

The authors believe that the results strongly suggest a reduction of the blood clotting time with the use of digitalis with possible significance as to embolism and thrombosis in cardiac patients Although these accidents may occur in patients who are not taking digitalis, the results of the experimentation suggest a more careful use of the drug

### Complement in Weil's Disease

Dr Santos has isolated several samples of Leptospira, which have been inoculated into guinea pigs These animals contracted Weil's disease with jaundice, severe hemorrhagic syndrome and the presence of leptospiras with an increasing severity and death after eight or nine days Assay of complement, several times during the illness, disclosed the maintenance of its titer with very small fluctuations Since in Weil s disease the liver does not present the destructive process characteristic of yellow fever and tetrachloride poisoning, the findings of Dr Santos confirm Dr Costa Cruz's explanation of the decrease of the complement in yellow fever

### Brief Items

Dr Eugene R Kellersberger of the American Legion to the Leprous arrived at Rio de Janeiro a few days ago to visit some institutions connected with the work against leprosy Accompanied by Dr Ernani Agricola, director of the Division of Leprosy of the National Department of Health and by Dr H Souza Araujo of the Oswaldo Cruz Institute, Dr Kellersberger visited the Santa Fé Colony for the Leprous at Tres Corações, state of Minas Gerais

Dr Aurelio Monteiro has been appointed assistant professor of gynecology at the University of Rio de Janeiro Dr Monteiro spent some time in the United States at the Sloane Hospital for Women and at the department of gynecology of Columbia University

The fifth Brazilian Congress of Ophthalmology will be held at Salvador, state of Bahia, on June 26-30 Several ophthalmologists of Argentina Uruguay, the United States and Great Britain have been given special invitations to the meeting

### Personal

Dr Humberto C Ferreira, of the Department of Microbiology and Immunology of the University of São Paulo has gone to the United States as a fellow of the Institute of International Education to make advanced studies with Dr A S Wiener on the Rh factor

## Marriages

WILLIAM JOSEPH FROHBOSE Bound Brook, N J, to Miss Elizabeth Montgomery Blair of Richmond, Va, March 16

JAMES JERNIGAN CRUMBLEY JR Sylvester, Ga to Miss Barbara Clarke Covington of Dade City, Fla., April 13

WALTER SAMUEL LOCKHART JR Durham N C, to Miss Doreen Ethel Steele of Guilford, Conn, March 30

PETER A WALLENBORN JR., Charlottesville, Va, to Miss Dolly Virginia Franklin of Concord, March 2

ROBERT STEELE HUTCHESON Lexington, Va, to Miss Mary Louise Moffett of Charlottesville, March 1

JOSEPH T MAJEWSKI Milwaukee, to Miss Carolyn Bernice Friedman of Halbur Iowa March 23

WILLIAM LOUIS BINGHAM Lexington, N C to Miss Evelyn Gray Whittenton of Dunn March 22

WILLIAM TENENBLATT, New York, to DR. SARAH SHTOFFER of Oakland Calif. April 6

JACK R WALTON, Midland, Texas to Miss Lillian Clark of Fayette, Iowa, March 31

EUGENE POOL SZERLIP Newark, N J, to Miss Hildur E. L. Coon of Seattle, April 11

DON E. KING, Birmingham Ala, to Miss Janice Root Mack of Athens, Pa, in March

MELVIN J FRIESWYK to Miss Irene Heyboer, both of Grand Rapids Mich, April 11

VICTOR STRAUSS Cincinnati, to Miss Dana Maher of Long Island, N Y April 6

ALLAN B WARREN JR., to Miss Wyclif Scott, both of Orange, Va., March 2

LEWIS LEHRER to Miss Eleanor Benditt, both of Philadelphia, March 17

# Correspondence

## CORONARY OCCLUSION AND MYOCARDIAL INFARCTION

*To the Editor* —In commenting on various discussions by Blumgart, Master, Boas and others, Dr. Victor Jacobsen (THE JOURNAL, February 23, p. 530) mentions the need for more precise use of the terms coronary occlusion, coronary thrombosis and myocardial infarction. Such clarification is necessary. However, his communication is not always clear in its meaning; furthermore, it contains several unwarranted criticisms.

Dr. Jacobsen states that intra-atheromatous hemorrhage has rarely impressed him as sufficient to produce complete arterial occlusion. The occurrence of simple hemorrhages in arteriosclerotic plaques is well known to pathologists. The significance of such intimal hemorrhages is that they often lead to thrombosis within the lumen of the coronary artery (Paterson, J. C.: Capillary Rupture with Intimal Hemorrhage as a Causative Factor in Coronary Thrombosis, *Arch. Path.* **25**: 474 [April] 1938). Occasionally a relatively massive hemorrhage occurs within a soft atheromatous plaque and may completely obstruct the coronary lumen by pressure alone without the development of a thrombus, as was demonstrated by Wartman (Occlusion of the Coronary Arteries by Hemorrhage into their Walls, *Am. Heart J.* **15**: 459 [April] 1938). In fact, Horn and Finkelstein noted such a mechanism to have been operative thirteen times in 100 hearts showing acute occlusions (Arteriosclerosis of the Coronary Arteries and the Mechanism of their Occlusion, *Am. Heart J.* **19**: 655 [June] 1940). In addition, they found that directly or indirectly intra-atheromatous hemorrhage was the underlying mechanism in acute coronary occlusion in nearly two thirds of the cases which they examined. Hence Dr. Jacobsen's belief that intra-atheromatous hemorrhage is unimportant is not substantiated by recent investigations.

In view of these considerations, namely that obstruction of the coronary lumen may result from thrombosis secondary to intimal hemorrhage or from thrombosis without evident hemorrhage, which is much less frequent, or finally from an intimal hematoma without any associated thrombosis, the clinician should employ preferably the phrase 'acute coronary occlusion' instead of "coronary thrombosis." The differentiation is obviously a pathologic one and depends on histologic evaluation.

Dr. Jacobsen raises three points in support of the contention that effort may induce acute coronary occlusion. It is felt that all of these are open to question. First, he assumes that sudden hemorrhage into an atheroma results from the systolic rise of blood pressure during severe effort. This is entirely supposition and has not yet been proved. On the contrary, intimal hemorrhages have been known to occur in sclerotic plaques in the pulmonary arterial tree where the pressure is far lower than that in the greater circulation (Paterson, J. C.: Capillary Rupture with Intimal Hemorrhage as a Cause of Pulmonary Thrombosis, *Am. Heart J.* **18**: 451 [Oct.] 1939). His second point is that during exertion a partially occluding thrombus may be torn loose and forced distally to occlude the lumen completely. Such a mechanism is perhaps anatomically conceivable. However, if this were so it would be a common observation at necropsy to find such a dislodged thrombus wedged in a normal segment of vessel, i. e. a segment distal to the plaque from which the thrombus originated. Except for rare embolization of a coronary artery as in subacute bacterial endocarditis for example, the site of an acute coronary occlusion is always the seat of arteriosclerotic change. Occlusive lesions of the coronary arteries are best demonstrated, for routine purposes, by multiple transverse sectioning. Under this method, a dislodged thrombus was not encountered by Horn and Finkelstein in even a single instance. The same is true of other large series of similar cases in the literature.

A final argument used by Dr. Jacobsen appears to be that, since rest and not exertion is the basic component of cardiac therapy, physical effort may produce a "fresh coronary thrombosis." This is faulty reasoning. No one will deny that rest is indicated following an acute coronary occlusion, but how does that prove that exertion can produce an acute occlusion?

Master, in writing of the incidence of acute coronary occlusion, stated that the latter was the end result of arteriosclerosis and also declared that an acute occlusion may occur at any time —during sleep, rest or mild or usual activity. These statements appear "contradictory" to Dr. Jacobsen, but it is his own confusion in terminology which causes the difficulty. It is essential that the slow, progressive arteriosclerotic narrowing of a coronary vessel be sharply distinguished from the acute occlusion. Apparently Dr. Jacobsen is referring to the former, whereas Master speaks of the acute episode.

This is the moment to reemphasize the necessity for employing suitable descriptive adjectives to qualify the expression "coronary occlusion." An acute coronary occlusion will then describe a sudden closure, a rapidly occurring accident during the development of an arteriosclerotic plaque, whether it is on the basis of thrombosis secondary to intimal hemorrhage, or thrombosis alone or of intramural hematoma.

LEONARD E. FIELD, M.D., New York.

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Friedman Test for Pregnancy: Factors Affecting Reliability** —The defendant was charged with murder by abortion and convicted of second degree murder, from which conviction he appealed to the Supreme Court of Colorado.

The deceased, suspecting that she was pregnant, called on a Dr. Holt and requested an examination. He gave her a bottle and asked her to return the next day with a sample of her urine. She returned as directed and presented what Dr. Holt assumed was a sample of her urine, though he had no actual knowledge of that fact. This sample the doctor delivered to a laboratory technician employed by a Dr. Halley to make the Friedman modification of the Zondek-Aschheim test. This test is performed by injecting a quantity of urine of a woman suspected of being pregnant into the blood stream of a virgin female rabbit which has been kept away from proximity to a male rabbit, is from 4 months to 17 weeks old and weighs about 4 pounds. Forty-eight hours after such injection the rabbit is killed and its ovaries are examined. If the woman is pregnant, certain changes in the appearance of the rabbit's ovaries ordinarily occur, discernible to one skilled in making such tests. If the woman is not pregnant ordinarily no change is produced in the appearance of the ovaries. This test was made and Dr. Halley reported that the result was positive. According to the medical testimony the test is correct in 90 per cent of the cases. Neither Dr. Holt nor any other witness stated definitely that the sample of urine presented to him was that of the deceased. His testimony was that she presented it to him as such. Neither Dr. Halley, his technician nor any other witness was able to state positively that the rabbit used for the test was of the age or weight required, that it was a virgin rabbit and, if so, that it had not been in proximity to a male rabbit. It was admitted that if the rabbit was not a virgin, or if so and it had been in proximity to a male its ovaries would have the appearance noted and that the test would be positive, even if deceased was not

pregnant It was further admitted that if deceased had a certain kind of tumor the test would be positive even though pregnancy did not exist, and that many other physical conditions of the woman might destroy its accuracy as a test There was no testimony that deceased was not afflicted with such a tumor, nor testimony excluding any other possible conditions that might make the test inaccurate.

Proof that there was an abortion said the court, requires as a prerequisite proof of pregnancy The evidence shows that on this point it might be questioned whether the proof is such as to justify the conclusion that pregnancy existed beyond a reasonable doubt The proof of this fact depends wholly on the so-called rabbit test, continued the court, which admittedly is accurate in only 90 per cent of the cases where it is made. No expert medical testimony is pointed out to us and we find none to the effect that pregnancy existed For this and other reasons, the judgment of conviction was reversed—*Cobianchi v People, 141 P (2d) 688 (Colo, 1943)*

**Hospitals, in General Exemption of Public Hospitals from Personal Property Taxes**—The state sought to recover personal property taxes for the years 1942 and 1943 alleged to be due from the defendant, Academy of Our Lady of Lourdes, by virtue of its ownership and operation of the St Mary's Hospital, Rochester, Minn. From a judgment in favor of the defendant the state appealed to the Supreme Court of Minnesota.

The defendant was incorporated under the provisions of the general statutes of 1878 for the purpose of establishing and maintaining hospitals, schools and institutions for orphans and the aged. It has no capital stock and none of its income, property or assets can inure to the benefit of its members the Sisters of Saint Francis of the Third Order Regular Carrying out its purposes, the defendant erected the first buildings of the St Mary s Hospital in 1889 at a cost of slightly over twenty-three thousand dollars In 1942 the total assets over and above liabilities of the St. Mary's Hospital was more than seven and one half million dollars Its net operative income in 1942 was $546 817 04 It had 890 beds, thirteen operating rooms a nurses' home swimming pool, auditorium, recreation hall, various areas set aside for educational work in connection with the care of patients and research along certain lines for the benefit of patients and a number of pathology laboratories used and staffed by the Mayo Clinic but maintained by the hospital The ultimate object of the latter service is to find new and better ways of treating patients Neither the clinic nor the hospital receives any pecuniary profit from the clinical research The Mayo Clinic contributes the equipment used, but the hospital owns it. Patients who submit themselves for examination and treatment in that part of the hospital devoted to clinical research are non-paying patients The service is contributed to medical education with the hope that the patient will also benefit. The results of this research are available to the entire medical profession The hospital has 400 student nurses, and during the years 1920 to 1944 inclusive it had 65,365 physicians from all parts of the world registered at the surgical clinics

At the outset the Supreme Court pointed out that under its prior decisions a public hospital need not operate at a loss nor as a charitable institution, to remain eligible for exemption from taxation under the constitutional and statutory provisions of the state. We are inclined to the view, the court continued, that it was intended that a public hospital should be operated for the benefit of the public in contradistinction to being operated for the benefit of a private individual corporation or group of individuals So construed, "operated for the benefit of the public' means operated without an intent to make a private profit. It is not thereby meant that the institution must dispense charity or that it may not charge a fee for services rendered. Article 9, section 1, of the Minnesota constitution exempts public hospitals from taxation The defendant also owns and operates three other hospitals, a college, a School of Musical Art and a parochial school located in different parts of the country If each of its activities was separately incorporated under a corporate structure such as the defendant, the property of each would be tax exempt. It would seem, the court concluded, that the mere fact that all the activities are carried out under one corporation, all within one legal entity, cannot possibly make the property or proceeds of any of them taxable.

The plaintiff contends that, since the admitted chief support of all the activities of the defendant comes from the income from St Mary's Hospital, profits from the operation of the hospital are intended, and, since they result, that it is not a public hospital and therefore not tax exempt. The complaint seems to be that there is a surplus Of course, it was the intention to operate the hospital so as to create a profit and avoid a deficit There was no intention however to make a private profit and none has been made The fact that the hospital has been successfully operated cannot, of course, be the feature which makes it legally an institution subject to tax or, if unsuccessfully operated, tax exempt. Its close cooperation with the Mayo Clinic, the most distinguished institution of its kind, together with its own competent administration accounts for its astounding growth From its income it has enlarged its plant to the proportions we have indicated The sisters contribute their services to the hospital Such services are characterized by arduous work and long hours for which they receive no pay They do receive training room, board, clothing, medical and hospital care, and support in old age and are provided a decent burial It was estimated by a witness competent to testify that the cash value of the services rendered by the sisters to St Mary s Hospital during the years 1919 to 1942 inclusive would be almost three million dollars on a minimum salary evaluation, less the value of certain things which they receive. Neither the hospital s property nor profits can ever inure to the benefit of any private individual or group of individuals

In its organization and operation, St Mary s Hospital is, the court concluded clearly a public hospital and as such its property is exempt from taxation Accordingly the judgments of the trial court in favor of the defendant were affirmed—*State v Academy of Our Lady of Lourdes, 21 N W (2d) 617 (Minn, 1946)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### BOARDS OF MEDICAL EXAMINERS
### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL, May 18 page 253

### EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY *Oral* New York Oct. 9 14 Sec Dr Paul M Wood 745 Fifth Ave. New York 22

AMERICAN BOARD OF INTERNAL MEDICINE *Written* Oct. 21 Final date for filing application is July 1 Asst Sec Dr W A Werrell 1 W Main St Madison 3, Wis

AMERICAN BOARD OF OPHTHALMOLOGY *Oral All Groups Parts I and II* New York June 1947 Final date for filing application is Dec. 1 Chicago October 1947 Final date for filing application is March 1 Sec Dr S J Beach 5o Ivie Rd Cape Cottage Me.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY *Part II Oral* Chicago January Final date for filing application is Nov 1 Sec. Dr Guy A Caldwell 1136 W Sixth St., Los Angeles 14

AMERICAN BOARD OF OTOLARYNGOLOGY Chicago May 22 25 Sec., Dr Dean M Lierle University Hospital Iowa City Ia

AMERICAN BOARD OF PATHOLOGY San Francisco June 25 26 Applications should be submitted by May 15 Sec. Dr F W Hartman Henry Ford Hospital, Detroit 2

AMERICAN BOARD OF PEDIATRICS *Oral* San Francisco July 1 5 Sec. Dr Lee F Hill 3309 Forest Ave Des Moines Ia

AMERICAN BOARD OF PSYCHIATRY & NEUROLOGY New York December Final date for filing application is Sept 30 Sec. Dr Walter Freeman 1028 Connecticut Ave N W, Washington D C

AMERICAN BOARD OF RADIOLOGY Chicago Nov 27 to Dec. 1 Final date for filing application is Sept. 1 Sec. Dr B R. Kirklin Mayo Clinic Rochester Minn.

AMERICAN BOARD OF SURGERY *Written Part I* Various centers October Final date for filing application is July 1 Sec. Dr J S Rodman 225 S 15th St. Philadelphia 2

AMERICAN BOARD OF UROLOGY *Oral* Chicago February 1947 Final date for filing application is Nov 15 Sec., Dr Gilbert J Thomas 1409 Willow St., Minneapolis 4

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

### American Journal of Medical Sciences, Philadelphia

**211** 129-256 (Feb.) 1946

Meningococcus Myocarditis. Report of 2 Cases with Anatomic and Clinical Characteristics. D. V. Holman and D. M. Angevine.—p. 129
Spontaneous Pneumothorax in Healthy Young Adults with Particular Reference to Etiologic Role of Aerial Ascent. E. M. Heath.—p. 138
Why Certified Milk? J. H. Brown.—p. 144
*Amino Acids in Production of Plasma Protein and Nitrogen Balance. S. C. Madden and G. H. Whipple.—p. 149
*Effect of Salicylate Therapy on Weltmann Serum Coagulation Reaction and Its Use as Prognostic Test in Rheumatic Fever. D. E. Ward Jr. and G. T. Harrell.—p. 157
Psittacosis Treated with Sulfonamide Drugs. J. A. Toomey and R. C. Lohrey.—p. 163
Thrombophlebitis with Multiple Pulmonary Emboli. Psychiatric Self Observations. F. Wertham.—p. 166
Thiouracil Effect in Diabetes Mellitus Complicated by Hyperthyroidism. W. S. Reveno.—p. 174
Influence of Environmental Temperature and Relative Humidity on Rate of Water Loss Through Skin in Congestive Heart Failure in Subtropical Climate. G. E. Burch.—p. 181
Respiratory Quotient and Blood Pyruvate and Lactate Responses After Oral Ingestion of Glucose and Fructose in Diabetes Mellitus With and Without Insulin. H. F. Root, E. Stotz and T. M. Carpenter.—p. 189
Human Utilization of Biotin from Various Diets. Josephine Gardner, Helen T. Parsons and W. H. Peterson.—p. 198
Chloroma. Clinicopathologic Study of 2 Cases. E. G. Goodman and L. Iverson.—p. 205
Natural Course of Chronic Southwest Pacific Malaria. W. L. Noe Jr., C. C. Greene Jr. and G. Cheney.—p. 215
Electrocardiographic Evidence of Cardiac Complications in Infectious Mononucleosis. W. F. Evans and A. Graybiel.—p. 220
Treatment of Human Hypertension with Kidney Extract. C. D. Stevens, J. H. Kotte, C. C. Smith and J. McGuire.—p. 227
Review of Present Concepts on Fluid Balance. W. E. Abbott.—p. 232
Retinal Lesions in Acute Disseminate Lupus Erythematosus. H. P. Wagener.—p. 240

**Amino Acids in Production of Plasma Protein and Nitrogen Balance.**—Madden and Whipple used pure crystalline amino acids in various mixtures, parenterally or by mouth to study plasma protein production and nitrogen balance in dogs and in man. Amino acids can supply the protein nitrogen requirements of the body. The so-called ten essential amino acids in suitable amounts can be given by mouth, by vein, subcutaneously or intraperitoneally with equal success in maintaining nitrogen and weight equilibrium. These ten essential amino acids are threonine, valine, leucine, isoleucine, lysine, tryptophan, phenylalanine, methionine, histidine and arginine. Aminoacetic acid (glycine) is usually added to this mixture. By mouth the amino acids are utilized a little more completely than when given parenterally. Experiments give no evidence that the unnatural isomers of the amino acids are toxic and some are probably used in the body. These amino acid mixtures can be given rapidly in 10 per cent solution parenterally and cause less clinical disturbance than any protein digests so far tested. Glutamic acid in digests or amino acid mixtures is not well tolerated by vein and may induce vomiting. Abundant production of plasma proteins in standardized dogs is readily demonstrated as being due to these amino acids as the sole source of nitrogen. The production of new plasma protein due to amino acids in general corresponds favorably with the response to high grade diet protein in equivalent amounts. The amino acid mixtures are well utilized by patients with chronic infection (colitis), gastrointestinal disturbances (partial obstruction) or cancer cachexia.

**Effect of Salicylate Therapy on Weltmann Serum Coagulation Reaction.**—Ward and Harrell made serial studies for six months of the Weltmann coagulation reaction, sedimentation rate and leukocyte count of 26 patients with rheumatic states who were receiving salicylate therapy. The Weltmann coagulation reaction was unaltered in vitro or in vivo by levels of salicylates commonly attained in the blood. Even in the presence of salicylate therapy a low Weltmann coagulation band, an elevated sedimentation rate and an elevated white blood cell count are all indications of an inflammatory process. The coagulation band is least affected by extraneous factors, however, and gives the most uniform results. The Weltmann coagulation band agreed more closely with the clinical course and symptoms in patients studied than did the sedimentation rate or white blood cell count. The Weltmann coagulation reaction seems to be a better measure of activity and a more accurate index to the prognosis of rheumatic fever in patients receiving salicylate therapy than other laboratory aids now available.

### American Journal of Physiology, Baltimore

**145** 447-631 (Feb.) 1946. Partial Index

Influence of Adrenalin on Plasma Prothrombin. K. G. Wakim, R. D. Fink and K. K. Chen.—p. 452
Cardiac Output in Man. Study of Some of Errors in Method of Right Heart Catheterization. J. V. Warren, E. A. Stead Jr. and E. S. Brannon.—p. 458
Relationship of Cardiac Glycogen Deposition to Blood Ketone Levels in Experimental Ketosis. R. W. Lackey, C. A. Bunde and L. C. Harris.—p. 470
Production of Acetylcholine in Antidromic Vasodilatation. L. M. N. Bach.—p. 478
Blood Histamine Levels in Experimental Burns. Vivian G. Behrmann, V. Schelling and F. W. Hartman.—p. 483
Supplementary Effects of Arsenic and Manganese on Copper in Synthesis of Hemoglobin. J. T. Skinner and J. S. McHargue.—p. 500
Development and Contour of Cardiac Injury Potential. J. A. E. Eyster and W. E. Gilson.—p. 507
Pulse Reaction to Performing Step Up Exercise on Benches of Different Heights. E. R. Elbel and E. L. Green.—p. 521
Action of Cardiac Ejection on Venous Return. H. A. Blair and A. M. Wedd.—p. 528
Further Observations Concerning Effect of Adrenalectomy on Alloxan Diabetes. Paired Feeding Experiments. R. G. Janes, H. Dawson and L. Myers.—p. 538
Release of Phosphate by Brain on Stimulation. V. H. Cicardo.—p. 542
Effect of Dose and Nutritive State on Renotrophic and Androgenic Activities of Various Steroids. C. D. Kochakian.—p. 549
Provisual Red and Visual Red. A. C. Krause.—p. 561
Changes in Protein Content and in Some Physicochemical Properties of Protein During Muscular Atrophies of Various Types. E. Fischer and Virginia W. Ramsey.—p. 571
Spontaneous Recovery of Muscle Following Partial Denervation. P. Weiss and M. V. Edds Jr.—p. 587
Effect of Some Isocyclic, Aromatic and Heterocyclic Compounds on Muscle Sensitivity to Acetylcholine and Potassium. Clara Torda and H. G. Wolff.—p. 608
Configuration of Epicardial and Endocardial Extrasystoles in Chest Leads. L. H. Nahum and H. E. Hoff.—p. 615
Some Factors Influencing the Biochemical Appraisal of Group Nutritional Status. G. H. Berryman, C. R. Henderson, C. E. French and others.—p. 625

### American Journal of Psychiatry, New York

**102** 433-576 (Jan.) 1946. Partial Index

Incidence of Neuropsychiatric Disorders in United States Army in World War II. Preliminary Report. J. W. Appel.—p. 433
Psychiatric Problems at Oak Ridge. E. K. Clarke.—p. 437
Psychiatric Testimony Before Courts Martial. War Department, Washington, D. C.—p. 445
Review of Neuropsychiatric Cases in Southwest Pacific Area. D. Rothschild.—p. 454
Environment Adjunct in Treatment of Combat Fatigue. J. D. Teicher.—p. 460
Exhaustion Syndrome in Excited Psychotic Patients. N. R. Shulack.—p. 466
Desensitization of Combat Fatigue Patients. L. J. Saul, H. Rome and E. Leuser.—p. 476
Study and Treatment of Alcoholism in 5th S. C. Rehabilitation Center. H. J. Lawn.—p. 479
Delay (Pavlov) in Human Physiology. Sleepiness on Delayed Response to Stimuli. M. Levin.—p. 483
Convulsive States and Coma in Cases of Islet Cell Adenoma of Pancreas. P. F. A. Hoefer, S. A. Guttman and I. P. Sands.—p. 486
Neuropsychiatry at University of Amsterdam, Holland, 1940-1944. Carel Van der Heide.—p. 496
War Psychiatry in Retrospect. B. H. McNeel.—p. 500
Physiologic Treatment of Psychoses. J. Wortis.—p. 511
Alcohol Geriatrics. K. M. Bowman.—p. 515
Child Psychiatry. Mental Deficiency. L. Kanner.—p. 520
Heredity and Eugenics. F. J. Kallmann.—p. 522
Epilepsy. W. G. Lennox.—p. 524
Electroencephalography. F. A. Gibbs.—p. 527

## American Review of Soviet Medicine, New York

**3** 193-288 (Feb) 1946

War and Tuberculosis A E Rabukhin—p 198
Organization of Antituberculosis Work I I Levitin—p 204
Immunizing Value of BCG Dry Glucose Vaccine E N Leshchinskaya—p 210
Employment During Pneumothorax for Tubercular Patients N E Vvedenskaya—p 216
Mechanism of Antiviral Immunity Role of Leukocytes in Immunity to Viruses of Infectious Ectromelia and Herpes L A Silber and A K. Shubladze—p 217
Innervation of Heart B I Lavrentiev—p 229
Restoration of Regular Rhythm in Mammalian Fibrillating Heart. N L. Gurvich and G S Yumev—p 236
Struggle Against Fungus Diseases in the Turkmenian SSR A N Smorodintsev P V Kozhevnikov and E N Cherniak—p 240
Agonal States and Clinical Death Problems in Revival of Organisms VII. Reestablishment of Circulation Respiration and Functions of Central Nervous System in Newborn Dying from Asphyxia V A. Negovski—p 243

## Annals of Internal Medicine, Lancaster, Pa

**24** 1-152 (Jan.) 1946

Cranial Arteritis Critical Evaluation of Syndrome of Temporal Arteritis, with Report of Case E D Kilbourne and H. G Wolff—p 1
Polyarteritis Nodosa Report of 11 Cases with Review of Recent Literature R B Logue and T Mullins—p 11
Some Unusual Thoracic Complications of Typhoid and Salmonella Infections G R Minor and M. L White Jr—p 27
Study of 100 Cases with Positive Coccidioidin Skin Test D Clark and J H Gilmore—p 40
Short PR Interval, Prolonged QRS Complex (Wolff Parkinson White Syndrome) Report of 14 Cases and Review of Literature. L. Stein—p 60
Liver Function Studies in Diabetes Mellitus S J Gray W Hook and J L. Batty—p 72
What Can Be Accomplished in Treatment of Heart Diseases. H J Stewart—p 80
Apparatus for Introduction of Penicillin Aerosol into Nasal Accessory Sinuses with Report of Patient with Chronic Sinusitis A L. Barach B Garthwaite M Soroka and F F Anderson—p 97

## Archives of Internal Medicine, Chicago

**77** 1 120 (Jan.) 1946

*Dynamics of Action of Penicillin in Experimental Animals Observations on Mice E Jawetz—p 1
Venospasm Its Part in Producing Clinical Picture of Raynaud's Disease M. Naide and Ann Sayen—p 16
Purpuric Manifestations of Heatstroke Studies of Prothrombin and Platelets in 12 Cases. D O Wright L B Reppert and J T Cuttino—p 27
Chronic Cor Pulmonale Sixty Cases Studied at Necropsy D M Spain and B J Handler—p 37
Abnormalities in Electrocardiogram Following Hemolytic Streptococcus Sore Throat L A Rantz W W Spink and P J Boisvert.—p 66
Blood Review of Recent Literature F H. Bethell, C C Sturgis R W Rundles and M C Meyers—p 80

**Dynamics of Action of Penicillin**—Jawetz reports investigations on the effects of penicillin in white Swiss mice which were infected with a virulent beta hemolytic streptococcus strain that had been isolated from a patient with sore throat He found that the success of penicillin by parenteral injection against an otherwise fatal infection of mice depended on both the quantity of penicillin administered and the interval between injections Small doses of the drug had to be given frequently (every four hours) in order to save a significant portion of infected animals but if large doses were used injections could safely be spaced eight to ten hours apart with excellent results With large doses a single injection sufficed to save a majority of animals By means of several bacteriologic methods it was demonstrated that the effects of penicillin on the bacterial population in the host lasted much longer than the measurable blood levels

## Archives of Neurology and Psychiatry, Chicago

**55** 79-170 (Feb) 1946

Histologic Changes in Brain in Cases of Fatal Injury to Head VII Alterations in Nerve Cells C W Rand and C B Courville—p 79
Disturbances in Sleep Mechanism Clinicopathologic Study III. Lesions at Diencephalic Level (Hypothalamus) C Davison and E. L Demuth.—p 111
Id IV Lesions at the Mesencephalometencephalic Level C Davison and E L. Demuth—p 126
Studies in Diseases of Muscle XV Progressive Spinal Muscular Atrophy as Late Sequel of Acute Epidemic Encephalitis Report on 2 Cases V T Milhorat—p 134

## Archives of Ophthalmology, Chicago

**35** 1-70 (Jan) 1946

*Occurrence of Glioma of Retina and Brain in Collateral Lines in Same Family Genetics of Glioma. A. Rados—p 1
Injection of Oxygen into Tenon's Capsule H G Scheie and P J Hodes—p 13
Clinical Study of Effect of Tobacco on Normal Angioscotoma A I Fink.—p 15
Cyclodiathermy in Treatment of Glaucoma Due to Rubeosis Iridis Diabetica A deRoetth.—p 20
Oculomotor Paralysis with Partial Recovery Report of Case M Chamlin—p 23
Congenital Retinal Fold E Rosen—p 28
*Intraocular Penetration of Streptomycin Following Systemic and Local Administration I H Leopold and Anne Nichols—p 33
*Congenital Cataract and Other Anomalies Following Rubella in Mother During Pregnancy California Survey J J Prendergast—p 39
Ocular Imagery A Cowan—p 42
Ocular Complications of Malaria W M Grant—p 48

**Genetics of Glioma of Retina and Brain**—Rados reports the occurrence of glioma duplex of the same histologic type in a boy and a girl whose mothers were sisters. The boy had a neuroepithelioma and the girl an astrocytoma of the brain. The occurrence of malignant growths of the same type in the retina and in the brain in collateral lines is presented for the first time.

**Intraocular Penetration of Streptomycin.**—Leopold and Nichols state that a single intravenous or intramuscular injection of 10,000 units of streptomycin per kilogram of body weight produced detectable concentrations of streptomycin in the conjunctiva, sclera, extraocular muscles and aqueous humor of the normal rabbit eye The concentrations in these tissues were increased by raising the systemic dose to 100 000 units per kilogram of body weight With the larger systemic dose streptomycin also appeared in the cornea vitreous, chorioretinal tissue and optic nerve of the normal rabbit eye. Concentrations of streptomycin in secondary aqueous humor were greatly increased over those in primary aqueous humor after systemically administered streptomycin. Local administration in drop form of a solution of streptomycin containing either 5 000 or 50 000 units per cubic centimeter of isotonic solution of sodium chloride or of an ointment containing 5 000 units per gram of base failed to penetrate readily into the aqueous humor of the rabbit eye with a normal cornea However both the solution and the ointment penetrated readily into the aqueous humor of the rabbit eye with a partially abraded cornea. High concentrations of streptomycin were obtained in the aqueous humor of normal rabbit eyes after iontophoresis with a solution of streptomycin containing 5 000 units per cubic centimeter of isotonic solution of sodium chloride for three minutes

**Congenital Anomalies After Rubella.**—In the fall of 1944 a survey was made of reports by 37 ophthalmologists, 24 pediatricians and 32 obstetricians in California on the incidence of congenital anomalies among children in that state whose mothers had had rubella during the first three months of pregnancy Eighty cases of congenital cataract and 10 cases of other ocular defects 32 cases of cardiac defects and 10 cases of other congenital anomalies were reported Because the greater number of cases to date have been reported from the western part of the United States the query is raised whether such congenital defects are more prevalent in this part of the country or whether the condition has spread to the Pacific coast from Australia, where it was first reported and is now progressing across the country

## Archives of Physical Medicine, Chicago

**27** 69-120 (Feb) 1946

Reconditioning at Army Amputation and Neurosurgical Center A C Reiger—p 69
Mapping Sensory Nerve Injuries. G D Wilson—p 78
Exercises for Convalescent Bed Patient G M Taylor J W McFarland and Anna Bond—p 82
Functional Anatomy of Shoulder Girdle D P Quiring and E L. Boroush—p 90
Summary of First Annual Report of Baruch Committee on Physical Medicine.—p 97
American Registry of Physical Therapy Technicians—Its Importance J S Coulter and Marion G Smith.—p 99

## Arizona Medicine, Phoenix

**3** 1-68 (Jan.) 1946

Meningococcemia with Gangrene: Report of Recovery of Case in Which Meningococci Were Found in Direct Blood Smears. L. B. Smith, E. B. Alpern, J. Shapiro and M. M. Kissane.—p. 25
Disseminated Lupus Erythematosus. L. G. Jekel.—p. 30
*Frog Test in Diagnosis of Early Pregnancy. J. A. Oliver and M. F. Miller.—p. 31
The Blue Cross, the Hospital, the Physician. N. A. Ross.—p. 35

**Frog Test for Diagnosis of Pregnancy.**—The South African clawed frog, Xenopus laevis, has been used as a test animal for several years and is rapidly replacing the rabbit in the diagnosis of pregnancy. After trying several methods of urinary hormone concentration, Oliver and Miller found that a modification of Scott's method was superior to all others in accuracy, ease of preparation of the reagents and the fact that concentrates so prepared were less toxic to the animals. This method is also more rapid because it is not necessary to dry the precipitates of volatile solutions such as are employed in other concentration methods. In over 300 tests they obtained an accuracy of 99.2 per cent without the loss of a single test animal due to faulty technic or toxicity of the concentrate. They found that 2 frogs must be used in order to obtain a high percentage of accuracy. By using 2 test animals for each specimen submitted, one can readily check on the animals giving false negative tests. These animals should be rested for at least two months, kept well nourished and thus be returned to a state of good health, when they will give reliable results. This technic is relatively simple, time saving and highly accurate. This modification has the advantage of speed over other tests.

## Canadian Medical Association Journal, Montreal

**54** 95-212 (Feb.) 1946

Importance of Plasma Protein Changes and Hemoconcentration in Shock. E. S. Mills and A. L. Gordon.—p. 95
Speeding up Action of Oxalic Acid on Process of Wound Healing. E. Dubé, L. P. Dugal and A. Royer.—p. 103
*Relation of Ascorbic Acid Intake to Gingivitis. W. J. Linghorne, W. G. McIntosh, J. W. Tice and others.—p. 106
Treatment of Defects of Long Bones by Cancellous Chip Bone Grafts. T. R. Sarjeant.—p. 119
Adenolymphoma of Salivary Glands. R. G. D. McNeely.—p. 124
Heart in Hypertension Since Days of Richard Bright. P. D. White.—p. 129
Chronic Prostatitis Associated with Nonspecific Urethritis. H. G. Cooper and J. T. MacLean.—p. 136
Chest X-Ray Survey of Repatriated Prisoners of War from Japanese Camps. H. H. W. Brooke.—p. 141
Circulation Failure in Hunger Edema. E. Lopes Cardozo and P. Eggink.—p. 145
Jaundice in Infancy. C. E. Snelling.—p. 147
Treatment with Vitamin B of a Special Type of Vesical Atony. N. W. Roome.—p. 151
Columnized Medical Chart. J. S. Willis.—p. 153
*Dupuytren's Contracture. W. B. Ayre.—p. 158
Restropin Factor in Cancer in Relation to Reticuloendothelial System. H. C. Connell, L. A. Munro and A. Medley.—p. 161
Teratoid Tumor and Carcinoma of Testis. F. N. Wilson.—p. 164
Anuria Due to Large Hydronephrosis. W. P. Hogarth.—p. 167

**Relation of Ascorbic Acid Intake to Gingivitis.**—Linghorne and his associates say that examination of service personnel and apparently healthy young civilians in Canada has revealed that inflammatory changes in gingival tissue are of frequent occurrence. Surveys of 1,448 apparently normal air force personnel under 30 years of age, including civilians on entry as well as persons who had been in service for several months, showed that approximately 20 per cent had gingivitis, usually asymptomatic, of a degree which could be readily detected by superficial examination of the oral cavity. Studies were conducted on air force personnel to investigate the effects of various nutrients on the incidence of gingivitis. The first study demonstrated that the administration of large amounts of vitamins A and D, thiamine, riboflavin, nicotinic acid and ascorbic acid for a period of five months had no clinical effect on preexisting inflammation of the gingivae. The second study indicated and the third study confirmed that when gingivitis was cleared to a maximum degree by local treatment 75 mg. of ascorbic acid daily delayed recurrence more than 10 mg. of ascorbic acid daily. A diet containing 75 mg. of ascorbic acid retarded recurrence to a greater degree than 25 mg. of ascorbic acid daily. There was no significant difference between the effect of a diet containing 10 mg. of ascorbic acid and one containing 25 mg. of ascorbic acid. The retarding effect on recurrence of gingivitis of a diet containing 75 mg. of ascorbic acid was not significantly different from that of a diet containing 10 mg. of ascorbic acid plus 70 mg. of ascorbic acid in tablet form. The microscopic appearance of the gingival tissues encountered in these studies in no way resembled the changes seen in scurvy.

**Dupuytren's Contracture.**—Ayre found 64 cases of Dupuytren's contracture among 486 members of the Veterans' Guard of Canada. This is an unusually high incidence. In all but 2 cases the contracture had begun while the men were on active service, which suggested that something peculiar to military service may have predisposed to its development. However it was impossible to demonstrate a definite etiologic factor in this group. The author is inclined to agree with Dupuytren's opinion that trauma is primarily involved, thinking that the contracture results from trauma in persons with a certain predisposition. Of the 64 cases observed by the author 34 were early, 25 moderately advanced and 2 complete. The thumb was involved in 1 case. In 1 other there was fibrous induration of the penis. During civilian life most of the group have been manual workers and during four years' army service they have been engaged in daily guard duties handling a rifle during a large part of the day.

## Connecticut State Medical Journal, Hartford

**10** 95-180 (Feb.) 1946

Meeting the Tuberculosis Problem Today. H. R. Edwards.—p. 95
Private Physician Responsibility in Tuberculosis Control. H. E. Hilleboe.—p. 99
Chest X-Ray in Industrial Preplacement Examinations. F. T. Oberg.—p. 101
Pulmonary Pathology in Rejectees: Survey of 100,000 Photoroentgenograms Performed at Induction Center in Connecticut. C. C. Verstandig.—p. 103
Cancer of Prostate in Connecticut. M. H. Griswold.—p. 106
Guide Posts to the Future. E. Clague.—p. 109
Notes on History of Orthopedic Surgery in Connecticut. P. P. Swett.—p. 113

**10** 181-272 (March) 1946

Present Status of Radiation Therapy of Cancer. H. S. Kaplan and H. M. Wilson.—p. 183
Occupational Dermatitis: Report of Survey of 368 Cases. M. I. Hall, E. F. Lutz and I. A. Patty.—p. 187
Formation of National Health Congress. J. F. Hunt.—p. 189
Acute Fatal Methyl Salicylate Toxicity: Report of Case. E. G. Laforet and W. V. Collins.—p. 196

## Delaware State Medical Journal, Wilmington

**18** 1-20 (Jan.) 1946

Total Cystectomy: Four Case Reports. B. S. Vallett.—p. 1
Chronic Nephritis with Metastatic Calcification. J. W. Howard.—p. 7
Roger's Congenital Heart Disease. E. R. Miller.—p. 10
Familial Mediterranean Target—Oval Cell (Cooley's) Anemia. G. J. Bones.—p. 13
Streptomycin: Review of Literature. E. G. Scott.—p. 15

## Experimental Medicine and Surgery, Brooklyn

**4** 1-90 (Feb.) 1946

New Digitalis Theory. B. Kisch.—p. 4
Intracranial Neoplasms Produced in Dogs by Methylcholanthrene. R. M. Mulligan, K. T. Neubuerger, J. T. Lucas, Jr. and W. B. Lewis.—p. 7
Observations on Renal Tissue Aldehydes and Their Possible Role in Mechanism of Hypertension. K. A. Oster.—p. 20
Esophagocardiogram. F. M. Groedel and M. Miller.—p. 26
Intrathoracic Auscultation in Pneumothorax. P. R. Borchardt and F. M. Groedel.—p. 34
Effect of Vitamins on Sensitivity of Striated Muscle to Acetylcholine and Potassium. Clara Torda and H. G. Wolff.—p. 50
Action of Dysentery Toxins on Different Laboratory Animals. P. K. Koch and L. Ohtzki.—p. 54
Role of Potassium and Sodium Group in Biology and Medicine. R. Keller.—p. 69

## Indiana State Medical Assn. Journal, Indianapolis

**39** 53-96 (Feb.) 1946

Thrombophlebitis: Experience at an Army General Hospital. D. L. Urschel and S. M. Salley.—p. 53
Empirical Treatment of Metastatic Carcinoma: Case Report. O. R. Lynch.—p. 59
Maxillofacial Injuries. T. C. Blocker, Jr. and L. R. Weiss.—p. 60
Modern Psychiatric Treatment. G. E. Metcalfe.—p. 64
Influenza Virus Vaccine, Types A and B, for General Use. H. M. Powell.—p. 68
Hydrolysates—Answer to Problem of Nutrition. C. E. Gillespie.—p. 70
Anterior Poliomyelitis a Complication of Influenza. O. I. Bigelow.—p. 72

## Journal of Bacteriology, Baltimore

**51** 1-130 (Jan.) 1946 Partial Index

Variation in Penicillium Notatum Induced by Bombardment of Spores with Neutrons Hazel Jean Hanson, W G Myers, G L. Stahly and J M Birkeland —p 9
Penicillin VIII Production of Penicillin in Surface Cultures A J Moyer and R D Coghill —p 57
Penicillin IX Laboratory Scale Production of Penicillin in Submerged Cultures by Penicillium Notatum Westling (NRRL 832) A J Moyer and R D Coghill —p 79
Combined Action of Penicillin and Sulfonamides in Vitro Nature of Reaction M Klein and S S Kalter —p 95
Two Paracolon Cultures Related Antigenically to Shigella Paradysenteriae W W Ferguson and W E Wheeler —p 107

## Journal Industrial Hygiene & Toxicology, Baltimore

**28** 1-24 (Jan) 1946

Toxicology of 1 2 Dichloropropane (Propylene Dichloride) I Studies on Effects of Daily Inhalations L A Heppel P A Neal B Highman and V T Porterfield —p 1
Health Survey of Pipe Covering Operations in Constructing Naval Vessels W E Fleischer, F J Viles Jr R L Cade and P Drinker —p 9
Exposures to Oxides of Nitrogen Accompanying Shrinking Operations P E Adley —p 17
Apparatus for Rapid Sampling of Large Air Volumes for Industrial Air Analyses L. Silverman and C R Williams —p 21

## Journal National Malaria Society, Tallahassee, Fla

**4** 279 364 (Dec.) 1945 Partial Index

Infection of Chick Embryos with Nonpigmented Forms of Plasmodium Gallinaceum V H Haas A Wilcox and F M Ewing —p 279
Heterologous Value of Acquired Immunity to Plasmodium Falciparum M F Boyd and S F Kitchen —p 301
Studies on Imported Malarias 2 Ability of California Anophelines to Transmit Malarias of Foreign Origin and Other Considerations J A Moore M D Young N H Hardman and T H Stubbs —p 307
Use of Dark Field Illumination in Studies of Malaria Parasites H Packer —p 331

## Journal of Nervous and Mental Disease, New York

**103** 107-212 (Feb) 1946

*Studies on Neuromuscular Dysfunction IX. Neostigmine Therapy of Chronic Spastic Paralysis from Cerebral Lesions H Kabat and C. W Jones —p 107
Anxiety and Group A N Mayers —p 130
Internal and External Causes of Anxiety in Returning Veterans A Eisendorfer and M D Lewis —p 137
Electronarcosis Its Application and Therapeutic Effects in Schizophrenia Esther Bogen Tietz G N Thompson A. van Harreveld and C A G Wiersma.—p 144
Description of Electronarcosis Machine M S Plesset.—p 163
*Histamine Therapy in Multiple Sclerosis Report of 20 Cases. H R. Carter —p 166
Syndrome of Bilateral Vestibular Paralysis J G Chusid and C G de Gutierrez Mahoney —p 172
Folie à Deux in Identical Twins Treated with Electroshock Therapy A Adler and W W Magruder —p 181
Some Phenomena of Group Psychotherapy H A Rashkis —p 187

**Neostigmine in Spastic Paralysis from Cerebral Lesions**—Kabat and Jones review the results obtained with neostigmine in 32 cases of chronic spastic paralysis or related conditions from cerebral lesions Intramuscular injections were given six times a week. The dosage varied from neostigmine methylsulfate 1 cc. of 1 2,000 solution (0 5 mg) with atropine sulfate 1/200 grain (0 32 mg) to neostigmine methylsulfate 3 cc. of 1 2 000 solution (1 5 mg) with atropine sulfate 1/100 grain (0 65 mg) In a few cases neostigmine bromide was given orally to supplement the injections in a dosage of from 15 mg three times a day to 45 mg of neostigmine bromide with atropine sulfate 1/150 grain (0 5 mg) three times a day Neostigmine was administered after meals to diminish toxic effects It has been administered to 11 patients who had developed hemiplegia from one to thirty-one years before. Improvement was observed in all and was retained after therapy was discontinued Eight patients who had had hemiplegia for months were treated with neostigmine, and accelerated recovery of motor function was observed in some. Of 6 patients with the spastic type of cerebral palsy who were given neostigmine 3 children all showed significant improvement while of 3 adults only 1 showed slight improvement. Three patients with the athetoid type of cerebral palsy all showed significant improvement from neostigmine therapy Two children with mild ataxia, 1 of whom had cerebral palsy with severe stuttering and the other of whom had had a subarachnoid hemorrhage at the age of 1½ years improved greatly on neostigmine Definite improvement from neostigmine occurred in ataxia and facial paralysis in a patient who had had an acoustic neuroma removed more than three years before Moderate improvement was observed in a disability of the upper extremity in a patient who had had a prolapsed cervical disk removed One patient with pseudohypertrophic muscular dystrophy derived no benefit from neostigmine Three patients with lesions of the spinal cord obtained slight or no improvement Neostigmine decreases spasticity, thereby decreasing resistance to passive motion increasing range of joint motion, relieving muscular pain and decreasing deformity It facilitates voluntary motion, resulting in restoration of motions which had long been absent, increasing strength, improving coordination and diminishing fatigue In addition neostigmine has resulted in improvement in athetosis ataxia dysphagia, dysarthria facial paralysis, motor aphasia and conscious proprioception from a variety of types of lesions of the brain Improvement has been retained after therapy was discontinued For maximal functional recovery neostigmine therapy should be accompanied by exercise and muscle training Evidence is presented that the locus of the therapeutic action of neostigmine in these cases is on the central nervous system.

**Histamine Therapy in Multiple Sclerosis**—Carter studied the effect of histamine therapy in 20 cases of multiple sclerosis The technic of Horton (1944) was used, 2 75 mg of histamine diphosphate in 250 cc of isotonic solution of sodium chloride being given intravenously at 30 to 90 drops per minute Seventeen cases failed to show improvement Three cases showed temporary improvement of less than six months followed by relapse

## Journal of Nutrition, Philadelphia

**31** 141 260 (Feb) 1946

Significance of Fatty Infiltration in Development of Hepatic Cirrhosis Due to Choline Deficiency P Handler and I N Dubin —p 141
Vitamin C Content of Market Milk Evaporated Milk and Powdered Whole Milk. A P Stewart Jr and P F Sharp —p 161
*Studies on Nutritive Value of Fish Proteins I Evaluation by the Rat Growth Method and by the Cannon Method H J Deuel Jr M C Hrubetz Cornelia H Johnston and others —p 175
Id II Use of Mackerel Protein in Bioassay Test for Vitamin A H J Deuel Jr, M C Hrubetz Cornelia H Johnston and others.—p 187
Availability of Wheat Bran Phosphorus for the Rat R K. Boutwell R. P Geyer A. W Halverson and E B Hart —p 193
*Relation of Fat to Economy of Food Utilization I By the Growing Albino Rat E. B Forbes R W Swift R F Elliott and W H James —p 203
Id. II By the Mature Albino Rat E B Forbes R W Swift R F Elliott and W H James —p 213
Vitamin A Ascorbic Acid and Spinal Fluid Pressure Relationships in the Young Bovine L A Moore —p 229
Evaluation of Proteins in Hypoproteinemic Dogs J B Allison R D Seeley J H Brown and J A Anderson —p 237
Effect of Changes in Diet on Volume and Composition of Rat Milk A. J Mueller and W M Cox Jr —p 249

**Nutritive Value of Fish Proteins**—Deuel and his associates studied the biologic value of proteins of mackerel, sardine and tuna The mixed proteins of mackerel, sardine and tuna muscle were shown to afford growth superior to casein in weanling rats when fed at levels suboptimal for growth with casein. The superiority of mackerel protein is further attested by the fact that it causes greater recovery in weight and a more pronounced stimulation in hemoglobin regeneration than casein in rats rendered hypoproteinemic and tested by the method of Cannon. Mackerel protein proved to have a potency equal to casein in causing a regeneration of plasma protein

**Fat and Food Utilization.**—Forbes and his associates conducted a seventy day metabolism and body analysis experiment to determine the effects of differences in the fat content of isocaloric diets on the utilization of food energy and protein The subjects were four groups of 10 growing male albino rats, each of these four groups containing 1 rat from each of the same ten litters A comparison was made of four diets containing 2, 5, 10 and 30 per cent of fat respectively, these diets being so compounded and fed as to supply to each rat of a litter of 4 the same quantities of gross energy, protein and vitamins Determinations were made of gains in live weight, nitrogen fat and energy, with a single value of the heat production for the seventy days as the energy of the food minus

the energy of the excreta and of the body gain The gains in live weight, the digestibility of nitrogen and the retention of nitrogen and energy were in the order of the increasing fat content of the diets, the superiority of the 5 per cent over the 2 per cent fat diet with respect to the utilization of both protein and energy being much greater than the superiority of the 30 per cent as compared with the 5 per cent diet

## Journal of Thoracic Surgery, St. Louis

**15** 1-76 (Feb.) 1946

Management of War Wounds of Chest in Base Center Role of Early Pulmonary Decortication P C Samson T H Burford, L A Brewer III and B Burbank—p 1
Review of Activities of Thoracic Center for the III and IV Hospital Groups, 160th General Hospital European Theater of Operations June 10 1944 to Jan 1 1945 D E Harken—p 31
Military Thoracic Surgery in Forward Area R H Betts and W M Lees.—p 44
Experience in Localization of Thoracic Foreign Bodies. B Burbank, T H Burford P C Samson and S Mesirow—p 64

## Kansas Medical Society Journal, Topeka

**47** 1-48 (Jan.) 1946

Behavior Problems and Habit Disturbances in Preadolescent Children Their Meaning and Management R P Knight.—p 1
Use of Penicillin Ointment in Treatment of Impetigo and Other Conditions of Skin. L. B Mellott and E. L. Pfuetze.—p. 7.

**47** 49-92 (Feb.) 1946

Primary Carcinoma of Ileum Case Report. J M. Leopard.—p. 49
Submucous Lipoma of Jejunum Report of Case. J W Cavanaugh and W M Mills.—p 51
Postoperative Bacterial Synergistic Gangrene Cured with Penicillin V G Cedarblade and T G Orr—p 53

## Medical Annals of District of Columbia, Washington

**15** 55-98 (Feb.) 1946

Present Status of Research on Rh Factor. Anne D McLaughlin.—p. 55
Vibratory Fremitus Use of Tuning Fork in Auscultation as Sign in Detection of Chest Diseases. J T Roberts—p 60
*Treatment of Gonorrhea by Single Injection of Penicillin Oil Beeswax Mixture. B D Chinn, S Olansky and L G Murphy—p. 62.
Ringworm of Scalp. J A. Murphy—p 64

**Single Injection of Penicillin Oil Beeswax Mixture in Gonorrhea.**—The penicillin oil beeswax mixture consists of 4 8 per cent beeswax in peanut oil in which is suspended calcium penicillin Chinn and his associates used a peanut oil mixture which contained 300,000 units of penicillin per cubic centimeter The material is solid at room temperature and must be well warmed and liquefied before use. Injections were made into the gluteal muscle with a 2½ inch needle, gage 18 or 19 One cc or a single dose of 300,000 units was administered A total of 115 cases of gonorrhea were treated. A cure rate of approximately 95 per cent was obtained Cultures were made after forty-eight hours and seven to ten days following treatment. This method appears to be a highly satisfactory procedure and suitable for both clinic and private practice The possible coexistence of syphilis should be kept in mind, and periodic serologic tests for syphilis should be made over a ninety day period.

## Medicine, Baltimore

**24** 339-440 (Dec.) 1945

Cerebral Injury by Blunt Mechanical Trauma. Review of Literature C G Tedeschi—p 339
Absorption and Elimination of Gases of Body in Relation to Its Fat and Water Content. A R. Behnke—p. 359
*Decompression Sickness Incident to Deep Sea Diving and High Altitude Ascent A R. Behnke—p 381
Circulation and Respiration in Fever M. D Altschule and A. S Freedberg—p 403

**25** 1-110 (Feb.) 1946

Murine Typhus Fever E S Miller and P B Beeson—p 1
Investigation of Effects of Recurrent Malaria Organic and Psychological Analysis of 50 Soldiers. P A Tumulty, E Nichols M. L. Singewald and T Lidz—p 17
Experimental Epidemiology L T Webster—p 77

**Decompression Sickness**—Behnke points out that in the early stages of bubble formation the gas is moved through the arterial side of the system into the low pressure area of the large veins the right side of the heart and the pulmonary vessels The heart and the brain resist for relatively long periods the deleterious action of bubbles The triad of bends, asphyxia and paralysis are the effects of the impairment of the circulation By means of the pressure chamber the obstructing bubbles can be recompressed and the apparently lifeless individual restored to well being If the bubbles are allowed to remain and accumulate, the injury becomes a disease and its protean manifestations of rash, pain, asphyxia and paralysis simulate those of an overwhelming infection

## Michigan State Medical Society Journal, Lansing

**45** 1-136 (Jan.) 1946

New Interpretation of Some So Called Positive Patch Tests with Special Reference to Metals Used in Industry S W Becker—p. 65
Hypoglycemia Secondary to Islet Cell Adenoma of Pancreas Case Report L C Carperter Jr—p. 70
Appendicitis Statistical Study of Death Rate in Detroit and at Mount Carmel Mercy Hospital W A. Chipman.—p 72
Vasodilators in Peripheral Ocular Angiospasm. L. J Croll—p 77
Leptotrichosis Conjunctivae. W E. McGarvey—p 84
Traumatic Convulsive Seizures. K Stuart—p 86.

**45** 137-264 (Feb.) 1946

Clinical Manifestations of Rheumatic Fever Determination of Rheumatic Activity S Gibson.—p. 193
Rheumatic Heart Disease Use of X Ray in Diagnosis J F Holt.—p 197
Chorea. J. A Johnston—p. 202.
Influence of Light on Pituitary Gland and Its Functions R C. Moehlig—p 205
Chronic Nonspecific Prostatitis and Gastrointestinal Complaints. J A. Winter—p. 210

## Military Surgeon, Washington, D C

**98** 39-190 (Feb.) 1946

Care of Filariasis Patient. L T Coggeshall.—p. 89
Problems of Naval Warfare Under Climatic Extremes M. Critchley—p 94
Medicine's Campaign in Burma. F A. M Webster.—p 106
Hookworm Disease—Its Eradication Again an International Problem. L Schapiro and M. M Schapiro—p. 109
Benign Peptic Ulcer as Diagnostic Problem J W Hall Jr—p 119
Management of Army Personnel with Peptic Ulcer Analysis of 200 Cases R Reeser Jr and M B Guthrie—p 125
Incidence of X Ray Evidence of Upper Gastrointestinal Pathology in German Prisoners of War P E Wylie—p. 131
Recurrent Infectious Hepatitis J D Nelson.—p 134
Field Medical Officer and Psychiatry O E Baum—p 137
Reconditioning Program for Combat Neurosis in Forward Combat Zones G L Wadsworth T Lacy and A A Pomeranz.—p 146
Role of Psychologic Laboratory in Pre-Court Martial Screening of Military Personnel Charged with Violations of Articles of War at McCloskey General Hospital W Kass—p 156

## Minnesota Medicine, St. Paul

**29** 97-192 (Feb.) 1946

Rh Factor in Feeblemindedness and Other Diseases L H Snyder—p 121
Serology and Obstetrics. R. T La Vake.—p 130
Bedside Diagnosis of Liver Disease E B Flink—p 133
Kerion A Review C W Laymon—p 137
Ureteral Obstruction Caused by Aneurysm of Iliac Artery H. F Rives and E. N Cook—p 143

## Missouri State Medical Assn. Journal, St. Louis

**43** 77-148 (Feb.) 1946

Roentgen Ray Classification of Pneumonias with Special Reference to Tissues Involved L R Sante—p 93
Volvulus of Stomach Report of Case N A Schneider and B Bohannon—p 97

**43** 149 228 (March) 1946

*Use of Streptomycin in Tularemia. O Abel Jr—p. 167
Intrathecal Penicillin in Treatment of Neurosyphilis Preliminary Report. S H Pubin and C G Leitch—p 169

**Streptomycin in Tularemia**—Abel presents 3 cases of tularemia, all of the ulceroglandular type, 2 of which were complicated with pulmonary involvement The third case was severe and was associated with pregnancy Streptomycin was administered intramuscularly, 1 million units being given in divided doses every twenty-four hours. This medication was continued for from two to eight days Streptomycin appears specific for tularemia, as evidenced by the rapid improvement immediately after its use. There were no reactions

## New Orleans Medical and Surgical Journal

**98** 351-398 (Feb) 1946

Carcinoma of Cervix—Attempted Follow Up Study of 500 Cases II Responsibility of Medical Profession for End Results. P Graffagnino and Elizabeth M McKetridge.—p 351
Lipocaic in Treatment of Nontropical Sprue Report of Case E. Posey, D C Browne and C McHardy.—p 359
Schistosomiasis (Manson s) Presentation of 25 Cases E F Dombrow sky.—p 362
Multiple Common Bile Duct Stones Report of Case with Twenty Six Oxalate Stones in Common Duct J A Rickles.—p 365
Infection Etiologic Factor in Diabetes Mellitus V D Ingianni.—p 368
Pathology of Boeck s Sarcoid C. T Stone Jr.—p 369
Extraintestinal Amebiasis and Its Diagnosis. B T Galloway.—p 373

**Infection in Diabetes Mellitus**—D Ingianni presents the istories of 3 patients with diabetes mellitus in whom the dex rose tolerance showed return to normal after removal of foci f infection Postoperatively the patients were no longer on estricted diets and discontinued insulin They showed other igns of improvement gain in weight, improved vision and a eeling of well-being which boosted their morale. The relation hip between the secretions of the island of Langerhans and the nfection was not clarified.

## Public Health Reports, Washington, D C

**61** 251-282 (Feb 22) 1946

Increase in Tuberculosis Proportionate Mortality Among Nonwhite Young Adults. J Yerushalmy.—p 251
Negro Mortality I Mortality from All Causes in Death Registration States Mary Gover.—p 259

**61** 283 326 (March 1) 1946

Rehabilitation and After Care in Tuberculosis I. General Problems. H E. Hilleboe and N C. Kiefer.—p. 285
Photofluorographic Roll Film Viewers. I Lewis.—p 294
Tuberculosis Mortality in Major Cities United States 1942 1943 R. V Kasius and E. H. Pitney.—p 297

**61** 327-370 (March 8) 1946

Incidence of Poliomyelitis and Its Crippling Effects as Recorded in Family Surveys S D Collins.—p 327

## Rhode Island Medical Journal, Providence

**29** 1-92 (Jan) 1946

Some Practical Aspects of Sterility Problem in Female G W Water man.—p 15
Uterotubography in Sterility L A. Martineau.—p 21
Presidential Address E Clarke.—p 24
Compulsory Proposal How Can We Assure Adequate Health Service for All People? A J Altmeyer.—p 36
Voluntary Way Expansion of Voluntary Group Health Care Programs J H Howard.—p 37

**29** 93-176 (Feb) 1946

Multiple Transfusions. O F Smith.—p 107
Manifestations of Diseases in Mouth. P E. Boyle.—p 110
Medicodental Relationship A. L. Midgley.—p 114
Surgery in Rhode Island J E. Farrell.—p 123
Community Needs and the Hospital Future O G Pratt.—p 131
Obligations of an Internist to a General Surgeon. T Findley.—p 139

## Southern Medical Journal, Birmingham, Ala.

**39** 97-190 (Feb) 1946

Changing Use of Hospitals by Medical Profession R I Lee.—p 97
Demobilization of Medical Department G F Lull.—p 102
General Practitioner and Rural Medical Care B A Hopkins.—p 106
Relationship of State and Local Health Services in Whole Program of Public Health H S Mustard.—p 108
Nutritional State of Civilian Population of Stuttgart Germany J M Ruffin and C E. French.—p 112
Clinical Study on Use of Protein Supplement in Treating Persons with Nutritive Failure T D Spies and Mabel M Morey.—p 117
Posttraumatic Sarcomlike Lesions C O King.—p 122
Use of Berman Locator in Removal of Intraocular Foreign Bodies B V Alvis.—p 125
Recent Significant Trends in Care of Cerebral Palsy W M Phelps.—p 132
Tumors of Lung O T Clagett.—p 138
Some Practical Aspects of Chemistry and Pharmacology of Local Anes thetic Drugs J Adriani.—p 143
Choice of Anesthetic in Urologic Surgery A Habeeb.—p 149
Experience with Rectal Pentothal Sodium in Obstetrics G R Tonn.—p 154
Two Hour Pregnancy Test. H S Kupperman and R. B Greenblatt.—p 158
Genitourinary Symptoms of Anorectal Disease G H. Thiele.—p 166
Pediatric Trends J A Bauer.—p 172
Industrial Medicine in the New Era. C W Roberts.—p 174
Etiology and Treatment of Peptic Ulcer Review of Literature. E. H. Hanck.—p. 179

## Surgery, St Louis

**19** 167-302 (Feb) 1946

Interruption of Sympathetic Nervous System in Relation to Trauma M Dawson Tyson and J S Gaynor.—p 167
Abdominal Apoplexy Secondary to Ruptured Congenital Aneurysm Multiple Aneurysms of Inferior Pancreaticoduodenal Artery with Rupture of One T A. Shallow P A Herbut and F B Wagner Jr.—p 177
Penicillin Therapy of Infections in 220 Patients Clinical and Bac teriologic Study J E Hamilton, A. G Prandoni J M. Evans and M J Romansky.—p 186
Safety Factor in Gastric Resection Preliminary Report. L. A Alesen.—p. 220
*Hyperuricemia in Gastric Cancer B J Ficarra.—p 223
Multiple Carcinomas of Stomach Case Presentation with Five Primary Separate Malignant Lesions Treated by Total Transthoracic Gastrec tomy J A Rickles.—p 229
Early Diagnosis and Management of Small Intestinal Obstruction C J Hunt.—p 237
Fissures of Articular Cartilage of Patella Occurrence in Multipartite Patella. C. J Sutro.—p 251
Inguinal Hernias and Allied Defects in Naval Recruits Analysis of 1 406 Patients Admitted for Surgical Treatment. C. W McLaughlin Jr and J R Brown.—p 267

**Hyperuricemia in Gastric Cancer**—Ficarra has studied the exogenous and endogenous protein metabolism of 20 patients with gastric cancer by serum protein and blood uric acid determinations The importance of hyperuricemia is stressed, first, because it differentiates hypoproteinemia following insufficient exogenous protein from hypoproteinemia resulting from accelerated endogenous protein metabolism Thus the source of protein depletion can be identified It is of value in predicting postoperative complications usually associated with a debilitated nutritional state in patients with gastrointestinal cancer

## Virginia Medical Monthly, Richmond

**73** 45-96 (Feb) 1946

Investigation of Allergy in Routine Nose and Throat Practice Report of 100 Private Cases F E Hamlin.—p 45
Prophylaxis Against Cervical Malignancy J W Kennedy.—p 51.
Samuel Thomson, Patentee and the Thomsonian System M. H. Harris.—p 53
Unsuspected Tuberculosis E S Ray.—p 57
*Postage Stamps as Mode of Transmitting Bacteria S H Macht.—p. 60
Value of Massage in Rheumatoid Arthritis F Hopkins.—p 62
Exploration of Cystic and Sclerotic Ovaries as Means of Preserving Their Function I Jacobson.—p 63

**73** 97-148 (March) 1946

Principles Underlying the Early Diagnosis of Nutritional Deficiency Disease J B Youmans.—p 97
Present Status of Thiouracil in Preparing Thyrotoxic Patients for Surgery R. L. Payne and J G Price.—p 105
Neurosyphilis, with Three Year Observation of Comparative Therapeutic Effects of Inoculation Malaria and Artificial Fever Therapy V E Lascara.—p 111
The Common Anemias Incidence, Cause and Treatment E. L Copley.—p 121
Chronic Subdural Hematoma Clinical Course Simulating Ruptured Intracranial Arterial Aneurysm Case Report A C Johnson and J G Lyerly.—p 126
Diaphragmatic Hernia Case Reports J F Blades and R Berger.—p 129

**Transmission of Bacteria by Postage Stamps**—Macht thinks that the licking of postage stamps suggests the possibility of transmitting infectious bacteria capable of producing disease The hazard of infection if it exists would be greatest to the philatelist. Macht found that the gum on U S postage stamps contains no germicidal properties It has slight bacteriostatic properties at least for Staphylococcus albus This organism a common inhabitant of the nose and throat can withstand drying for a long time. A growth was obtained from stamps Tubercle bacilli were not cultured from stamps licked by patients known to have active pulmonary tuberculosis Previous sputum tests of these patients showed as many as 100 tubercle bacilli to a microscopic field. Stained smears of the centrifuged sediment obtained from the back of each stamp also failed to show acid-fast bacilli All cultures for other organisms, both aerobic and anaerobic, as well as for diphtheria bacilli were negative This study would indicate that there is little danger of the common use of postage stamps playing an important part in transmitting infectious diseases.

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

### British Medical Journal, London

**1** 227-264 (Feb 16) 1946

Primary Atypical Pneumonia. A. B. Adams, G. L. Rolleston, J. M. Staveley, W. E. Henley and J. E. Caughey.—p. 227
Fractured Patella. Analysis of 54 Cases Treated by Excision. R. Brooke.—p. 231
*Vitamin C Content of Home Cooked Vegetables. G. N. Jenkins.—p. 233
Neurologic Complications Following Prefrontal Leukotomy. I. Reitman.—p. 235
Primary Benign Tertian Malaria Among British Troops in Normandy. W. W. Macnaught.—p. 236

**1** 265-304 (Feb 23) 1946

Expulsion of Pathogenic Organisms from Respiratory Tract. J. P. Duguid.—p. 265
Plasma Viscosity. Clinical Test. J. Harkness, J. Houston and R. B. Whittington.—p. 268
Nonabsorption of Quinacrine. Description of Case. J. Yudkin.—p. 271
Cephalin Flocculation Test in Malaria. J. G. Makari.—p. 272
Some Pediatric Problems Presented at Belsen Camp. W. R. F. Collis and P. C. MacClancy.—p. 273
Spontaneous Rupture of Liver Complicating Pregnancy. H. Links.—p. 275

**Vitamin C Content of Home Cooked Vegetables.**—Jenkins investigated by direct analysis the vitamin C content of samples of home cooked vegetables and the losses incurred during cooking. Information about the timing and method of cooking was obtained for most of the samples. The vitamin C content of over 300 samples of vegetables cooked in ordinary households was determined. The average results, in milligrams per hundred grams, were 10.5 for potatoes in September and 5 in April, and 13 for cabbage in September and 35 in April. Average meals containing potatoes and greens provided between 20 and 28 mg. of vitamin C according to season. Average meals containing no green vegetables provided less than 15 mg. vitamin C in September and less than 8 in April. The correlation between vitamin C values as analyzed and those calculated from information about the methods of cooking employed was poor in individual cases but the average agreed fairly well, especially with potatoes.

### Clinical Science, London

**5** 139-288 (Dec.) 1945

Observations on a Case of Orbital Varix. F. F. Rundle.—p. 139
*Familial Idiopathic Methemoglobinemia and Its Treatment with Ascorbic Acid. H. Barcroft, Q. H. Gibson, D. C. Harrison and J. McMurray.—p. 145
Experimental Limb Ischemia in Man with Especial Reference to Role of Adenosine Triphosphate. H. B. Stoner and H. N. Green.—p. 159
Development and Course of Exophthalmos and Ophthalmoplegia in Graves' Disease with Special Reference to Effect of Thyroidectomy. I. F. Rundle.—p. 177
Thrombosis of Femoral Artery with Myohemoglobinuria and Low Serum Potassium Concentration. E. G. L. Bywaters and J. K. Stead.—p. 195
Nature of Circulatory Changes in Burn Shock. M. Primmetal and H. C. Bergman.—p. 205
*The Role of Kidney in Acute and Chronic Hypertension Following Renal Artery Constriction in Rabbit. G. W. Pickering.—p. 229
Heart Failure and Bone Blood Flow in Osteitis Deformans. O. G. Edholm, Sheila Howarth and J. McMichael.—p. 249
Congenital Tricuspid Stenosis. T. Lewis.—p. 261
Angina Pectoris and Tobacco. G. W. Pickering and P. H. Sanderson.—p. 275

**Ascorbic Acid in Idiopathic Methemoglobinemia.**—Deeny recently reported the results of treatment in 2 cases of polycythemia vera with ascorbic acid. He also encountered 2 brothers with familial idiopathic methemoglobinemia who were intensely cyanosed. Ascorbic acid was given to 1 brother, and in a short time his color became normal. Barcroft and his co-workers investigated the second brother during treatment. The first brother, now aged 29, was blue from birth and the second brother, now aged 19, was blue from an early age. Physical examination showed no cause for the cyanosis. Both enjoyed normal health apart from slight dyspnea. Blood ascorbic acid was determined on whole blood by the method of Deeny, Murdock and Rogan. Methemoglobin was determined by three methods (*a*) by the difference between oxygen capacity and total pigments, (*b*) with a spectrocomparator and (*c*) by the method of Evelyn and Malloy. Methods *b* and *c* were of service when the quantity of methemoglobin in the blood became so small that determination by difference gave uncertain results. The oxalated blood of the second brother had the chocolate tint of methemoglobin, the blood changes produced by treatment with 100 mg. of ascorbic acid twice daily for sixteen days and subsequently with double the amount are summarized. The skin color recorded twice before and nine times during treatment showed a gradual disappearance of the cyanosis and its replacement by the normal reddish tint that is the cyanosis was relieved and the methemoglobin fell from 7.3 Gm. to 0.8 Gm. per hundred cubic centimeters of blood. Continued treatment with ascorbic acid (200 to 300 mg. per day) has kept the methemoglobin at a low level for nearly two years. In vitro ascorbic acid reduced methemoglobin in the patient's red cells to normal hemoglobin. The enzyme systems in the erythrocytes of the two patients reduced methemoglobin in presence of added glucose or lactate much more slowly than did those present in normal red cells.

**Role of Kidney in Acute and Chronic Hypertension.**—Pickering confirms previous observations that, when hypertension is produced in the rabbit by constricting one renal artery (the other kidney having been removed), excision of the ischemic kidney after eight days or less usually abolishes the hypertension in a few hours but that excision of ischemic kidney after seven weeks or more has no effect on the hypertension during the four day survival period. Persistence of hypertension after excision of the ischemic kidney in animals with prolonged renal ischemia is not due to inability to inactivate renin. The response to renin is increased in size and duration in normal animals by total nephrectomy. Animals with renal ischemia of short duration respond to renin after nephrectomy in the same manner as nephrectomized animals which have never had hypertension. In animals with prolonged renal ischemia the response to renin after nephrectomy is unusually great and prolonged. It is concluded that in the rabbit during the first week after renal artery constriction hypertension is due solely or chiefly to the release of a humoral agent, probably renin, from the ischemic kidney. Later a new and nonrenal factor plays an important, and perhaps the chief, role in maintaining the raised pressure.

### Journal of Physiology, Cambridge

**104** 239-352 (Jan.) 1946

Effect of Magnesium and Calcium on Physiologic Properties of Certain Purine Derivatives. M. Bielschowsky, H. N. Green and H. B. Stoner.—p. 239
Comparison of Action of Vitamin D on Teeth of Rachitic Rats with That of Additional Calcium or Phosphorus Added to Rachitogenic Diets. J. T. Irving.—p. 253
Interaction of Drugs and Effect of Cooling on Isolated Mammalian Intestine. N. Ambache.—p. 266
Metabolism of Kidney Slices from Newborn and Full Grown Rats. M. Cutting and R. A. McCance.—p. 288
Effect of Introduction of Isotonic Sodium Chloride Solution into Cisterna Magna of Dog on Cell Content of Cerebrospinal Fluid. T. H. B. Bedford.—p. 299
Accuracy of Hemoglobin Determination by Copper Sulfate-Blood Gravity Method in Indian Soldiers. M. Hynes and H. Lehmann.—p. 303
Urine Acidity in Alcohol Diuresis in Man. M. G. Eggleton.—p. 312.
Effect of Local Temperature on Fluid Loss in Thermal Burns. J. C. Courtice.—p. 321
Normal Course of Separation of Pubes in Pregnant Mice. Kathleen Hall and W. H. Newton.—p. 346

### Lancet, London

**1** 257-292 (Feb 23) 1946

*Acute Infections of Pleura Treated With and Without Penicillin. L. Fatti, M. E. Florey, H. Joules, J. H. Humphrey and J. Sakula.—p. 257
Unilateral Facial Paralysis. Correction with Tantalum Wire, Preliminary Report on 8 Cases. J. E. Sheehan.—p. 263
In Vivo Isosensitization of Red Cells in Babies with Hemolytic Disease. R. R. A. Coombs, A. E. Mourant and R. R. Race.—p. 264
Nicotinamide Deficiency Precipitated by Sulfaguanidine. S. W. Hardwick.—p. 267
Epidemic of Pneumonia in West Africa. E. Hinden.—p. 268

**Penicillin in Acute Infections of Pleura.**—Fatti and his associates compared the progress and end results of two contemporaneous series of acutely infected pleural effusions: 14 cases treated by standard methods (controls) and 20 cases treated with penicillin and a surgical technic. In "treated" cases (1) toxemic manifestations disappeared at a significantly greater rate, (2) pus formation was speeded up rather than prevented, (3) retained pus, even if sterile, produced a recurrence of

pyrexia, and (4) leukocytosis steadily disappeared as the infection was controlled, but the immediate effect of treatment on leukopenia was to increase the number of white cells Red cell examinations were not a guide to progress during treatment as they are in infections producing severe anemia. The mean healing time has been reduced from fifteen to seven weeks Radiologic evidence pointed to the more rapid clearing of abnormal shadows, usually within three months Chest expansion more often returned to normal by the end of six months in the 'treated" cases Evidence that the rapid healing was permanent was that there had been no recurrence or residual signs of infection radiologic or clinical, in the affected side by the time the investigation was completed sixteen months after the last patient was treated The patients treated with penicillin were able to resume their former work considerably sooner than those treated by other methods

## Medical Journal of Australia, Sydney

**1** 33-64 (Jan 12) 1946

Further Observations on Sciatica N Little —p 33
Sciatica R A Money —p 37
Low Back Pain A V Meehan —p 40
Low Backache A E Lee —p 42
Low Backache E Murphy —p 44
Recent Advances in Diagnosis and Treatment of Lumbar Intervertebral Disk Disease J H Young —p 45
Recent Advances in Surgical Treatment of Lumbar Intervertebral Disk Disease F J Clark —p 49

## Journal de Radiologie et d'Électrologie, Paris

**26** 277-348 (Nos 9-10) 1944-1945

Technic and Results of Lipiodol (Iodized Oil) Test in Sciatics (50 Cases) R Ledoux Lebard S Nemours-Auguste and S de Sèze —p 280
Lateral Roentgenographic Study of Hip in Injuries of Neck of Femur J Massa —p 288
*Teleroentgen Therapy for Treatment of Diffused Skeletal Metastasis in Cancer of Breast P Bétoulières —p 291

**Teleroentgen Therapy for Diffused Skeletal Metastasis in Cancer of Breast** —Bétoulieres reports the occurrence of diffused skeletal metastases in a woman aged 44 who had been operated on for cancer of the breast in October 1939 Interscapular pains with intercostal irradiation appeared first at the beginning of 1942 Two series of teleroentgen treatments were applied to the trunk, each consisting of ten sittings with a dose of 50 roentgens (the total dose 500 roentgens) at a target-skin distance of 1 5 meters (59 inches) The pain subsided and the patient was able to rise Six months later her weight was increased by 10 Kg

## Cardiologia, Basel

**9** 241 372 (Nos 5 & 6) 1945

Normal Contraction and Auricular and Ventricular Fibrillation in Tortoise P Rijlant —p 241
Angor and Obliterating Arteriopathy (Anatomicoclinical Study of Obliterating Arteriopathy) A van Bogaert and A van Genabeek —p 269
Investigations on Blood Circulations of Gunder Hagg and Arne Anderson G Nylin —p 313
Path Clearing Effect of Nodal Beat for Auriculoventricular Conduction in Human Heart B Kisch —p 326
*Electrocardiogram Obtained Directly from Human Heart Preliminary Report P R Borchardt and H M Groedel —p 329
Fibrillar Structure of Human Epicardium and Its Importance for Changes of Form of Heart A Faller —p 337

**Electrocardiogram Obtained Directly from Human Heart** —In patients with pneumothorax who are to be operated on for pneumolysis it is technically simple to place an electrode on different sites of the surface of the heart. When pairing this electrode with one or the other extremity of the patient the resulting electrocardiogram represents fairly accurately the potential variations occurring in the respective areas With this method Borchardt and Groedel studied the electrical recordings from the surface of the heart of a woman aged 24 with a left sided pneumothorax and a girl aged 17 with a right sided pneumothorax They found that the left and right partial electrocardiograms obtained routinely by Groedel s method leading off from the anterior and posterior chest wall to a place distant from the heart were identical with the respective curves obtained when leading directly from the surface of the left and right ventricles By comparing the voltage of the internal left and right partial electrocardiograms with that of the external electrocardiograms it was found that on the surface of the heart the voltage is more than six times that of the usual chest leads This promising new method can be modified in many ways, it requires about fifteen minutes, a short time as compared with that required for pneumolysis It never caused the patient any discomfort

## Arquivos de Neuro-Psiquiatria, São Paulo

**3** 325-486 (Dec.) 1945 Partial Index

Genesis of Tumor of Carotid Body and Microscopic Physiology of This Body C Lordy —p 325
Tumor of Conus Medullaris Produced by Eggs of Schistosoma Mansoni C Gama and J Marques de Sá —p 334
Trauma and Neurosyphilis J M Taques Bittencourt and H Martins Canelas —p 347
Treatment of Segmental Neuralgia by Nerve Block with Ammonium Sulfate and Procaine R Melaragno Filho and R A Tenuto —p 409
*Prefrontal Lobotomy A C. Barretto —p 420

**Prefrontal Lobotomy** —Barretto reports his experience with prefrontal lobotomy at the Juqueri State Hospital in São Paulo Brazil He devised a lobotome for a threefold purpose to ascertain the reference marks sever the fibers and leave iodine oil in the transection track. The instrument consists of a trocar slightly flattened to take the shape of a regular leukotome and having one of the ends sealed. In one of the severing edges near the blind end there are four small holes 1 cm apart from one another Through the free end a syringe may easily draw fluid and inject the contrast into the transection surface To secure a better placing of the transection he has recently followed the technic of transfixing the falx and both frontal poles with a stylet inserted through burr holes He also advises preoperative pneumoencephalography for the localization of the ventricles He performed prefrontal lobotomy on 42 patients but feels that the postoperative period has not been sufficiently long to permit an evaluation of the results One woman aged 25, fully recovered following lobotomy although metrazol and insulin shock and even leukotomy according to Moniz had failed The condition of all the patients subjected to lobotomy was chronic, and they had failed to respond to other treatments Serious accidents did not occur during or immediately after the lobotomy

## Medicina Clinica, Barcelona

**5** 319 398 (Nov ) 1945 Partial Index

Alveolectasis and Emphysema M Beltran Báguena —p 323
Treatment of Lithiasis of Choledochus E Sala Patau —p 331
Production of Pigments and of Penicillin in Cultures of Penicillium Notatum J A de Loureiro —p 341
Penicillin in Treatment of Chronic Maxillary Osteomyelitis J Puig Sureda V Salleras Llinares and C Sala —p 348
Acute Pleural Suppurations and Their Treatment J Civil Ingles —p 356
Objections to Mechanical Etiology of Gastroduodenal Ulcer J de Telleria —p 366
Anatomotopographic Study of Parathyroids B Pla Majó —p 370
*New Treatment of Ozenal Atrophic Rhinitis L M Viscasillas Alcázar and P Abella Daurella —p 375

**New Therapy of Atrophic Rhinitis** —Viscasillas and Abella studied the effect of anesthetic infiltration of the stellate ganglion on patients with ozena The technic first used produced great changes in the circulation of the upper extremity but exerted only a slight influence on the ozenal symptoms Therefore the blockage of segments was changed until a point was met which exerted the maximum effect on the nose In all infiltrations with this technic there was immediate disappearance of the fetid odor, with hyperemia and hypersecretion of the nasal fossa, accompanied several hours later by softening and detachment of the crusts Although these effects were bilateral they were usually more pronounced on the side that had been blocked The duration varied, but in general it increased with each infiltration One case is described in which the effects of the first blockage persisted for more than a month In some cases the infiltrations were given at fifteen day intervals although sometimes the effects persisted for a month The authors have treated 20 cases and in a total of about a hundred stellate infiltrations they have never had an accident

## Revista de la Asoc Méd Argentina, Buenos Aires

59 1287-1342 (Nov 30) 1945 Partial Index

Winding Descending Aorta J Valotta and J E Israel —p 1287
Sarcoma of Conjunctival Spaces and of Muscles of Extremities (Neurosarcoma of Ewing) F J Nocito —p 1291
Serum Gonadotropins in Treatment of Changes in Genital Cycle of Women J A Salaber G Di Paola J L Ahumada and H L. Guixa —p 1302
Sulfonamide Therapy and Grave Anemia Sulfonamides and Penicillin in Treatment of Woman Having Undergone Cesarean Section for Occlusive Placenta Previa J Leon A S Coatz and G Bomchil —p 1309
Case of Arachnodactylia or Marfan's Disease with Subluxation of Both Lenses and Myopia F Paez Allende —p 1311
Morgagni's Syndrome Internal Frontal Hyperostosis Associated with Obesity Headaches and Variations in Lumbar and Sacral Vertebral Articular Tropism H A Mascheroni C Reussi and R R Iturbe —p 1316
*Allergic Dermatosis Caused by Aniline Intoxication Work Accident A Ferrer Zanchi and A A Bonduel —p 1322
Angina Pectoris and Work Accident H A Abrines —p 1324

**Allergic Dermatitis Caused by Aniline Intoxication.**—Ferrer Zanchi and Bonduel report the experience of a worker who for twenty-five years had been employed as a printer of silks He was exposed for many hours daily to the inhalation of the vapors of the aniline dyes In applying the matrix to the silk the hands were almost continuously covered with the dyes The first symptoms appeared on the skin of the hands in the form of erythema with vesicles and abundant serous secretion. The disorder was most intense between the fingers the patient being greatly annoyed by a burning sensation. The condition was diagnosed as eczema and the patient interrupted his work for fifteen days but on returning to his work the same disorder reappeared. For two months thereafter he was subjected to intense treatment. He returned to work completely cured, but at the end of a certain period the disorder recurred this time extending to the face forearms and legs the patient also had gastrointestinal disturbances gastric pains, diarrhea *nausea, weakness and severe headaches He was given a new* treatment which lasted four months but a few days after he returned to work he had another attack of dermatitis. This time the entire body became involved and he was forced to abandon his occupation as a textile printer

## Revista Médica de Rosario, Rosario

35 919-1012 (Nov) 1945

Brucellosis J M Gonzalez —p 919
*Case of Generalized Allergy to Insulin J T Ganem —p 928
Determination of Cholinesterase. M Balaguer —p 939
Syndrome of Morgagni Morel Internal Frontal Hyperostosis in Patients with Diabetes O Vila —p 963
Ocular Changes in Old Syphilis M C Soto —p 985

**Allergy to Insulin.**—Ganem presents the clinical history of a woman aged 49 who ten days after the commencement of treatment with protamine zinc insulin and soluble insulin presented generalized allergic symptoms which occurred several times daily coincident with the injection of the common form of insulin and also the crystalline form It was not possible to desensitize the patient with the crystalline form but a few days later it was found that protamine zinc insulin could be tolerated in increasing doses starting with 2 units and reaching 40 units in fifteen days It is thought that these manifestations might have been due to the slow absorption of the protamine and its gradual increase after some days

## Acta Medica Scandinavica, Helsinki

1-204 (Supplement to Vol 167) 1945

*Flexner Bacilli and Flexner Dysentery U P Kokko —p 1

**Flexner Bacilli and Flexner Dysentery** —Kokko presents a monograph on an extensive epidemic during the summer of 1944 among troops on the Carelian Isthmus Cultures of the Flexner bacillus were obtained in about 32 per cent of the examined cases Most of the positive cultures were obtained in the beginning of the illness of the specimens of feces examined during the first five days of illness, 58 per cent yielded Bacterium flexneri Positive cultures were more frequent in samples of feces preserved with 30 per cent glycerin and 0.6 per cent sodium chloride in water than in specimens sent for examination without the preserving solution. The bacillus was never found in samples of blood, urine, synovial fluid or stomach contents The Flexner bacillus remained alive in excrements for two to three days being better preserved in cold than in heat, averaging 2 5 days in an incubator at 37 C and 6.5 days in a refrigerator Different Flexner strains varied in fermentation, arabinose, maltose, saccharose, raffinose dextrin sorbite and the production of indole. This variation was shown not only between different strains but also between the subcultures from different colonies of one single strain and subsequent cultures at different times More than 15 per cent of the examined strains decomposed both maltose and saccharose producing acid, a peculiarity which is not compatible with the three principal types of the original Flexner group Serologic type characteristics with Kauffman's method were constant although some variations in the antigenic structure occurred.

## Acta Medica Scandinavica, Stockholm

123 111-208 (Jan. 21) 1946

*Amyloidosis Myocardii S Ranstrom —p 111
Pathogenetic Studies on Lupus Erythematosus Disseminatus and Related Diseases G Teilum.—p 126
Effect of Frequency and of Age on QRS Time of Electrocardiogram M Savilahti —p 143
*Tuberculin Negative Erythema Nodosum J H Vogt —p 151
Bilirubin Production of Human Organism and Its Significance to Pathogenesis of Jaundice T K. With —p 166
Results of Medical Treatment of Peptic Ulcer N B Krarup —p 181

**Amyloidosis Myocardii** —Ranström reports 3 cases of cardiac amyloidosis in an autopsy material of 550 cases Case 1 was that of a man aged 88 with atypical amyloidosis in the myocardium Microscopic examination revealed many small deposits of interstitial amyloid. The patient had been suffering from increasing cardiac insufficiency for years and died with symptoms of coronary insufficiency No cause of amyloidosis could be demonstrated at postmortem. Case 2 was that of a man aged 80 who presented the anatomic picture of an atypical amyloidosis located primarily in the heart Microscopic examination revealed medium sized and small myocardial arteries changed into massive amyloid clumps with strands of connective tissue. In the cardiac musculature there were small foci of interstitially deposited amyloid The left auricle contained extensive subendocardial deposits of the same material There were large quantities of amyloid in the mitral valves Clinically the case was characterized by a cardiac insufficiency slowly progressing for several years Case 3 was that of a man aged 81 who presented an atypical amyloidosis of the heart which was the only organ affected Microscopic examination revealed small foci of interstitial amyloid in the cardiac musculature Within the amyloid areas the separate muscle fibers were wholly or partly atrophied, otherwise there was muscular hypertrophy The myocardial amyloidosis was associated with signs of acute septic myocarditis in the form of abundant small interstitial foci of polymorphonuclear leukocytes.

**Tuberculin Negative Erythema Nodosum.**—Vogt reports 40 cases of erythema nodosum from the department of internal medicine of the Aker Municipal Hospital in Norway during the years 1940 to 1943 Thirty-three of these gave a positive tuberculin reaction In 6 the tuberculous origin of the condition was definite In the remaining 27 cases with a positive reaction the same etiologic factor was considered as probable. The occurrence of acute polyarthritis in 10 cases especially when associated with nephritis or with a septic course, suggests that the erythema nodosum was not caused by tuberculosis This somewhat vague concept became more concrete after the study of 7 cases in which the tuberculin reaction was negative. Five of the patients did not show signs of any specific etiology Of these 5 4 had acute polyarthritis and 1 had a sore throat and acute nephritis immediately after the eruption. The fifth had a sore throat prior to the eruption. Hilar adenitis was present in 2 of these patients, and 1 showed unilateral enlargement of the hilus The existence of a syndrome is suggested consisting of erythema nodosum acute polyarthritis and occasionally a sore throat as the provocative symptom at times associated with nephritis and not infrequently with hilar adenitis The etiologic factor may be of a 'rheumatic (streptococcic?) nature A positive tuberculin cutaneous reaction does not exclude an unspecific etiologic factor even if the hilar glands are enlarged.

# Book Notices

**Textbook of Obstetrics Designed for the Use of Students and Practitioners.** By Henricus J Stander M D F A C S Professor of Obstetrics and Gynecology Cornell University Medical College New York Stander's third revision This edition represents the ninth edition of Williams Obstetrics the first six of which were written by the late Dr J Whitridge Williams Professor of Obstetrics Johns Hopkins University School of Medicine Fabrikoid. Price $10 Pp 1,277 with 740 illustrations New York & London D Appleton-Century Company 1945

A review of an internationally famous textbook such as the textbook of obstetrics by Stander may be evaluated better by constructive criticisms than by lauding the numerous merits Its preeminence as a textbook is well established Improved visual educational methods and better use of diagrams, illustrations and properly chosen pictures enhance a good text. As is so often the instance the author has not deleted or abbreviated the text or bibliography The text proper is composed of 1,214 pages and is followed by an index of 63 pages No doubt the colored reproductions should be improved in later editions when better materials are available and there are fewer restrictions There is little justification for including vomiting of pregnancy under the section on toxemias of pregnancy There is adequate discussion of causes of abortion and considerable discussion on treatment, but the advice of digital exploration of the uterine cavity in incomplete abortion is not generally advised by other authorities The use of pack in the rigid cervix in incomplete abortion may also be as severely questioned. Sixty-three pages are assigned to clinical pelvimetry, following the older classification of pelves the morphologic classification of Caldwell and Maloy is disposed of in four and one-half pages The subject of asphyxia is appropriately emphasized, yet certain schools of thought may not agree with the visual method for clearing the trachea and for insufflation with carbon dioxide and oxygen. There are excellent illustrations on the use of Piper forceps on the aftercoming head, but the description is very brief. Although there has been an increase in the death rate from hemorrhage in recent years a greater and compensating reduction has occurred in toxemia sepsis and other causes The discussion of puerperal infection is good except that the portion on treatment seems abbreviated. There is brief reference to management of peritonitis The use of sulfonamides is reasonably well defined, but the place of antibiotics has been conspicuously omitted (Perhaps their introduction has been so recent that it was not possible to get such a section adequately and reliably prepared for this edition.) In several sections not a direct distinct single treatment outline is offered but several are discussed. The student may be inclined to feel insecure, whereas the general practitioner and the young specialist can profit by the presentation of the various methods No doubt this book was reedited under pressure of time and shortage of help Dr Stander has made considerable changes and has made a good revision. The book is practical and valuable for the student and the physician Even with the enumerated faults this volume is adequately documented practical and valuable It is sponsored by the authority and integrity of its editor The publishers and editor deserve credit for keeping this edition like the previous one in the enviable position of second to none.

**The Psychology of Seeing** By Herman F Brandt Professor of Applied Psychology and Director of the Visual Research Laboratories Drake University Des Moines Iowa Cloth Price $3 75 Pp 240 with 88 illustrations New York Philosophical Library 1945

This is a short monograph describing the author's technic and his findings The eye movements are photographed in a bidimensional plane on a single film Two small beams of light are focused on the corneas and the reflex is recorded by the camera on a film. These pictures are taken while the subject observes various pictures or printed material By means of the series of dots and lines the progress of the eyes over the text can be followed and studied As a rule the upper left area is the first observed, and more time is spent looking at that quadrant. Red attracts more attention than black and white A considerable portion of the book is given to the study of advertising layouts A comparison of eye movements of superior and poor students in solving mathematical problems shows purposeful systematic motion versus time consuming, useless duplication of movement A study of motion while reading and learning to read is presented in part 5, and study of art in part 6 The author believes that with his technic he may be able to measure the intellectual abilities of individuals, ascertain the aptitudes underlying mental and motor performance establish criteria in judging the degree of intoxication, differentiate between the abilities of poor and good gunners evaluate the adequacy or inadequacy, diagnose visual acuity in relation to the task to be performed, determine the effect of fatigue resulting from prolonged motor activity detect the guilt or innocence of a criminal and identify specific personality traits and characteristics He presents his findings to call attention to ocular photography as a scientific approach to the study of the human mind and behavior which may have far reaching effects The book presents an interesting psychologic study

**The Manual of the M. D Anderson Hospital for Cancer Research** Compiled by Members of the Staff Helen T Koniias editor M. D Anderson Hospital Publications Cloth. Pp 201 Houston University of Texas 1945.

This brochure the first publication of the sort by the M D Anderson Hospital for Cancer Research has been prepared under the auspices of the University of Texas School of Medicine. It is a concise, briefly written book which enumerates somewhat categorically, the various kinds of cancer and the methods of diagnosis and treatment. The manual is not intended as a comprehensive treatise Its purpose as indicated in its foreword, is to acquaint general practitioners who are assumed to have cursory knowledge of the cancer problem, with the newest developments in cancer The source of the material is the published experience of those surgeons radiologists and pathologists who have been intimately associated with cancer diagnosis and therapy The data and information in the contents have been augmented with the criticisms and suggestions of members of the clinical staff of the M D Anderson Hospital For a publication of this nature, the book is well organized and indexed A generous bibliography indicating where further elaboration on the various problems of diagnosis and treatment of cancer may be found is appended.

**Zur Frühdiagnose und Früherfassung maligner Oberkiefertumoren** Vorgelegt von Dr med dent. Karl Kallenberger Inaugural Dissertation zur Erlangung der Doktorwürde der Medizinischen Fakultät der Universität Basel. Paper Pp 109 Basel Benno Schwabe & Co 1944.

The thesis is based mainly on the study of 39 cases of cancer of the upper jaw treated in the clinic at the University of Basel during the years 1922-1941 The bibliography contains 132 items The histories of the cases are given in detail, with tabulation of the main facts The series includes 30 cases of carcinoma, 5 of sarcoma, 3 of melanoma and 1 of 'cylindroma The records show that in its early stages cancer of the upper jaw frequently is mistaken for dental disorder chronic maxillary sinusitis trigeminal neuralgia and dacryocystitis A principal obstacle to early diagnosis is the failure of the physician to bear in mind always the possibility of cancer in patients with symptoms of such conditions In view of the current advances in the surgery and the radiotherapy of cancer the author's assumption that these methods have reached their limits in cancer of the upper jaw is perhaps not warranted, but certainly the earlier the diagnosis is made the better will be the result of treatment.

**A Handbook on Diseases of Children Including Dietetics & the Common Fevers** By Bruce Williamson M D F R C P Fourth edition Cloth Price $4 50 Pp 388 with 81 illustrations Baltimore William Wood & Company 1945

The fact that this little handbook has reached its fourth edition is an indication of its popularity The author covers an amazing range of topics The book gives a splendid synopsis of pediatric diseases including the recently recognized entities It will serve as an excellent brief review for the general practitioner and the pediatrician.

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT HOWEVER REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## ATYPICAL LICHEN PLANUS

*To the Editor*—*Information is requested concerning the latest therapy for chronic atypical lichen planus occurring after twenty two months residence in India and the ingestion of atabrine daily for four months*

W P Conlan M D Holbrook Mass

ANSWER—There is no specific therapy for the syndrome referred to as atypical lichen planus Experience has shown that the condition tends to involute when patients suffering from this disorder are returned to the United States and atabrine is discontinued However the involution is slow and may require many months to become complete Furthermore, pigmented relics may persist for a much longer time and in some cases hypertrophic lesions may result in permanent atrophic scarring

The manifestations of the disorder are so varied in different cases and even in different areas and at different times in the same patient that local treatment is of necessity symptomatic Exudative lesions should receive only soothing measures, and stimulating preparations such as tar should be reserved for hypertrophic nonexudative areas If the latter type of lesion is unusually persistent a few fractional doses of x-ray therapy may be used, but they should be undertaken with the full realization by both patient and physician that atrophy is the natural end result of some of these lesions Mouth involvement if distressing to the patient may be benefited by mild alkaline washes Except when clinical atrophy occurs in the scalp the hair is not permanently damaged and any alopecia present may be expected to disappear in time

In general the treatment other than local is that designed to promote the general health of the patient and tonics should be given freely as indicated There is some evidence that nutritional inadequacy, especially in respect to vitamin A, has been one of the factors in the pathogenesis of this disorder Accordingly, it is probably advisable to administer large doses of this preparation over a reasonable time even in the absence of laboratory evidence of hypovitaminosis A

## OPERATION ON SEPTUM IN 13 YEAR OLD BOY

*To the Editor*—*A boy aged 13 years has a deviated nasal septum and is subject to frequent upper respiratory infections He has had a tonsillectomy and adenoidectomy Is he too young to have a septum operation and would this operation have much of an effect on preventing his colds? Do you think an allergy workup should be done before he is operated on?*

M D New York

ANSWER—A patient of this age is not too young to have a septum operation if he really needs one On the other hand the need for it must be great indeed to warrant its performance on a 13 year old Most parents would hesitate to give permission, and there is a psychologic hazard involved in addition to whatever physical risks there may be to the operation Most of the time too there is little reason to believe that a septal deviation by itself is the main or chief factor in producing upper respiratory infections And still from time to time a septum operation does seem to make a difference

Before recommending it in any case, however, as a factor in preventing colds, a careful examination should be made to rule out all other factors and this includes allergy studies

## DIALYZED MILK

*To the Editor*—*In the Oct 20 1945 issue of The Journal there appeared an article on Sodium Restriction in the Diet for Hypertension by Grollman and others How can dialized milk be prepared from regular milk or is there any such milk commercially available?*

Hyman A. Vogel M D Detroit

ANSWER—Since a quart of milk contains over 5 Gm of sodium, this must be removed if used in a diet intended to be restricted in sodium content. The sodium can be removed from regular milk by placing it in a semipermeable membrane around which a steady stream of water circulates For this purpose visking tubing (obtainable from the Visking Corporation, Chicago) may be used One end of an approximately 5 foot length of tubing is tied off and the milk introduced through the open end, which is then also tied and the filled tube placed in a cylinder through which water circulates Dialysis must continue for approximately forty-eight hours, and the circulating water must be maintained at a low temperature in order to avoid spoilage A dried milk powder which has been freed from its sodium content has been prepared commercially However this is available at present only for experimental trial and is not on the market.

## POSSIBLE MONILIASIS

*To the Editor*—*A boy aged 4 developed dermatitis involving the penis scrotum abdomen chest and lower extremities during infancy This would develop under the diaper and spread up and down the body The foreskin of the penis would become erythematous and edematous as would the skin of the scrotum abdomen chest and lower extremities It responded best to gentian violet rather than ointments These outbreaks occurred about every two months especially if he developed an upper respiratory infection Another skin condition developed about the age of 2. If he received a bruise the traumatized area developed vesicles around it About 200 vesicles would appear containing a clear fluid They were small and would respond best to gentian violet treatment At the age of 3 he became nervous and began to stammer About this time he also began to develop a skin condition between his toes This would develop during an upper respiratory infection or any type of systemic disease The skin between his toes would first become red and swollen for the first forty-eight hours. This is a painful stage After the first forty-eight hours vesicles appear between the toes and the pain begins to subside The vesicles become large and usually have to be opened A clear fluid exudes when they are opened and the pain begins to disappear Gentian violet dries up the lesions best after they have been opened but they usually take one to two weeks to heal At the same time he develops edema and erythema of the foreskin of the penis and his scrotum He also develops a macular lesion (similar to a measles rash) over the abdomen and lower part of the chest and under the knees as well as on the thighs Sometimes he develops this lesion on any part of the body except the face There is usually fever (up to 101 6 F) on the first day before the vesicles appear between the toes Could you offer a diagnosis and a treatment for this skin condition? Is it a metabolic disease? What prophylactic treatment would you use to prevent the outbreaks? He has had two of them in the last five weeks (he had a cold each time)*

M D Indiana.

ANSWER—It is impossible to offer more than a suggestion as to the diagnosis More information would be desirable, such as the results from a bacteriologic study A diagnosis to consider is moniliasis and monilid This comprises a group of conditions that involve the folds of the skin and the mucous membranes and is caused by yeast organisms, specifically Monilia albicans In the mouth the disease is known as thrush. On the skin the lesions are usually sharply outlined They have a bright red appearance and a sodden scale The latter is often peripherally placed and has an opalescent or dead white appearance Frequent sites of involvement are the commissures of the lips (where it is known as perleche), the nail folds (where it is termed mycotic paronychia), on the webs of the fingers (where it is known as erosio interdigitalis saccharomycetica), beneath the breasts, in the folds of the abdomen in corpulent persons, in the axillas, in the perineum and between the toes

At times, disseminated eruptions of various types may appear simultaneously with the presence of true moniliasis as described This accompanying rash is supposedly due to the development of an allergy to the yeast organisms or their toxins in and emanating from the local infection The secondary lesions are called monilids or levurids Perhaps the most effective treatment for moniliasis is keeping the parts dry and the application of gentian violet solutions One or 2 per cent aqueous solutions are adequate For the patient mentioned in the query, gentian violet applications were helpful

## CONTRACEPTION AFTER MENOPAUSE

*To the Editor*—*In Queries and Minor Notes in The Journal March 16 the answer to the question under the heading Contraception Six Years After Menopause flatly denies the need for contraceptive measures for such a patient and states that there is no case on record of a gestation having occurred under these circumstances This is definitely at variance with statements in the European medicolegal literature (see Hofman Haberda Lehrbuch der gerichtlichen Medizin Urban and Schwarzenberg 1927 p 65 Marcuse Handwoerterbuch der Sexualwissenschaften Bonn Markus and Weber 1926 p 367) The cases referred to there are not of recent date but there is no reason to doubt the occurrence of a pregnancy in a comparatively old individual when reported by good observers only because at that time the knowledge of the physiology of reproduction was more than fragmentary In addition to the cases mentioned by these two authors another one reached in the twenties of this century the superior court in Koblenz (Rhineland) Here the situation was identical with that indicated in your correspondent's query and the practitioner consulted had given an unequivocal answer identical with The Journal's. The woman became pregnant and the doctor was held liable by the court and had to pay a large sum of money to his former patient for his advice*

*It is difficult to explain these pregnancies taking place years after the menopause However one encounters occasionally in operative specimens of postmenopausal patients evidence of still extant follicular activity (corpora lutea in regression) without any indication of menstrual flow It may be that these late and extremely rare contraceptions are possible on the basis of such or a similar endocrine anomaly*

K E. Landé M D Hamilton Ohio

# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL 131, NO 5 — CHICAGO, ILLINOIS — JUNE 1, 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

## GOUT STILL A FORGOTTEN DISEASE

JOSEPH P McCRACKEN, M D PHILIP S OWEN M D
and
JOSEPH H PRATT, M D
Boston

More than two hundred and sixty years ago Thomas Sydenham[1] published a clear description of the diagnostic features of acute gout It would seem that in the course of nearly three hundred years every well educated physician would be familiar with the simple clinical picture presented by Sydenham and thereby be able to recognize the disease in its typical form without difficulty Such is not the case Ten years ago Herrick and Tyson[2] published a paper entitled "Gout—A Forgotten Disease" That gout is still a forgotten disease as late as 1945, the following case report indicates

*History*—Mrs. R W, aged 68, in descending a stairway on June 26 twisted her right ankle Walking became painful and there was swelling of the outer part of the ankle with black and blue discoloration of the skin On the night of June 28 at bedtime the right big toe at the metatarsophalangeal joint began to throb Her sleep was so much disturbed by pain in the toe that she arose at 2 a. m and wrote letters The pain was worse the next day The toe was so tender the night of June 29 that the pressure of a sheet was painful She slept poorly on account of the pain The next day, June 30 she was unable to bear her weight on the right foot The toe was "as tender as a boil" Dr A, the first physician to be consulted, saw her that forenoon His diagnosis was acute bursitis As the pain continued unabated throughout June 30 and the following night the patient sent for another physician, Dr B, who diagnosed the condition as an acute infection of the foot (phlegmon) and prescribed a sulfonamide drug Both doctors stated later that the idea that it was gout never occurred to them The patient returned from Cape Cod to her home in Boston the same day, as the pain was almost unendurable, to consult a surgeon. Dr C, whose diagnosis was bursitis, failed to recognize that he was dealing with a case of gout even after the great toe of the other foot became painful, swollen and tender He thought that in moving about the room she had bruised the left big toe while attempting to spare the right foot As the pain continued and the swelling spread, she consulted an orthopedic surgeon, Dr D, on July 6 By that time the patient received word from a medical friend who had heard the details of the case that she undoubtedly had gout and recommended colchicin Both Dr C and Dr D asserted that this was a dangerous drug and they were unwilling to employ it As they said it might injure the liver, they evidently confused it with cinchophen Although given the correct diagnosis, Dr D employed orthopedic measures and gave no instruction regarding diet or the use of alcohol The patient was overweight and admitted taking a whisky cocktail about five nights out of seven before dinner The blood uric acid was increased, being 7 mg per hundred cubic centimeters of blood (the upper limit of normal by the method employed is 6 mg per hundred cubic centimeters) This confirmatory evidence of gout was not needed

Four doctors in succession failed to recognize that the patient had gout although this attack corresponded with Sydenham's classic description in all essentials The onset two days after she sprained her ankle was sudden She could fix the exact hour It began as she was preparing for bed with pain in the great toe joint Sydenham said that "about 2 o'clock in the morning the patient is awakened by a severe pain in the great toe The pain at first moderate becomes more extreme" This was true in our case She said she could not sleep and at 2 a m left her bed and to divert her attention from the pain wrote letters The pain increased and the following night the extreme tenderness of the toe could be described in Sydenham's words "so exquisite and lively meanwhile is the feeling of the part affected that it cannot bear the weight of the bedclothes' At first "the only visible swelling had been the veins of the affected joint" After some hours, possibly twenty-four hours after the onset, "the patient on awaking is freer from pain and finds the part recently swollen A few days after, the other foot swells or suffers the same pain" This occurred in our case " Gout attacks women but rarely and then chiefly the aged and masculine Our patient was 68 at the time of this her first attack and weighed about 185 pounds (84 Kg)

*Family History*—The patient's father died at the age of 63 of congestive heart failure. For many years preceding his death he had repeated attacks of what was called "acute rheumatism" The feet were the seat of some attacks the hands of others He would be laid up for six weeks at a time There would be swelling of the affected parts, and the pain was severe. He would be unable to move about when the feet were involved Between the attacks the joints were normal

Her paternal grandmother also had many attacks of "acute rheumatism' during which the tenderness of the feet was so intense that she could not bear the weight of the bedclothes In the intervals between attacks the feet were normal

It will be noted that the attacks of arthritis in both father and grandmother correspond to Sydenham's description of acute gout The fact that between attacks the joints are normal and the health excellent is important in differentiating gout from rheumatoid arthritis Aretaeus (second to third century A D) stated that a person in the interval between attacks has won the race at the Olympic games Hench and his co-workers[3] at the Mayo Clinic, in a comparative study of 100 cases each of gout, rheumatic fever and infectious nonspecific arthritis, concluded that "an arthritis which occurs

1 Sydenham Thomas The Works of Thomas Sydenham London Sydenham Society 1850 vol 2 pp 123-162

2 Herrick W W and Tyson T L Gout—A Forgotten Disease Am. J M Sc 192 483 488 (Oct.) 1936

3 Hench P S. Vanzant F R. and Nomland R. Basis for the Early Differentiation of Gout Tr A Am Physicians 43 217 229 1928

acutely or subacutely and is associated with complete remission should be considered gout until proved otherwise"

The evidence seems convincing that in the family under consideration unrecognized gout has existed in three generations

Massachusetts is, of course, not the only state in which gout is a disease unknown to many doctors One of our patients who had typical attacks of gout affecting the toe and other parts of the foot was seized later while living in Texas with severe inflammation of the right knee and ankle Although we wrote the attending physician that the patient had had typical attacks of gout in the past, he insisted on his diagnosis of infectious arthritis The patient was given very large doses of vitamin D, and tonsillectomy was performed to remove the supposed focus of infection At the height of this attack the patient was unable to move, so great was the pain Once owing to his helpless condition he fell out of bed He was found on the floor unable to move his right leg The doctor's examination must have been hasty, for he asserted the patient had had a "cerebral embolism" which had paralyzed the right leg The patient told one of us later that it was not loss of muscular power but pain that kept him motionless Sydenham had seen such cases, for he wrote "the least contrary movement causes pain, which is tolerable only in proportion as it is momentary This movement is one of the great troubles in gout, since with perfect quiet the agony is just tolerable"

Equal ignorance of gout was shown by the physician of one of our patients who after removing a tophus from the ear and noting its chalklike contents still adhered to his diagnosis of rheumatism

Additional evidence that gout is an unknown disease to many physicians was furnished by the experience of the Mayo Clinic, where in a series reported by Hench [3] only 12 per cent of the cases had been recognized as gout prior to admission, although in the majority characteristic symptoms had existed for years

With the hope of calling attention to this forgotten disease by presenting anew its clinical features, we have made a detailed analysis of 100 cases of gout previously unreported and made a comparison of our findings with a series of 657 cases collected from the recent literature In each case included in our Boston series there was no doubt of the correctness of the diagnosis, as all cases in which it could be questioned were discarded This group of 100 cases consisted of 37 from the Joseph H Pratt Diagnostic Hospital, 29 cases from the private records of one of us (J H P), 27 from the medical and surgical records of the Peter Bent Brigham Hospital during the period 1935-1941 made available to us by Dr Soma Weiss, and 7 from the medical clinic of the Boston Dispensary

## CLASSIFICATION

Ninety-three of our cases were acute gout The remaining 7 should be classed as chronic gout This term is given to those cases in which persistent deformity or rigidity of the joints occurs It is gratifying to note that although many of our patients had recurrent attacks over many years few became permanently crippled Febrile polyarticular gout is a severe type of acute gout in which several to many joints are involved in a single attack There is usually high fever, and the duration of the attack is measured generally in weeks rather than days. Ten of our cases fall into this group In 1 the temperature reached 104 F and in another 103 F

## SEX

Of the group, 91 were men and 9 were women The reported incidence of gout in women varies from less than 1 per cent [4] to as high as 36 per cent [5] However, the majority of the reports range between 3 and 7 per cent Of a total of 1,484 cases reported in the recent literature [6] in which the sex is stated, 98 instances were in women, or 6 6 per cent. Vorhaus and Kramer's [5] figures show a far higher percentage of gout in women than do any other series, and their findings in other respects vary from those given in all other published statistical reports as will be shown later If their series is excluded, the percentage of gout in women falls to 6

## RACE

Approximately one half (48 per cent) were of American parentage This incidence is similar to that noted by Williamson [4] and also Talbott [7] The remaining racial groups are as follows Jewish 15, Italian 12, Irish 7, English 3, German 3, Negro 3, Canadian 2, French 2, Austrian 1, Greek 1, Lithuanian 1

It has frequently been stated that gout is rare in the Negro As just noted, only 3 cases in this series were in the Negro Williamson's Chicago series [4] included 2 Negro patients, Schnitker and Richter's [8] 2, 1 of whom was a Negro woman Cohen [9] had 1 Negro in a series of 47 patients admitted to the Philadelphia General Hospital (1905-1929)

## AGE

The age of the patient at the onset of the initial attack varied from 19 to 73 years In a small number of instances the age at the first attack was only approximate In 58 per cent of the cases the onset was between the ages of 41 and 60, and in 79 per cent it was between the ages of 31 and 60 Arranged by decades, the ages vary from 19 to 30 years 14 cases, 31 to 40 years 21 cases, 41 to 50 years 30 cases, 51 to 60 years 28 cases and 61 to 73 years 7 cases

The average age of our entire group was 46 8 years at the onset of the initial attack This figure is within the range generally reported Kinell and Haden [10] 43 5, Jacobson [11] 47 1, Monroe [12] 39, Sherwood [13] 46 3, Williamson [4] 38 and Brøchner-Mortensen [9] 47 7, Talbott [14] being the lowest with 32 0

Sixty-six per cent of Williamson's [4] patients were between 30 and 50 years of age, 50 per cent of Sherwood's [13] between 31 and 50, 60 per cent of Kinell and Haden's [10] between 33 and 50, 75 per cent of Brøchner Mortensen's [9] between 31 and 60 Seventy-two per cent of Monroe's [12] patients were over 30 and 88 per cent of Hill's [15] were over 35

4 Williamson, C S Gout A Clinical Study of 116 Cases, J A M A 74: 1625 1629 (June 12) 1920

5 Vorhaus M G and Kramer M L Studies on Thiamin Chloride in Gout, Tr Am Therap Soc 38: 109 115 1938

6 Williamson [4] Vorhaus and Kramer [5] Brøchner Mortensen,[9] Cohen,[14] Coombs, Pecora Thorogood Consolazio and Talbott [17] Hill [15] Jacobson,[11] Kinell and Haden [10] Monroe [12] Sherwood [13] Talbott [14] Schnitker and Richter [8]

7 Talbott, J H and Coombs, F S Metabolic Studies on Patients with Gout, J A M A 110: 1977 1982 (June 11) 1938.

8 Schnitker M A and Richter A B Nephritis in Gout Am J M Sc 192: 241 251 (Aug.) 1936

9 Brøchner Mortensen K One Hundred Gouty Patients Acta med. Scandinav 100: 81 107 1941

10 Kinell J and Haden R L Gout A Review of 62 Cases M Clin North America 24 429 441 (March) 1940

11 Jacobson B M The Uric Acid in the Serum of Gouty and Non gouty Individuals Its Determination by Folin s Recent Method and Its Significance in the Diagnosis of Gout Ann Int. Med 11: 1277 1295 (Jan.) 1938

12 Monroe, R T The Detection of Gout M Clin. North America 18: 999 1012 (Jan.) 1935

13 Sherwood K K. Observations upon Gout, West. J Surg 46: 596 599 (Nov.) 1938

14 Talbott J H Serum Urate in Relatives of Gouty Patients J Clin Investigation 19: 645 648 (July) 1940

15 Hill I C Gout Lancet 1 826-831 (April 9) 1938

The youngest patient in our group was 19 years of age and the oldest was 73 at the time of the initial attack of gout The average age of the entire group when admitted to the hospital was 56 2 years The average period of duration from the first attack to the time these studies began was ten years Schnitker and Richter [8] also found that the average duration of gout prior to the initial hospital visit was ten years Other reported figures vary seven years (Kinell and Haden [10]), 8 8 years (Vorhaus and Kramer [5]), 11 5 years (Hench [3])

### FAMILY HISTORY

In only 18 (18 per cent) cases was there a recorded history of gout in the family In the English series of Hill [16] the hereditary aspect was much greater, 45 per cent having a history of gout and of fibrositis in an additional 15 per cent Other sources give a varying percentage 6 (Monroe [12]), 9 7 (Williamson [4]), 10 (Cohen [16]), 11 (Brøchner-Mortensen [9]) The first 3 of this series occurred in America, the last in Denmark

### DIETARY HISTORY

In 14 records emphasis was made of large amounts of meat in the diet In 63 cases the dietary habits were considered to be moderate No comment was noted in the remaining 23 records

Obesity of a degree sufficient to warrant comment was recorded in 41 cases In Kinell and Haden's [10] series 83 7 per cent were 5 pounds (2 3 Kg ) or more overweight, Williamson [4] found that of 101 patients 92 were described as well nourished In only 5 of 84 cases studied by Brøchner-Mortensen [9] was the weight lower than 10 per cent of what was considered the ideal weight However, Schnitker and Richter [8] concluded that obesity did not seem more common than expected

### ALCOHOLIC HISTORY

In 26 instances the alcoholic intake was considered frequent and excessive, in 28 it was stated as moderate, in 32 from only occasional to no indulgence There was no comment in the remaining 14 cases

Williamson [4] found only 4 abstainers in his large series of 116 patients with gout, 9 who partook in small amounts, 41 only moderately, with the remaining considered as heavy drinkers Monroe [12] states that 62 per cent of his Boston patients were habitual consumers of alcohol, but only 3 were drunkards In 83 of the patients studied by Brøchner-Mortensen,[9] 13 were total or nearly total abstainers, 11 consumed alcohol but not daily, 31 drank one to two bottles of beer daily, 31 five to ten bottles of beer daily and 17 drank more than ten bottles a day

### PRECIPITATING FACTORS

In about one half of the cases various conditions seemed to precipitate an attack of gout These may be listed after moderate to excessive walking 9 cases, mild trauma to the foot or toes 8, after alcohol indulgence 7, with or following upper respiratory infections 5, during the holiday season 4, after parenteral liver injections for anemia 3, after minor operations 2 and tooth extraction, diathermy treatment, cardiac failure, acute cholecystitis, Sippy dietary regimen, bleeding duodenal ulcer 1 each

### OCCUPATION

Our series of only 91 men included a scientist of international reputation, an ex-Senator of the United States, a judge of the Superior Court of his state, a Representative in Congress and several wealthy industrialists and lawyers in addition to 4 physicians Hence it would seem evident that Sydenham's observation still holds good that gout affects "more rich men than poor, more wise men than simple" Naturally laborers predominated among the patients in the public wards and in outpatient practice Thirty-two per cent of our group fell into this class There were 3 painters It has long been known that lead and gout are in some way related, 9 4 per cent of Williamson's cases were among painters One of Schnitker and Richter's patients had chronic lead poisoning

### TOPHI

In 32 cases subcutaneous tophi were found In 23 of these the tophi were located in the ear Other locations were the olecranon bursae 7 instances, feet 4, fingers 3, legs 2, hand 1 and over the clavicle 1 Several patients had tophi in more than one location

In table 1 there are listed the incidence of subcutaneous tophi in a number of other series of gout patients If the entire group of cases is totaled, it is seen that tophi were found in 45 7 per cent of the entire 750 cases in which their presence or absence was stated Osler in the 1905 edition of his textbook pointed out that the ears should always be inspected in a case of polyarthritis The diagnosis may rest with a small tophus The student should learn to recognize on the ear margin Woolner's tip, fibroid nodules and small sebaceous tumors These may be mistaken for tophi To make the diagnosis with certainty, the needle-shaped crystals of sodium urate should be demonstrated under the microscope or a positive murexide test be obtained

TABLE 1.—*Subcutaneous Tophi*

| Author | Number of Cases | Number with Subcutaneous Tophi | Per Cent of Cases with Tophi | Per Cent of Cases with Tophi in Ears |
|---|---|---|---|---|
| Brøchner Mortensen | 100 | 33 | 33 | 85 |
| Hench | 100 | 53 | 53 | |
| Hill | 93 | 40 | 43 | 87 5 |
| Jacobson | 21 | 10 | 48 | 80 |
| Kinell and Haden | 62 | 14 | 23 | |
| Monroe | 61 | 42 | 69 | 90 |
| Talbott | 24 | 14 | 58 | |
| Vorhaus and Kramer | 25 | 17 | 68 | |
| Williamson | 116 | 66 | 56 | 68 |
| This series | 100 | 32 | 32 | 72 |
| Total | 702 | 321 | 45 7 (Average) | |

### FOOT INVOLVEMENT

The great toe was the site of acute arthritis in 78 per cent of the cases in the initial attack of gout In subsequent attacks this percentage of podagra was increased to 97 Table 2 shows other joints involved in the initial attack and in the whole number of attacks

Table 3 gives the incidence of podagra in the initial attack and in later attacks in the collected series of cases It is evident that the great toe is involved in more than one half of the cases in the initial attack The percentage in which the big toe is involved in all the series averages 68 Vorhaus and Kramer's [5] figure of 28 per cent is far at variance from all other statistics If this series is excluded the percentage rises to 72 Also in most of the cases the great toe is involved later, if not in the first attack

16. Cohen A Gout Am J M Sc. **192**: 488-493 (Oct.) 1936

### BLOOD URIC ACID

The statement is sometimes made that early cases of gout present as a rule a blood uric acid content that is less than in cases that have existed for some time An analysis of our cases according to the duration of the disease is given in table 4 It shows that the

TABLE 2—*Joints Involved*

| Joint Involved | In First Attack | In Initial or Subsequent Attacks |
|---|---|---|
| Great toe | 78 | 97 |
| Ankle | 21 | 51 |
| Foot | 18 | 30 |
| Knee | 9 | 36 |
| Wrist | 5 | 20 |
| Hands and fingers | 4 | 27 |
| Elbow | 3 | 24 |
| Other toes | 3 | 14 |
| Shoulder | 2 | 10 |
| Cervical spine | | 2 |
| Hip | | 4 |
| Sternoclavicular | | 1 |

blood uric acid is usually increased in the initial attack and as the disease progresses no rise in the amount of uric acid is regularly found The highest average values occurred during the first four years after the onset of the disease In this table results obtained by various Folin methods are given from the first (1913) to the last (1933) When only those cases in which the blood uric acid was determined by Folin's 1933 method were analyzed the same result was obtained Brøchner-Mortensen,[9] on the other hand found higher values as a rule after the first five years In 25 cases examined during an attack the blood uric acid averaged 5 8 mg per hundred cubic centimeters In 25 cases during an attack-free interval the average was 6 2 mg per hundred cubic centimeters In 25 cases without tophi the amount of blood uric acid averaged 6 7 mg per hundred cubic centimeters In 25 cases with tophi it was 5 1 mg per hundred cubic centimeters In 16 cases there was no significant increase in the blood uric acid, as the amount was below 5 mg per hundred cubic centimeters in all determinations In

TABLE 3—*Involvement of Great Toe*

| Author | Percentage of Cases with Involvement of the Great Toe: Initial Attack | All Attacks |
|---|---|---|
| Brøchner Mortensen | 70 | 71 |
| Cohen | 51 | |
| Hench | 58 | |
| Kinell and Haden (Foot or ankle) | 53 / 80 | |
| Monroe (Foot or ankle) | 74 / 90 | 98.3 |
| Sherwood | 75 | |
| Talbott and Coombs et al (foot) | 75 | |
| Vorhaus and Kramer | 28 | 68 |
| Williamson | 88 | 95 |
| This series | 78 | 97 |

17 cases it was below 4 mg per hundred cubic centimeters in single determinations and hence not diagnostic of gout

### RENAL DAMAGE

In 23 cases there was albuminuria. Casts were found in 16 In 10 cases tests revealed impaired renal function In 11 cases the clinical diagnosis of nephrosclerosis was made, and in 1 the diagnosis of chronic pyelonephritis Renal calculi were present in 6 cases

In 31 per cent of Schnitker and Richter's[8] cases the diagnosis of nephritis had been made Fifteen of their cases were nephrosclerosis, the other 2 chronic glomerulonephritis In one half of the cases reported by Kinell and Haden[10] there was noted a faint to a heavy trace of albumin, but in only 3 instances was the presence of casts mentioned In the same series renal calculi were present in 11 per cent Of Hench's[3] 100 patients, 11 either had or gave a history of renal stones, 1 had passed gravel, 14 had varying degrees of renal insufficiency Most of the 22 cases studied by Coombs, Pecora and their associates[17] showed some evidence of renal damage, with renal calculi present in 7 (32 per cent) In 45 per cent of Williamson's[4] cases albuminuria was present, but in only 7 of 116 cases of gout in his series was the diagnosis of nephritis made In the 100 cases studied by Brøchner-Mortensen[9] nephrosclerosis was diagnosed in 14 chronic glomerulonephritis in 7 and nephrolithiasis in 15

### ROENTGEN RAY FINDINGS

Roentgen ray interpretations "compatible with gout" were recorded in 23 cases In 17 they were negative In 11 hypertrophic arthritis was demonstrated, in 6 atrophic arthritis, in 3 both hypertrophic and atrophic

TABLE 4—*Duration of Disease*

| | Number of Cases | Average Mg Uric Acid per 100 Cc. |
|---|---|---|
| First attack | 15 | 5.3 |
| 1 month to 1 year | 4 | 6.0 |
| 2 years to 5 years | 20 | 6.0 |
| 6 years to 10 years | 20 | 5.9 |
| 11 years to 20 years | 13 | 5.3 |
| 21 years to 30 years | 9 | 5.5 |
| 31 years to 40 years | 4 | 5.1 |
| 41 years to 50 years | 1 | 5.0 |
| Total | 87 | |

arthritis In the remaining 38 cases roentgenograms were not taken

In only 1 of our cases was the roentgenologist willing to make a definite diagnosis of gout In this case the diagnosis was perfectly clear without x-ray evidence as the patient had tophi Our roentgenologists realized that small punched out areas in the margins of the bones may occur in other forms of arthritis as well as in gout This was first pointed out by McClure and McCarty[18] many years ago They insisted that a definite diagnosis of gout could not be made on an x-ray examination The statement Williamson[4] wrote a quarter of a century ago still stands as correct "The roentgen ray is of very little service from a diagnostic standpoint In nearly two thirds of all the cases submitted to it [roentgen ray] it not only failed to assist in the diagnosis but tended if anything, to lead one to arrive at wrong conclusions"

### BLOOD STUDIES

*Red Blood Cell Count*—In the 63 or 80 per cent of the cases in which the red blood cell count was recorded, the value was 4,000,000 or more per cubic millimeter, of the 6 patients having an anemia of less than 3,000,000 red cells 2 had chronic nephritis, 1 had cirrhosis of the liver in addition to chronic nephritis 2 had undoubted pernicious anemia, and 1 had an atypical macrocytic anemia which was questionable pernicious anemia

17 Coombs, F S, Pecora, L J, Thorogood E Consolazio W and Talbott J Renal Function in Patients with Gout J Clin Investigation **19** 525 535 (May) 1940

18 McClure C and McCarty E Roentgenographic Studies in Gout Arch Int Med. **24**: 563-579 (Nov) 1919

*Hemoglobin* (Sahli's method)—In 61, or 76 5 per cent of the cases in which a hemoglobin determination was recorded the value was 80 per cent (Sahli) or more Of the 4 patients in whom the determination ranged between 60 and 70 per cent 3 had chronic nephritis The 5 patients who had less than 50 per cent hemoglobin included 2 with chronic nephritis 1 with chronic nephritis and cirrhosis of the liver, 1 with pernicious anemia and 1 with hypochromic anemia due to blood loss in carcinoma of the stomach

*White Blood Cells*—In 68 or 90 per cent of the cases in which a white blood cell count was recorded the value was less than 12 000 per cubic millimeter Of the 2 patients whose leukocytosis was 15,000 or more each was in an acute attack of gout

The foregoing findings are similar to those recorded in other series In Sherwood's [18] series of 20, 90 per cent had a hemoglobin value of 80 per cent or more Monroe [19] reports that the average hemoglobin determination was 91 per cent and the red blood cell count averaged 4 900,000 per cubic millimeter One half of Kinell and Haden's [10] series had a red cell count of 4 800,000 per cubic millimeter, and 45 per cent had a hemoglobin value of 90 per cent or more

### BLOOD SEDIMENTATION RATE

The blood sedimentation rate obtained with the Westergren method was determined in all but 8 of the 50 cases studied at the Pratt Diagnostic Hospital and the Boston Dispensary These 42 cases in which one or more values were recorded may be divided into "acute," "subsiding" and "nonactive" groups of gout The highest value recorded in each case was used in this analysis

In the "acute" group (30 cases), only 7 showed a blood sedimentation rate of 20 mm or less in one hour In 1 instance the value was 2 mm in one hour but was 52 mm in two hours, which leads one to surmise an error in the hour reading Of this "acute" group, excluding the aforementioned case, only 3 were below 15 mm in one hour Of the remaining 23 cases in this group 11 gave values between 20 and 40 mm 5 between 40 and 60 mm, 4 between 60 and 80 mm 1 of 87 mm, 1 of 104 mm and the highest was 111 mm in one hour

In the "subsiding" group there were 4 cases giving values of 5 12, 14 and 31 mm in one hour In the "nonactive" group there were 8, the values being 6, 6, 7, 18 23, 28 36 and 50 mm in one hour The last value occurred in a patient who also had chronic nephritis and an active duodenal ulcer

Of especial interest is a case of acute gouty arthritis in which the blood sedimentation rate was determined daily throughout the attack These five daily values were 87, 70, 74, 38 and 36 mm in one hour The declining values coincided with the complete relief of the symptoms of the gouty attack

### TEMPERATURE

Of the cases in which the attack of gout was observed in the acute stage, the temperature was recorded in 46 instances All cases were excluded in which additional disease processes were present, which may have had an influence on the temperature

The highest temperature elevation observed while the patient was hospitalized was taken in each instance and this constituted the following data Less than 99 F in 17 cases, from 99 to 100 in 18, from 100 to 101 in 6 from 101 to 102 in 2, from 102 to 103 in 2 cases and 104 F in 1 case From this grouping it is seen that 63 per cent of the acute cases of gout in which the temperature was recorded (46) was 99 F or more, with 24 per cent showing a temperature elevation of 100 F or more There were 2 instances of an elevation as high as 103 F The maximum temperature was 104 F

### DIAGNOSIS OF GOUT

Forty-one cases of gout in this series of 100 had not been correctly diagnosed during previous attacks the diagnosis being first made when seen in our clinics Forty-four cases had previously been recognized as gout Ten were seen in their first attack by the Brigham Hospital physicians or by us, the remaining 5 records did not give information on this point It is thus seen that in 41, or 48 per cent, of the cases in which one or more previous attacks of gout had occurred the disease had not been recognized This would indicate that to nearly 50 per cent of the many doctors who had examined and treated these patients gout was an unknown disease This record is certainly bad but it is far better than the figures published by Hench [3] These showed that in a series of 100 cases of gout treated at the Mayo Clinic only 12 per cent had been correctly diagnosed prior to admission

In 32 of our cases gout had existed five years or more before the diagnosis was made in 20 cases ten years or more, in 14 cases fifteen years or more, in 8 cases twenty years or more and in 2 cases thirty years or more The longest length of time before it was discovered that the patient had gout was thirty-nine years

### DIAGNOSIS OTHER THAN GOUT

In 41 cases obesity was present Thirty-eight of the group showed arterial hypertension Eleven cases of chronic nephritis were diagnosed There were 9 instances of hypertensive heart disease and 8 of arteriosclerotic heart disease In 4 cases cirrhosis of the liver was noted, and in a like number there was evidence of diabetes mellitus Additional single diagnoses were legion

### TREATMENT

Our experience justifies the high reputation in which colchicum has always been held by authoritative writers on gout "A patient may be in helpless agony with a tumefied red hot joint today and walking about quite well, tomorrow" So wrote Thomas Watson nearly a century ago For no other drug can such a claim be made Forty-four of our patients on whom we have good notes were treated during acute attacks with a colchicum preparation, usually colchicine In 37 cases improvement was rapid and often dramatic Pain was often abolished in from twelve to twenty-four hours after the first dose of colchicine Usually 0 5 to 1 mg was given hourly for from four to eight doses In only 7 cases was there little or no benefit

Cinchophen was employed in 14 cases according to our records, and usually with striking benefit It acted well in 4 acute cases in which colchicine had failed to reduce the pain Usually from 1 5 to 3 Gm of cinchophen was given daily for three or four days In no instance was a toxic action observed *Our experience* indicates that the widespread fear of employing this drug deprives patients of a valuable remedy It might be well to test the urine for urobilinogen frequently when a patient is taking cinchophen in order to guard against toxic action on the liver This is done as a routine procedure in the Boston Dispensary at the suggestion of Dr Karl Singer

## CONCLUSION

The most important point brought out by this study is the inexcusable delay in the recognition of gout. Forty-eight per cent of the cases had not been recognized as gout when admitted to our clinics, although the duration of the disease was ten years or more in 20 cases and many physicians had been consulted. In only 21 per cent of the cases was the correct diagnosis made during the initial attack, although in no less than 78 per cent the big toe was involved. At the time the cases in our Boston series came under our recorded observation the percentage in which the big toe had been the seat of one or more attacks had risen to 97. It is evident that physicians do not yet realize that acute inflammation of the first metatarsophalangeal joint almost always means gout and should be so regarded and treated until proved otherwise. Unless the disease is recognized, adequate treatment is impossible. In few diseases is the pain so intense as in acute gout, and in none is a drug for its relief so effective as colchicum in gout. The failure of practitioners to use this remedy owing to their failure to recognize gout still causes a great amount of needless suffering.

30 Bennet Street, Boston 11

---

# DIAGNOSTIC VALUE OF EXFOLIATED CELLS FROM CANCEROUS TISSUES

GEORGE N. PAPANICOLAOU, M.D., Ph.D.
New York

I value greatly the honor of having been invited by this renowned institution to give an account of my recent investigations pertaining to the diagnosis of malignant neoplasms before such a select audience, including many who have devoted themselves to the study of the theoretical and clinical aspects of cancer. I am undertaking this task with a feeling of deep appreciation but not without some apprehension. I consider myself a novice in this vast and complex field of cancer research, but my intrusion has not been at all intentional. It was forced on me by unavoidable and uncontrollable circumstances which have deflected the course of my scientific endeavors.

When the late Professor Stockard and I embarked on the study of the morphologic and cyclic variations of desquamated epithelial cells in the vagina of the guinea pig some thirty years ago[1] our aim was specific, though rather limited. We were in search of a method which would allow us to identify the consecutive stages of the estrous rhythm. The idea of such an exploration was not new. As far back as 1847 Pouchet[2] had studied vaginal smears for the purpose of analyzing the normal human sex cycle. Pouchet studied unstained smears and therefore could not make accurate cytologic observations. Precise preservation and staining of the cellular elements are of paramount importance. In our own studies we have been fortunate in having developed a simple method of fixation that has proved to be very efficient. Had we adopted the dry and nonfixed smear technic we would never have been able to apply it with equal success in the cytologic evaluation of some physiologic and pathologic conditions, including cancer. The sharp definition of cells, the finer details of their nuclear structure and their staining affinities are greatly impaired if allowed to dry before fixation.

The introduction of the vaginal smear procedure in 1917 revived the interest of biologists and physiologists in the study of problems related to mammalian sex physiology. Within a relatively short time it led to many important achievements in this field and to the isolation of the estrogenic hormone, which was soon followed by that of some of the other sex hormones. Its first application in the diagnosis of cancer of the uterus dates back to 1923, when I began a comprehensive study of human vaginal smears during the normal menstrual cycle and in various pathologic conditions. This investigation was conducted for about nine years at the Woman's Hospital under the auspices of Dr. George Gray Ward with the support of the Cornell Medical School and of the Committee on Maternal Health. The results of these studies were published in a short article[3] in 1928 and in a monograph[4] in 1933. Despite the early recognition of the fact that malignant tumors of the uterus could be diagnosed by the vaginal smear test and the conclusive evidence offered by a large number of cases, I must admit that I failed utterly in arousing the interest of clinical men in the potentialities of this diagnostic method and in gaining their confidence.

This failure dampened my own faith and enthusiasm considerably and was responsible for my devoting the next seven years chiefly to problems of experimental and human sex endocrinology. Looking back to that distant period with a more objective eye, I now realize that the fault was largely mine. First of all, I had given only a short and incomplete account of my observations relating to cancer diagnosis. Then, not being a pathologist, I had been greatly handicapped by my inadequate pathologic training, which prevented me from grasping the full significance of certain deviations from the normal cell pattern and their relationship to the different types of neoplasms. I must confess that this is still my most serious handicap, although I have been trying hard during the last few years to get some belated education in this vast and still insufficiently explored field of cancer pathology. One of my colleagues tried to convince me lately that my lack of pathologic perspective has been an advantage rather than a disadvantage, as it has most likely protected me from having been influenced by any set ideas. It is not infrequent, indeed, to find men, even prominent scientists, who have become dogmatic because of such set ideas and strong beliefs, which have prevented them, or others who have been under their influence, from having an unbiased and objective attitude toward certain facts which are at variance with their beliefs.

Last spring I had in my laboratory a young pathologist from Peru who was referred by the Commonwealth Foundation to study our smear technic. After having spent about two weeks with us he stepped into my room one day to show me a slide of a vaginal smear which he was studying. He thought that it was marked incorrectly as pyometra, as he had found many cell groups which he believed were definitely suggestive of

---

From the Department of Anatomy, Cornell University Medical College.
Read at the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York, Nov. 15, 1945, as the first in a series of lectures organized in honor of James Ewing.

1. Stockard, C. R., and Papanicolaou, G. N.: The Existence of a Typical Estrous Cycle in the Guinea Pig, with a Study of Its Histological and Psychological Changes, Am. J. Anat. 22: 225, 1917.
2. Pouchet, F. A.: Theorie positive de l'ovulation spontanée et de la fécondation des mammifères et de l'espece humaine basée sur l'observation de toute la serie animale, Paris, J. B. Bailliere, 1847.
3. Papanicolaou, G. N.: New Cancer Diagnosis, in Proceedings of Race Betterment Conference, 1928, p. 528.
4. Papanicolaou, G. N.: The Sexual Cycle in the Human Female as Revealed by Vaginal Smears, Am. J. Anat. (supp.) 52: 519, 1933.

an adenocarcinoma of the fundus The confidence with which he was pointing out this possible error in spite of his limited experience in smear diagnosis made an impression on me We soon found out that he was right, at least in part, and that the correct diagnosis was an adenocarcinoma of the fundus associated with a pyometra He subsequently confessed to me that, when he first came to our laboratory, he was definitely prejudiced against all efforts to diagnose cancer by cytologic criteria He had been greatly influenced by a distinguished and internationally known pathologist who, in a lecture delivered in Peru some six years ago, had strongly defended the view that there is no such thing as a cancer cell After having examined some of our slides, this young pathologist had realized that the views expressed by the lecturer were rather extreme He no longer doubted that cancer cells though detached and completely isolated, as frequently seen in smears, retain some distinctive traits which make possible their identification as integral parts of a neoplasm

In 1939 I had the good fortune to become associated with Dr Herbert F Traut and later with Dr Andrew A Marchetti, both well trained and experienced gynecologic pathologists Through this association the study of vaginal smears and their application in cancer diagnosis have been put on a more solid basis The work is still being continued at Cornell Medical College and the Woman's Clinic of the New York Hospital under a grant from the Commonwealth Fund as a joint project of the Department of Anatomy under Dr Joseph Hinsey and the Department of Obstetrics and Gynecology under Dr Henricus Stander Dr Traut and I published the results of our studies on the diagnosis of cancer of the uterus by vaginal smear in 1943 in the form of a monograph[5] richly illustrated by Mr Hashime Murayama In this monograph we gave a complete description of the vaginal smear in its use as a diagnostic procedure for uterine cancer and presented a statistical evaluation of 193 instances of carcinoma involving the uterus and some part of

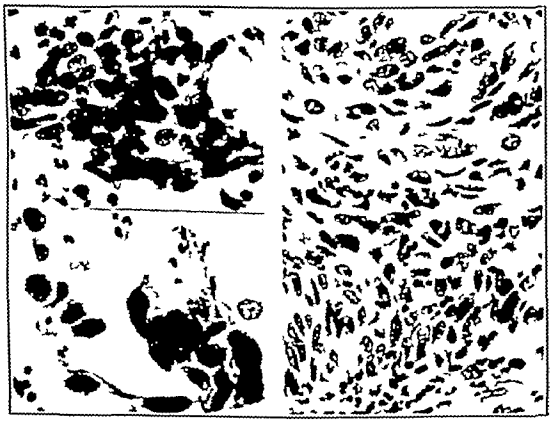


Fig 1—Squamous cell carcinoma of the cervix.

the lower genital tract A total of 127 patients had demonstrable malignant lesions of the cervix In this group, failure to detect the malignant cells in the vaginal smear occurred four times, which gives a percentage of 3 2 In the 53 patients who had primary carcinoma of the fundus the percentage of failure was found to be 9 3 This higher percentage was at least partly due to the relatively high incidence of adenoma malignum, which is more difficult to diagnose because of its slower shedding

Since then Dr Marchetti and I have introduced the endocervical and endometrial smear technic,[6] which has decidedly reduced the chances of overlooking endocervical or endometrial cancers The examination of fluid from the cervical canal and the uterine cavity

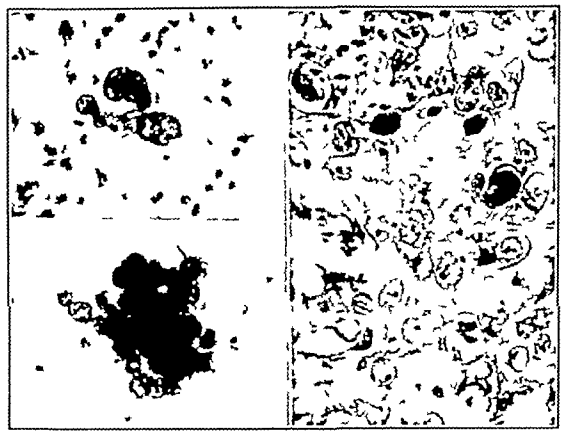


Fig 2—Epidermoid carcinoma of the bladder

is of great value, particularly when an adenocarcinoma of the fundus is suspected Of course the introduction of a cannula into the uterine cavity is not as simple as that of a pipet into the lumen of the vagina, and there are instances in which it is contraindicated In general, however, it is a relatively simple procedure which can be used in most cases without inconvenience to the patient

The value of the endometrial smear is illustrated by the following case studied by Dr Marchetti and me

A woman was admitted to the Woman s Clinic of the New York Hospital on July 26 Vaginal and endometrial smears were prepared Only the endometrial showed abnormal cells suggestive of a malignant process, most likely adenocarcinoma These findings were reported on July 28 A curettage and a cervical biopsy were performed on August 7 They showed normal secretory endometrium and chronic cervicitis The endometrial smears were repeated on August 28 and were again positive A total hysterectomy and bilateral oophorectomy performed on August 30 revealed the presence of a primary adenocarcinoma of the tube.

## DIAGNOSIS BY VAGINAL SMEARS

The publication by Dr Traut and me of our monograph on vaginal smears has created a wide interest in this new approach to uterine cancer diagnosis and has stimulated other investigators to repeat the work and to test its validity Joe Vincent Meigs, Maurice Fremont-Smith, Ruth Graham and their co-workers of Harvard Medical School were the first to conduct a thorough investigation of the test Their observations which are in full accord with the findings reported by us, have been published in a series of articles[7] In a recent paper Meigs, Graham, Fremont-Smith, Janzen and Nelson[8] gave a complete report of 1,015 cases,

5 Papanicolaou G N and Traut H F Diagnosis of Uterine Cancer by the Vaginal Smear New York, Commonwealth Fund 1943

6 Papanicolaou G N and Marchetti A A The Use of Endocervical and Endometrial Smears in the Diagnosis of Cancer and of Other Conditions of the Uterus Am J Obst & Gynec. 46 421 1943

7 Meigs J V Graham Ruth M Fremont Smith M Kapnick I and Rawson R W Value of the Vaginal Smear in the Diagnosis of Uterine Cancer Surg Gynec & Obst 77 449 1943 Fremont Smith M Graham Ruth M Janzen L T and Meigs J V The Vaginal Smear in the Diagnosis of Uterine Cancer J Clin Endocrinol 5 40 1945 Meigs Graham Fremont Smith, Janzen and Nelson[8]

8 Meigs J V Graham Ruth M Fremont Smith M Janzen L T and Nelson C B The Value of the Vaginal Smear in the Diagnosis of Uterine Cancer A Report of 1 015 Cases Surg Gynec. & Obst. 81 337 1945

with a total error of only 4 per cent They also cite 8 early cases of uterine cancer diagnosed primarily by vaginal smears Three of these were carcinomas in situ In the meantime several other reports have appeared, one by Jones, Neustaedter and Mackenzie[9] of the Post-Graduate Hospital of New York and two by J Ernest Ayer[10] of the Royal Victoria Hospital

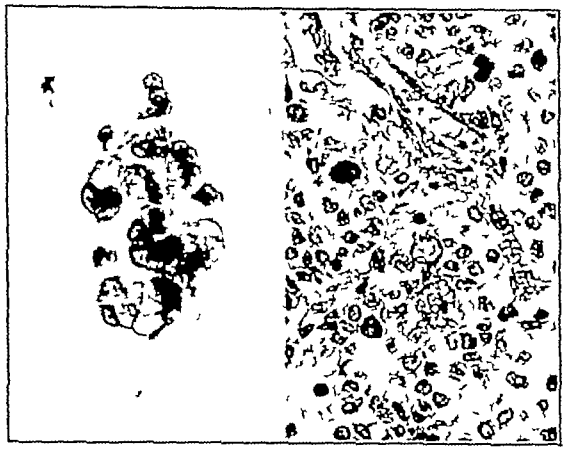


Fig 3 —Bronchogenic carcinoma of the lung

of Montreal All of these confirmed our findings and cited cases in which an early or a primary diagnosis of uterine cancer had been made with the vaginal smear At present many more tests are being conducted in other hospitals in this country as well as in Canada, England and South America

The great simplicity of the test and its low cost have been an inducement to try it as a screening method for detecting early or hidden carcinomas of the female genital tract The attention of public health departments in various states has been called to this possibility, and several investigations are already in progress Among these the studies of the public health departments of the states of New York, Connecticut and Vermont may be mentioned In Massachusetts a thorough and systematic study is now being conducted under the direction of Dr Shields Warren The method has also been introduced and is used routinely in some of the cancer prevention clinics, such as the Strang Clinic of the Memorial Hospital under the direction of Dr Elise L'Esperance

The smear technic is not restricted to the diagnosis of disorders of the female genital system It has been utilized also as an aid in the diagnosis of neoplasms of other systems About a year ago I was greatly impressed by three smears taken at my request from the female urethra by Drs Allister McLellan and J Scott Gardner of the Department of Urology of Cornell Medical College and the New York Hospital The smears of 2 of the patients gave positive and conclusive evidence of carcinoma and that of the third of a sarcoma of the urinary bladder These observations, supported by previous evidence that cells exfoliated from bladder carcinomas can be identified in vaginal smears, led to the decision to investigate the possibility of recovering and recognizing cells or fragments of desquamated cancerous growths of the male and female urinary tract in the sediment of centrifuged urine In a cooperative arrangement with the departments of surgery and urology of our school under the direction of Dr George Heuer and Dr Alexander Stevens, a systematic study of this problem was initiated A preliminary report[11] has already been published by Dr Victor F Marshall of the urology departments of the New York and Memorial hospitals and me This covered 83 cases, 27 of which have been diagnosed as positive for neoplasm on the basis of smears In 24 of these (89 per cent) the smear diagnosis was confirmed by biopsy (21 cases) or clinically (3 cases) In the remaining 3 (11 per cent) the final diagnosis remained obscure One of these 3 cases was originally suspected to be a sarcoma of the prostate An aspiration biopsy of the prostate performed in another hospital several months after the smear examination showed only purulent material Therefore it is possible, though not definite, that our diagnosis in this case was incorrect This would account for one "false positive" in a total of twenty seven positive reports (3 7 per cent) In the group of cases in which the smear was inconclusive or negative, the percentage of correct diagnoses was much lower (about 60)

Since our original report we have tabulated 153 additional cases Thirty-seven of these have been reported as positive for neoplasm on the basis of smears In 34 of the 37 (91 89 per cent) the smear diagnosis was confirmed by biopsy (32 cases) or clinically (2 cases) One (2 7 per cent) has been diagnosed as a papilloma In the remaining 2 cases (5 4 per cent) the final diagnosis still remains uncertain The positive smear diagnosis in these 2 cases was based on the presence of some atypical cells the nature of which is still obscure Many of these cells had multiple nuclei some as many as twenty or more Others showed enlargement of the nucleus and anisonucleosis In the 1 case they were found in urine specimens taken from each of the ureters It is possible that these cells were of histiocytic origin and that we have been wrong in interpreting them as malignant

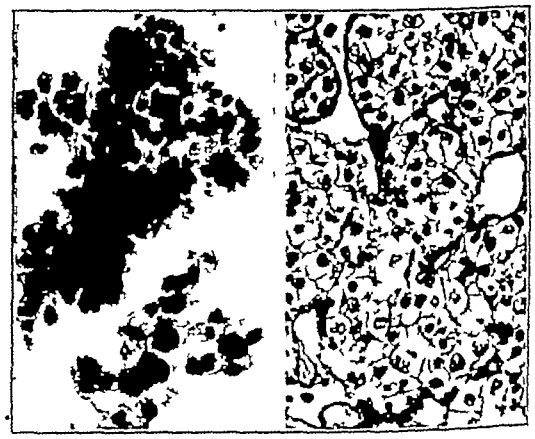


Fig 4 —Clear cell carcinoma of the kidney

In the group of cases in which the smear was inconclusive or negative the percentage of correct diagnoses was 80 However, should all suspected cases in which atypical cells have been found and reported be segregated, the correct diagnosis in the purely negative group would be as high as 93 33 per cent These figures show some improvement over corresponding figures given by Marshall and me[11] in our first report

9 Jones C A Neustaedter T and Mackenzie L L The Value of Vaginal Smears in the Diagnosis of Early Malignancy Am J Obst & Gynec 49: 159 1945

10 Ayre, J E A Simple Office Test for Uterine Cancer Diagnosis Canad M A J 51 17 1944 Ayre J E Bauld W A G and Kearns, P J Test to Show Value of Cervical Cytology Smear in Uterine Cancer Diagnosis Am J Obst & Gynec 50: 102, 1945

11 Papanicolaou, G N and Marshall V F Urine Sediment Smears as a Diagnostic Procedure in Cancers of the Urinary Tract Science 101: 519 1945

Of the 32 correctly diagnosed positive cases there were 17 carcinomas of the bladder, 1 sarcoma of the bladder, 10 carcinomas of the prostate, 3 carcinomas of the kidney and 1 transitional carcinoma of the calix In several of these cases the smear furnished the first positive evidence of malignancy In 1 of these, referred by Dr Howard Jeck of our school, the provisional

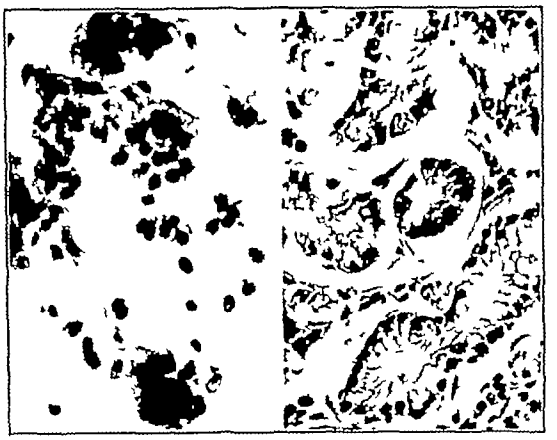


Fig 5 —Mucous carcinoma of the stomach

diagnosis was hypertrophy of the prostate Cancer was not suspected at all The smear was reported as positive, but repeated cystoscopies were negative A subsequent exploratory operation revealed the presence of a carcinoma in a diverticulum of the bladder [12]

In 9 cases of carcinoma of the prostate urine specimens have been examined in the course of estrogenic treatment with or without previous orchiectomy In all but 1 definite cancer cells have been found in the smears In some instances the cells were small, had a dense nucleus and appeared in relatively small numbers In others they were numerous, appearing in large clusters, and showed definite activation of their nuclei and anisocytosis Some cells displayed strikingly aberrant forms and looked like cancer cells enlarged beyond normal limits and remodeled by the prolonged estrogenic therapy The study of these smears is actually fascinating and furnishes convincing evidence of the strong effect of the estrogens on the transitional epithelium of the urinary tract in both men and women An amazing change occurs in the cytology of the urinary smear after an adequate administration of estrogens This modification is comparable to that in the vaginal smear [13] Large acidophilic cells with a pyknotic nucleus and dark cytoplasmic granules, as well as cells loaded with glycogen, become very conspicuous in the smear, while leukocytes show a numerical decrease This change occurs also in smears prepared from the sediment of catheterized urine, as Dr Marshall and I have been able to ascertain which proves that the estrogenic hormone has a stimulating effect not only on the mesodermal and ectodermal epithelia of the uterus, cervix and vagina but also on the endodermal epithelium of the urinary tract The smear technic promises to be of unique value in following the result of various treatments or of irradiation of carcinomas of the urinary tract

Once the door was opened to the use of the smear test for other secretions and fluids, new material, which no longer had to be requested, began to flow into our laboratory Dr Henry Cromwell of Cornell Medical College and the New York Hospital was the first to suggest the use of this technic on sputum and on June 22 he brought us the first specimen This was from an obscure case in which there was a clinical suspicion of cancer of the lung with serosanguineous sputum and suggestive x-ray findings The smears, which were among the first that we had ever prepared from sputum, were not particularly good and disclosed nothing unusual except for one group of cells with enlarged, heterogeneous and hyperchromatic nuclei It was impossible to interpret these as being anything else but a group of malignant cells Bronchoscopy was done by Dr John Kernen and fluid was aspirated, but the findings were negative Bronchoscopy revealed no definite pathologic changes but just slight fixation to the wall of the bronchus A subsequent operation and the biopsy of an excised mediastinal node proved the existence of an undifferentiated bronchogenic carcinoma Since June, more material has been sent to us for study, chiefly from the New York Hospital and the Memorial Hospital through the courtesy of Dr David Barr, Dr Cornelius Rhoads and Dr Lloyd Craver

Up to the present time our experimentation with sputum smears has covered 70 cases Of the 54 which have been completed and tabulated, 22 have been reported as positive for cancer on the basis of smears In 18 of these (82 per cent) the smear diagnosis was confirmed by biopsy or exploratory thoracotomy and in the remaining 4 (18 per cent) by x-ray or other clinical methods The final diagnosis in the 18 confirmed cases was 7 bronchogenic carcinomas, 3 epidermoid carcinomas, 2 metastatic, 1 adenocarcinoma of the right bronchus and 5 moperable carcinomas of the lungs There was no case in which the smear was reported as conclusive for cancer which has been proved to be negative Seven cases have been reported as inconclusive but suspected on the strength of some atypical cells present in the smears Of these, 6 have been proved to be positive by operation or biopsy and 1 remained suspected clinically In the group of 25 cases reported as negative on the basis of smears, 3 (12 per cent) have been shown to present malignant neoplasms of the lungs, 1 (4 per cent) remained obscure and 21 (84 per cent) have been finally diagnosed as negative These results correspond closely to those obtained with urine sediment smears In several instances the sputum smear furnished the first evidence of the presence of a malignant neoplasm Some positive cases showed malignant cells in the sputum smears whereas

*Analysis of Positive Reports Based on Smears*

| | Of Urine Sediment | | Of Sputum | |
|---|---|---|---|---|
| Total number of tabulated cases | 236 | | 54 | |
| Total number of positive reports | 64 | | 22 | |
| Positive pathologically | 56 (87.5%) | 93.75% | 18 (82%) | 100% |
| Positive clinically | 4 (6.25%) | | 4 (18%) | |
| Doubtful | 3 (4.69%) | 6.25% | 0 | |
| Negative | 1 (1.56%) | | 0 | |

12 We recently had a similar case referred by Dr Allister McLellan in which a transurethral prostatectomy had been performed one year before There had never been clinical symptoms of cancer The urine sediment smears were definitely positive A subsequent exploration has shown a small early carcinoma in a diverticulum of the bladder

13 The urine sediment smear is a sensitive and dependable criterion in evaluating estrogenic action In the urine of men the small-nucleated cornified cells are absent and appear only after estrogenic therapy whereas in the vaginal fluid of women they are frequently found under other conditions and are therefore less pathognomonic The glycogenic cells also offer a good criterion as they are rare in the male urine and show decided increase during estrogenic therapy while in the vaginal fluid they are usually present in large numbers.

bronchoscopy and aspiration biopsy were negative One of the patients had three successive aspiration biopsies which were negative The sputum smear was positive and showed "several abnormal cells offering conclusive evidence of malignancy and slight metaplasia," as reported A subsequent exploratory thoracotomy has shown an inoperable cancer of the lung

### PREVIOUS INVESTIGATIONS

When we began our studies on sputum smears for the purpose of recovering and identifying desquamated malignant cells we were not fully aware of the large number of investigations that had previously been conducted on the same problem I have recently made a search of the literature and have found that much has been published on this subject since 1887 [14] The most recent and most complete of these papers is that published in 1944 by H H Wandall [15] of Copenhagen in which he gives the results of sputum examinations for the diagnosis of cancer on 250 patients He used the technic of Dudgeon and Wrigley,[16] which consists in the fixation of the sputum smear in mercury bichloride and in its staining with hematoxylin and eosin He reports an erroneous diagnosis in only 6 of 193 positive cases (a percentage error of 3 1) Our results are in close agreement with his findings

### SMEARS FROM GASTRIC AND OTHER FLUIDS

The group of smears prepared from gastric fluid deserves particular interest Cancer of the stomach is one of the most prevalent forms of all malignant tumors in men and, since it is accessible to surgery, its early diagnosis would be of great help in reducing its mortality I always doubted that cells could be recovered from the stomach in a good state of preservation permitting recognition of their finer structural details Yet in practically all of our smears such cells were well preserved and stained despite their previous exposure to the action of the gastric secretions

So far only 9 cases have been studied, 2 of which were positive and 7 negative It is gratifying to state that all of these have been diagnosed correctly by the smear The 2 malignant cases were an adenocarcinoma of the stomach and a mucous gastric carcinoma The smears of the aspiration fluid showed beautifully preserved cancer cells No aberrant cells have been found in any 1 of the 7 negative cases These observations, though limited in number, demonstrate conclusively that cancer of the stomach can be diagnosed through the identification of cells which have been exfoliated from its surface

Also 4 specimens of aspirated duodenal fluid have been sent to us for study One was from a case of carcinoma of the pancreas with metastases to the mesentery In this specimen the presence of some hyperchromatic and somewhat suggestive cells was noted and reported but the smears were poorly preserved and, in general, inconclusive The other 3 cases were negative

The duodenal smears are remarkable for their unusually low content in exfoliated cells They make a striking contrast to gastric fluid smears, which as a rule contain numerous desquamated cells, many of which are derived from the epithelial lining of the esophagus Occasionally ciliated cells of the respiratory epithelium and histiocytes loaded with pigment like those found in the lungs may be seen in the gastric smear These evidently enter the stomach with mucus which is swallowed

A small number of thoracic and peritoneal fluid specimens have also been sent to us for study Most of these were negative We took an interest in them in that they offered new material for comparison The comparative study of cells representative of different types of malignant neoplasms can be carried out more advantageously in smears when the cells are detached and present themselves to the eye as complete and independent units than in sections in which they lose their individuality and cannot be well visualized outside the pattern of the tissue to which they belong The pathologist is struck more by the differences prevailing in the various types of neoplastic tissues, while the student of smears is apt to pay more attention to certain traits which may be common to different cell types

### TECHNIC

The technic of preparing and staining the smears differs only slightly with the various specimens The vaginal fluid is aspirated with a glass pipet, spread evenly on a slide and fixed immediately in a solution of equal parts of 95 per cent alcohol and ether [5] The endocervical and endometrial fluids are aspirated with a special flexible metal cannula [17]

For the urine tests, approximately 40 cc of urine is considered sufficient Catheterized urine is preferable as it is more cellular and in women it is free from vaginal cells, which greatly confuse the cytologic picture The urine is mixed with 95 per cent alcohol and then centrifuged Smears are prepared from the sediment and fixed in alcohol-ether [11] Gastric aspiration and thoracic or peritoneal fluid specimens are handled in the same way For sputum examinations a specimen after coughing is requested This is fixed immediately in 70 per cent alcohol Smears are made from it and fixed in alcohol-ether

All smears are stained first in hematoxylin and then in OG6 and EA 36, as described in a previous article [18] A good nuclear staining is essential The two counterstains which we use are fairly transparent and give a good differentiation of basophilic and acidophilic cells Eosin is not recommended as a counterstain because it is less transparent and stains all cells uniformly

### DIAGNOSTIC VALUE

The diagnostic value of the smear test is based on the constant exfoliation of malignant neoplasms having a free surface This could be compared to a curettage that nature keeps on performing continuously The cells become detached either singly or in clusters Therefore the criteria in smear diagnosis are not entirely cytologic, as some persons believe Small fragments of tissue in the form of cell clusters are found frequently in cancer smears When present they indicate exfoliation and help greatly in the diagnosis In most instances one can rely more on such fragments, which retain some of the structural characteristics of the neoplasm, than on individual cells

The size and form of the nucleus are most significant In the malignant cell the nucleus tends to be unusually large in proportion to the size of the cell It also tends to grow far beyond normal limits and to acquire atypical forms Its structure assumes a characteristic

14 Hampeln P St Petersburg med Wchnschr 1876, No 40 cited by Betschardt 6 (11)
15 Wandall H H A Study of Neoplastic Cells in Sputum as a Contribution to the Diagnosis of Primary Lung Cancer Acta chir Skandinav (supp 93) 19 1 1944
16 Dudgeon L S and Wrigley C. H On the Demonstration of Particles of Malignant Growth in the Sputum by Means of the Wet Film Method J Laryng & Otol. 50: 752, 1935
17 Cary W H A Method of Obtaining Endometrial Smears for Study of Their Cellular Content Am J Obst. & Gynec 40: 422, 1943
18. Papanicolaou G N A New Procedure for Staining Vaginal Smears Science 95: 438 1942

pattern with intensely stained granules or small clumps of chromatin and a distinct network of filaments centering in the nucleoli Some nuclei show changes suggestive of an early prophasic stage Actual mitoses are rather rare, though they may occasionally appear in relatively large numbers Nuclei are often hyperchromatic or degenerated Degenerating nuclei may lose entirely their finer structure and stain almost black The nucleoli show considerable variability In certain types of cancer they are large and conspicuous, in others less prominent The nucleus often shows atypical and unequal fragmentation resulting in the not infrequent appearance of binucleate or multinucleate cells

The cytoplasm in the undifferentiated cancer cell is rather basophilic, but in some differentiated cells, like those found in squamous cell carcinomas of the cervix or of the lungs, it is strongly acidophilic An abnormal vacuolation is not rare, particularly in adenocarcinomas Sometimes the vacuoles contain a mucoid substance or are infiltrated by leukocytes, monocytes or other small cells The inclusion of one cell into another is not unusual and gives the impression of a phagocytic process It might be attributed to the high proliferative activity of the cells and to their crowding, which cause one cell to be pressed into another

The form of the cancer cells depends on the prevailing type of cancer Whereas the nucleus tends to show uniform and comparable changes in all types of malignant neoplasms, the cell as a whole largely retains its individuality and its specific form In the undifferentiated types it has the primitive round or oval form of the embryonic cell In the differentiated types it preserves much of the distinctive form of the tissue from which it draws its origin However, this does not apply to all cells Many show deviations from the normal and acquire atypical and sometimes entirely monstrous forms Such monstrosities are often seen in squamous cell carcinomas of the cervix

When cancer cells appear in clusters they offer additional criteria One of these is crowding, which has a definite diagnostic value The cells overlap and are so densely arranged that it is impossible to focus them in one plane The crowding of the cells is more apparent in fragments of the tumor found in smears than in sections of the tumor itself Anisocytosis and anisonucleosis are also very significant and not infrequent

The diagnosis of cancer by smears should be based on strong and substantiative evidence offered by sufficiently pathognomonic cells and cell groups One should refrain from reaching a final conclusion on the strength of only a few cells The failure to detect malignant cells in the smear of a positive case is in a way excusable, but the wrong interpretation of findings is apt to be severely critized and to cause serious doubt as to the accuracy and dependability of the test

A failure may sometimes be due to the insufficiency or poor preservation and staining of a specimen or to the absence of characteristic cells in the smear because of the deficient shedding of the tumor In 1 case of carcinoma of the kidney the examination of the urine for cancer cells was negative in seven out of nine tests

When findings are inconclusive the test should be repeated whenever possible One of the greatest advantages of this method of diagnosis is its technical simplicity, which permits repeated examinations without much inconvenience or expense In the positive cases one test is, as a rule, sufficient

## ADVANTAGES AND DISADVANTAGES OF TEST

The smear, like any other test, has its distinctive advantages and disadvantages These may be objectively summarized as follows Among the advantages of this method one should mention First, its simplicity and inexpensiveness Second, its reliability in the hands of experienced men Third, that it permits the early recognition of incipient cases or of hidden carcinomas such as carcinomas in situ, this is because aberrant cells become exfoliated from the surface of a cancerous growth even before it is ulcerated Fourth, that it can be carried out on a large scale as a screening method Fifth, that it does not conflict in any way with other well established methods of pathologic diagnosis such as biopsy or curettage, being, on the contrary, a valuable complement to them as it covers a larger area than they do Sixth, that it may eventually reveal the presence of cancer where biopsy has failed,[19] although it may occasionally fail in its turn to show an existing cancer proved by biopsy Seventh, that it is of unique value in following up the result of operative procedures or the progress of irradiation or other therapy All these points have been amply supported by conclusive evidence

Its main disadvantages are the following First, its criteria are not yet clearly outlined and need to be further standardized Second the type and origin of the malignant cells are not always clear, some cells retain their original pattern, while others lose it beyond possible identification Third, it does not show the grade of malignancy, although it may occasionally give some hint as to the prognosis Fourth, it does not supply information as to the mitotic activity of the malignant growth or its relationship to the adjoining normal tissues Fifth, the average time required for the examination of a smear is somewhat longer than that required for a pathologic section

## COMMENT

The idea of studying the exfoliated cells in various secretions of the body is not new The vaginal fluid was examined for the first time almost a hundred years ago by Pouchet[2] and the sputum some sixty years ago by Hampeln[14] Examination of urine and of thoracic and peritoneal fluids has been a routine procedure for a long time in pathologic laboratories Many investigators have worked on the possibility of applying such examinations to the diagnosis of cancer, and their results have been published in a large number of papers Since our note on the "urine test" has appeared, I have received several letters from men who at one time or another had succeeded in diagnosing malignant neoplasms through the identification of exfoliated cancer cells in the urine

Why were not the apparent potentialities of this diagnostic procedure fully appreciated much earlier? Is it because of the widely prevailing opinion that a malignant tumor cannot be safely diagnosed except by biopsy? Is it because of the discouragement of some investigators by diagnostic errors which occurred during the early stages of their experimentation or by the

19 A recent case may serve as an illustration of this point A woman aged 42 was admitted to the New York Hospital on Sept 7 1944 with a provisional diagnosis of right ovarian cyst Vaginal and endocervical smears showed evidence of a malignant neoplasm Because of these findings the endometrium was curetted on September 9 and a biopsy of material from the cervix made September 23 The findings were inconclusive Frequent examinations in the clinic were all negative On Dec 5 1945 a second biopsy was performed and revealed the presence of an intraepithelial carcinoma fully fifteen months after its first diagnosis by smears

strong opposition which they have encountered? Or is it because of an inefficient and inadequate technic? The last reason appears to be more likely, though other factors must have contributed. A good fixation and a good staining of the cancer cells are of paramount importance in this cytologic method of diagnosis.

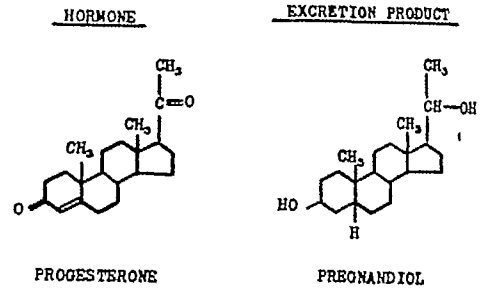
I fully realize that the report which I have given is fragmentary and incomplete. This is because in this new and vast field of research the work which we have done so far is still incomplete and fragmentary. It will take many years before all the aspects and potentialities of this new diagnostic approach have been thoroughly explored. However, much has already been accomplished. The soundness, reliability and practical value of this method of pathologic diagnosis have been well established and are now more generally recognized. Its specific advantages and its superiority in some respects over other diagnostic procedures are apparent and are no longer disputed. Having devoted a large part of my scientific endeavors to the establishment of this method as an instrument of research and diagnosis I may be allowed to assert my absolute faith in it and my strong belief that it will eventually prove to be as stimulating and productive in the field of cancer cytology and cancer diagnosis as it has been in the realm of experimental and human sex physiology and endocrinology.

## PREDICTION OF FATE OF THREATENED ABORTION BY PREGNANDIOL

HENRY S GUTERMAN M D
Chicago

It has been shown in this laboratory that the determination of pregnandiol excretion in urine (by a qualitative color reaction) can be used as a diagnostic test for pregnancy, with an accuracy similar to that obtained with the Friedman (rabbit) procedure.[1] Recently we have been following, by means of the color test the excretion of pregnandiol in complications of pregnancy, particularly in threatened abortion. It will be demonstrated in this report that the pregnandiol color test can be used to predict with a large degree of accuracy the fate of a threatened abortion, and that it can thus serve as a prognostic guide for the physician.

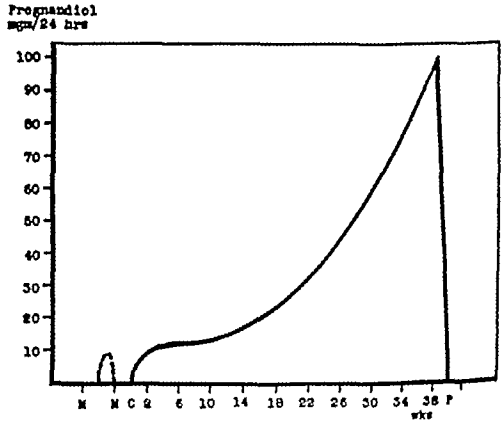
Pregnandiol is a biologically inactive steroid found in the urine of women. On the basis of the following considerations it is generally accepted to be the urinary excretion product of progesterone a hormone secreted by the corpus luteum and/or the placenta. 1. Coincident with the period of corpus luteum function pregnandiol is present in the urine of women in the latter half of the menstrual cycle until one to four days before the onset of the flow.[2] 2. When fertilization occurs and normal pregnancy follows, the corpus luteum persists and pregnandiol excretion continues.[3] 3. Furthermore, when large amounts of progesterone are administered to men or women (normal, hysterectomized and/or oophorectomized) pregnandiol appears in the urine.[4] The structural similarity between progesterone and pregnandiol is illustrated in the structural formulas.




Chemical structure of progesterone and pregnandiol. The conversion of progesterone to pregnandiol involves the addition of two hydrogen atoms at each double bond.

Pregnandiol studies in normal pregnancy reveal a definite pattern of excretion despite quantitative variations in individual cases as shown in the chart. In early pregnancy urinary pregnandiol excretion continues at about the maximum level reached during the latter half of the normal menstrual cycle. Between the ninth and the twelfth week the amount of pregnandiol appearing in the urine begins to rise sharply and reaches a maximum level about two to three weeks before delivery. From this peak the excretion decreases sharply, and pregnandiol disappears from the urine twenty four to forty-eight hours after delivery.[5]

Venning and Browne believe that the corpus luteum secretes progesterone during the first two months of pregnancy. Regression of the corpus luteum of pregnancy in the third month of gestation coincides with increasing levels of pregnandiol excretion. They conclude that the placenta probably assumes the function of secreting progesterone at this stage.[3] When parturition approaches, the secretory activity of the placenta decreases and pregnandiol levels fall.




A schematic illustration of the pattern of pregnandiol excretion in the normal menstrual cycle and normal human pregnancy. *M* menses *C*, conception *P*, parturition.

The symptoms of threatened abortion occur most frequently in the third month of human gestation

From the Department of Metabolic and Endocrine Research Research Institute Michael Reese Hospital.

The Department of Metabolic and Endocrine Research is in part supported by the Michael Reese Research Foundation.

This work was aided by a grant from the Committee on Scientific Research of the American Medical Association to Dr. Rachmiel Levine.

Dr. Rachmiel Levine director of the Department of Metabolism and Endocrinology, gave aid and encouragement in this work. Technical assistance was given by Miss L. Marquardt Miss M. Weichert and Mrs. E. F. Hirsch. Drs. B. I. Coopersmith Richard Frank and Simon Cideon cooperated in providing the greater part of the clinical material for study.

1. Guterman footnotes 8 and 9.
2. Venning E. H. and Browne J. S. L. Studies on Corpus Luteum Function. Urinary Excretion of Sodium Pregnandiol Glucuronidate in Human Menstrual Cycle. Endocrinology **21**: 711-721, 1937.
3. Browne, J. S. L., Henry, J. S. and Venning E. H. The Significance of Endocrine Assays in Threatened and Habitual Abortion. Am. J. Obst. & Gynec. **38**: 927-955, 1939.
4. Buxton C. L. and Westphal U. Recovery of Pregnandiol in Urine of Men Treated with Progesterone. Proc. Soc. Exper. Biol. & Med. **41**: 284-287, 1939. Venning E. H. and Browne J. S. L. A Study of the Metabolism of Crystalline Progesterone, Endocrinology **27**: 707-720, 1940.
5. Bachman E. Leekley D. and Hirschmann H. Excretion of Sodium Pregnandiol Glucuronidate in Urine of Normal Human Pregnancy. J. Clin. Investigation **19**: 801-807, 1940. Browne Henry and Venning.[3]

TABLE 1—*Clinical Data, Prognosis Based on Color Reactions and Ultimate Clinical Results in Seventy-Three Cases of Threatened Abortion Reported in This Series Grouped According to Mode of Pregnandiol Excretion*

| No | Age | Para | Gravida | Last Menstrual Period | Date of Symptoms | Pregnandiol Test | Date | Friedman Test | Predicted Outcome | Clinical Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Group 1 (Persistent Positive Pregnandiol Tests) | | | | | |
| 1 | [illegible]5 | 0 | 1 | 10/ 2/43 | 11/27/43 | Positive<br>Positive | 11/16/43<br>1[illegible]/ 4/43 | Positive<br>Positive | Retention | Retention |
| 2 | 32 | 1 | 2 | 1[illegible]/15/43 | 3/ 6/44 | Positive | 3/14/44 | Positive | Retention | Retention |
| 3 | 36 | 1 | 2 | 1/ 1/44 | 4/ 2/44 | Positive | 4/ 5/44 | Positive | Retention | Retention |
| 4 | [illegible]6 | 0 | 1 | 1/[illegible]2/44 | 4/ 7/44<br>4/24/44 | Positive | 4/21/44 | Positive | Retention | Placenta previa abortion 4/25/44 |
| 5 | 26 | 2 | 3 | [illegible]/1[illegible]/44 | 4/10/44<br>4/30/44 | Positive<br>Positive<br>Positive | 4/26/44<br>4/27/44<br>4/29/44 | Positive<br>Positive | Retention | Retention |
| 6 | 32 | 0 | 3 | 4/12/44 | 6/18/44 | Positive | 6/23/44 | | Retention | Retention |
| 7 | 23 | 0 | 1 | 5/ 5/44 | 7/ 1/44<br>7/ 7/44 | Positive | 7/ 7/44 | Positive | Retention | Retention |
| 8 | 32 | 0 | 1 | 6/25/44 | 9/15/44<br>9/[illegible]9/44 | Positive | 9/29/44 | Positive | Retention | Retention |
| 9 | 35 | 0 | 1 | 7/ 4/44 | 10/15/44<br>10/[illegible]/44 | Positive | 10/10/44 | | Retention | Retention |
| 10 | 32 | 0 | 1 | ? | 9/18/44<br>10/ 5/44 | Positive<br>Positive | 9/30/44<br>10/ 5/44 | Positive | Retention | Retention |
| 11 | 22 | 2 | 3 | 8/ ?/44 | ? | Positive | 10/ 2/44 | Positive | Retention | Retention |
| 12 | 33 | 0 | 1 | 9/ ?/44 | 4/ 1/45<br>4/ 2/45 | Positive<br>Positive | 4/ 7/45<br>4/17/45 | | Retention | Retention |
| 13 | 35 | 1 | 3 | 10/ 8/44 | 12/ ?/44 | Positive<br>Positive<br>Positive | 12/[illegible]2/44<br>12/20/44<br>12/29/44 | Positive | Retention | Retention |
| 14 | 20 | 1 | 2 | 10/ ?/44 | 2/19/45 | Positive | 2/23/45 | Positive | Retention | Placenta previa abortion 2/22/45 |
| 15 | 35 | 1 | 2 | 11/13/44 | ? | Positive | 3/10/45 | Positive | Retention | Retention |
| 16 | 35 | 1 | 2 | 11/30/44 | 2/20/45 | Positive | 2/2[illegible]/45 | | Retention | Retention |
| 17 | 30 | 0 | 1 | 1[illegible]/[illegible]8/44 | 1/27/45 | Positive<br>Positive | 3/ 1/45<br>4/10/45 | | Retention | Retention |
| 18 | 27 | 1 | 2 | 1[illegible]/25/44 | 2/[illegible]1/45<br>3/ 8/45 | Positive | 3/ 8/45 | Positive | Retention | Retention |
| 19 | [illegible]6 | 1 | 3 | 12/ [illegible]/44 | ? | Positive | 4/ 5/45 | Positive | Retention | Retention |
| [illegible]0 | 25 | 1 | 2 | 1/ 1/45 | 5/18/45<br>5/[illegible]2/45 | Positive | 5/[illegible]1/45 | | Retention | Abortion 5/22/45 |
| 21 | 32 | 1 | 2 | 1/15/45 | 3/ 1/45<br>4/ 7/45 | Positive | 4/ 2/45<br>4/ 9/45 | Positive | Retention | Retention |
| 22 | 30 | 0 | 1 | 1/29/45 | 4/[illegible]1/45 | Positive<br>Positive | 4/24/45<br>4/30/45 | Positive | Retention | Retention |
| [illegible]3 | 28 | 1 | 2 | 2/10/45 | Intermittent | Positive | 4/1[illegible]/45 | | Retention | Retention |
| 24 | 31 | 0 | 2 | 3/ 1/45 | 5/13/45 | Positive<br>Positive | 4/13/45<br>5/14/45 | Positive | Retention | Retention |
| 25 | 35 | 0 | 1 | 3/ 3/45 | 8/20/45 | Positive<br>Positive<br>Positive | 8/30/45<br>9/ 4/45<br>9/ 5/45 | | Retention | Miscarriage fibroid 9/6/45 |
| 26 | 26 | 0 | 2 | 3/15/45 | 4/10/45 | Positive<br>Positive | 5/ 4/45<br>5/24/45 | | Retention | Retention |
| 27 | 34 | 1 | 2 | 3/[illegible]5/45 | 6/ 1/45<br>6/12/45 | Positive | 6/11/45 | | Retention | Retention |
| 28 | 22 | 0 | 1 | 4/ 5/45 | 5/31/45<br>6/ 6/45 | Positive | 6/ 5/45 | Positive | Retention | Retention |
| | | | | | Group 2 (Initial Negative and Subsequent Positive Pregnandiol Tests) | | | | | |
| 29 | 21 | 0 | 1 | 9/ ?/43 | 1/21/44<br>1/[illegible]8/44 | Negative<br>Positive<br>Positive | 1/2[illegible]/44<br>1/[illegible]3/44<br>1/24/44 | Positive<br>Positive | Retention | Retention |
| 30 | 26 | 0 | 2 | 1/29/44 | 3/27/44<br>5/ 1/44 | Negative<br>Negative<br>Negative<br>Positive<br>Positive | 3/[illegible]8/44<br>3/20/44<br>3/30/44<br>4/ 4/44<br>4/ 5/44 | Positive<br>Positive<br>Positive<br>Positive | Retention | Retention |
| 31 | 28 | 0 | 2 | 7/26/44 | ? | Negative<br>Positive | 9/15/44<br>9/20/44 | | Retention | Retention |
| 32 | ? | 0 | 2 | 9/13/44 | 10/10/44<br>11/ 3/44 | Negative<br>Positive | 10/26/44<br>11/ 0/44 | Positive | Retention | Retention |
| 33 | 31 | 1 | 2 | 9/[illegible]6/44 | 11/20/44 | Negative<br>Positive | 11/28/44<br>12/ 1/44 | Positive | Retention | Retention |
| 34 | 30 | 0 | 1 | 2/20/45 | 4/12/45 | Negative<br>Positive | 4/18/45<br>4/25/45 | Positive | Retention | Retention |
| | | | | | Group 3 (Initial Positive and Subsequent Negative Pregnandiol Tests) | | | | | |
| 35 | 31 | 1 | 2 | 1/25/44 | 3/14/44 | Positive<br>Negative | 3/10/44<br>3/14/44 | Positive<br>Positive | Abortion | Abortion |
| 36 | 20 | 0 | 2 | 5/ 8/44 | [illegible]/ 4/44<br>7/14/44 | Positive<br>Negative | 7/ 8/44<br>7/1[illegible]/44 | Positive | Abortion | Abortion 7/13/44 |
| 37 | [illegible]3 | 0 | 1 | 8/ 1/44 | Intermittent | Positive<br>Negative<br>Negative | 10/23/44<br>10/30/44<br>10/31/44 | Positive | Abortion | Abortion 11/1/44 |
| 38 | 27 | 0 | 1 | 10/29/44 | 12/13/44<br>1[illegible]/27/44<br>1/12/45<br>1/24/45 | Positive<br>Positive<br>Positive<br>Positive | 12/27/44<br>1/14/45<br>1/2[illegible]/45<br>1/[illegible]/45 | | Abortion | Abortion 1/29/45 |
| 39 | 27 | 0 | 1 | 6/ [illegible]/45 | [illegible]/18/45 | Positive<br>Positive<br>Negative<br>Negative | 7/ 5/45<br>7/ 9/45<br>7/18/45<br>[illegible]/2[illegible]/45 | Positive | Abortion | Abortion 7/20/45 |

TABLE 1.—*Clinical Data Prognosis Based on Color Reactions and Ultimate Clinical Results in Seventy-Three Cases of Threatened Abortion Reported in This Series Grouped According to Mode of Pregnandiol Excretion—Continued*

| No. | Age | Para | Gravida | Last Menstrual Period | Date of Symptoms | Pregnandiol Test | Date | Friedman Test | Predicted Outcome | Clinical Result |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Group 4 (Persistent Negative Pregnandiol Tests) | | | | | |
| 40 | 32 | 0 | 1 | 9/ ?/43 | Intermittent | Negative<br>Negative<br>Negative | 4/18/44<br>4/26/44<br>5/15/44 | Positive<br>Positive<br>Positive | Abortion | Abortion 5/29/44 |
| 41 | 31 | 0 | 1 | 10/ 1/43 | 12/ 6/43<br>12/20/43 | Negative<br>Negative | 12/ 9/43<br>12/24/43 | Positive<br>Negative | Abortion | Abortion |
| 42 | 28 | 0 | 1 | 11/28/43 | 1/ 4/44<br>1/18/44 | Negative<br>Negative | 1/ 4/44<br>1/18/44 | Positive<br>Positive | Abortion | Abortion 2/4/44 |
| 43 | 26 | 0 | 1 | ? | 1/19/44 | Negative | 1/19/44 | Negative | Abortion | Abortion |
| 44 | 24 | 0 | 1 | 1/ 1/44 | 8/ 0/44<br>8/11/44 | Negative | 8/10/44 | Positive | Miscarriage | Miscarriage 8/11/44 |
| 45 | 39 | 2 | 3 | 1/20/44 | 2/ 1/44<br>3/ 1/44 | Negative | 3/ 0/44 | Positive | Abortion | Tubal abortion 3/?/44 |
| 46 | 35 | 1 | 3 | 5/ 1/44 | Intermittent | Negative | 7/31/44 | | Abortion | Abortion |
| 47 | 37 | 3 | 5 | 5/ 0/44 | ? | Negative<br>Negative | 6/23/44<br>8/20/44 | Negative<br>Negative | Abortion | Abortion 9/?/44 |
| 48 | 26 | 0 | 1 | 5/10/44 | 7/15/44<br>7/18/44 | Negative<br>Negative | 7/13/44<br>7/21/44 | Positive<br>Positive | Abortion | Abortion |
| 49 | 29 | 3 | 4 | 6/10/44 | ? | Negative | 8/ 1/44 | | Abortion | Abortion 8/2/44 |
| 50 | 32 | 2 | 2 | 6/ 6/44 | 8/20/44<br>9/ 7/44<br>10/10/44 | Negative | 10/12/44 | | Abortion | Abortion |
| 51 | 22 | 1 | 1 | 6/10/44 | 8/20/44 | Negative | 8/30/44 | | Abortion | Abortion |
| 52 | 34 | 0 | 1 | 6/ ?/44 | ? | Negative | 8/18/44 | | Abortion | Abortion 8/20/44 |
| 53 | 31 | 0 | 1 | 7/ ?/44 | ? | Negative | 10/10/44 | Negative | Abortion | Abortion |
| 54 | 23 | 0 | 1 | 7/22/44 | 2/20/45 | Negative<br>Negative<br>Negative | 2/28/45<br>3/15/45<br>3/29/45 | Positive<br>Positive<br>Positive | Abortion | Abortion |
| 55 | 40 | 2 | 2 | 8/ 3/44 | 10/ 1/44<br>10/ 7/44 | Negative<br>Negative | 10/ 7/44<br>10/10/44 | | Abortion | Abortion |
| 56 | 25 | 0 | 1 | 8/10/44 | 10/ 6/44<br>10/ 7/44 | Negative<br>Negative | 9/22/44<br>9/28/44 | Positive<br>Positive | Abortion | Abortion 10/7/44 |
| 57 | 30 | 1 | 2 | 8/15/44 | 9/18/44<br>10/ 4/44 | Negative<br>Negative<br>Negative<br>Negative<br>Negative<br>Positive | 9/21/44<br>10/ 3/44<br>10/ 4/44<br>10/10/44<br>10/ 7/44<br>3/19/45 | Positive | Abortion | Retention |
| 58 | 30 | 0 | 1 | 8/18/44 | 10/15/44 | Negative<br>Negative | 10/23/44<br>11/ 1/44 | Positive | Abortion | Abortion 10 weeks |
| 59 | 21 | 0 | 1 | 9/10/44 | 12/14/44<br>12/18/44 | Negative | 12/18/44 | Positive | Abortion | Abortion 12/21/44 |
| 60 | 26 | 1 | 5 | 10/ 3/44 | Intermittent | Negative<br>Negative | 11/11/44<br>12/23/44 | | Abortion | Abortion 1/26/44 |
| 61 | 38 | 0 | 1 | 11/24/44 | ? | Negative<br>Negative<br>Negative | 1/26/45<br>1/27/45<br>2/ 3/45 | Positive<br>Positive | Abortion | Abortion |
| 62 | 39 | 0 | 1 | 12/10/44 | ? | Negative | 1/20/45 | Positive | Abortion | Abortion |
| 63 | 37 | 2 | ? | 12/ ?/44 | ? | Negative | 2/13/45 | Negative | Abortion | Abortion |
| 64 | 28 | 2 | 2 | 1/25/45 | 3/22/45 | Negative | 3/27/45 | | Abortion | Abortion |
| 65 | 22 | 0 | 1 | 2/14/45 | ? | Negative | 4/ 7/45 | Positive | Abortion | Abortion 4/15/45 |
| 66 | 40 | 1 | 2 | 3/23/45 | 5/ 4/45<br>5/13/45 | Negative | 5/11/45 | Positive | Abortion | Abortion |
| 67 | 39 | 0 | 1 | 4/ 4/45 | ? | Negative | 6/22/45 | Positive | Abortion | Abortion 7/5/45 |
| 68 | 34 | 1 | 2 | 4/10/45 | 6/13/45<br>6/19/45 | Negative<br>Negative | 6/18/45<br>6/19/45 | | Abortion | Abortion 6/19/45 |
| 69 | 31 | 1 | 2 | 4/24/45 | 6/18/45<br>6/21/45 | Negative<br>Negative | 6/19/45<br>6/21/45 | | Abortion | Abortion 6/21/45 |
| 70 | 30 | 0 | 1 | 4/ ?/45 | 6/12/45 | Negative | 6/26/45 | | Abortion | Abortion |
| 71 | 33 | 1 | 2 | 6/ 0/45 | 8/23/45<br>8/27/45 | Negative | 8/27/45 | Negative | Abortion | Abortion |
| 72 | 24 | 0 | 1 | 6/ 7/45 | 8/25/45 | Negative | 8/28/45 | Negative | Abortion | Abortion |
| 73 | 24 | 0 | 1 | 7/10/45 | 8/17/45 | Negative | 8/17/45 | Negative | Abortion | Abortion 8/?4/45 |

Browne, Henry and Venning [5] pointed out that this corresponds to the period when secretory function is being transferred from the corpus luteum to the placenta. They postulated that failure to maintain progesterone secretion during this transition stage may be the factor responsible for abortions occurring in the first trimester. Studying pregnandiol excretion (as an index of progesterone elaboration) in cases of threatened abortion, these authors showed that the persistence of pregnandiol in the urine during the symptom period was associated with the resumption of a normal course of pregnancy. If pregnandiol dropped to a low level or disappeared from the urine, abortion followed.[5] Similar observations have been made by other investigators.[6]

This information, if correct, would provide the physician with a prognostic guide in evaluating a case of threatened abortion. However, the methods usually employed in determining pregnandiol gravimetrically are not practical for routine clinical use. They are time consuming, require skilled technical help and employ large volumes of urine.

Hamblen, Cuyler and Baptist,[7] in their report on pregnandiol determinations find that the delay imposed by such a prolonged determination renders the data "of no practical or constructive import."

In 1944 this laboratory reported a rapid simple method for the determination of pregnandiol which is practical for clinical use. In this procedure a color reac-

6. Cope, C. L. The Diagnostic Value of Pregnandiol Excretion in Pregnancy Disorders, Brit. M. J. 2:545-549, 1940. Hamblen, Cuyler and Baptist.[7] Hain.[10]

7. Hamblen, E. C., Cuyler, W. K., and Baptist, M. Pregnandiol Determinations in Gynecology and Obstetrics. Am. J. Obst. & Gynec. 44:442-454, 1942.

tion occurs when concentrated sulfuric acid is added to the pregnandiol extracted from urine (pregnandiol color reaction) [8]

On the basis of the report of Browne, Henry and Venning [3] and a few of our own observations [8] the study of the pregnandiol excretion of threatened abortion by means of the pregnandiol color reaction was extended to ascertain whether it could be used to establish the prognosis in such cases Employing the pregnandiol color test routinely to predict the course of threatened abortion, my associates and I have found it accurate, reliable and practical in the 73 cases studied to date

## METHOD

First morning urine specimens from pregnant women who complained of both abdominal cramps and vaginal spotting or bleeding were examined for pregnandiol Whenever possible daily urine samples were tested

The pregnandiol color reaction technic employed in this study was detailed previously [8] The procedure is simple and requires two and a half to three hours to complete Four to six tests can be carried out simultaneously by one person The chemicals are inexpensive The equipment is standard in clinical laboratories

The pregnandiol color test is read as "positive" when a deep yellow to orange or orange-brown develops A colorless or pale yellow final solution is considered "negative" The minimal "positive" color (deep yellow) represents 0 4 mg of pregnandiol per hundred cubic centimeters of urine (the volume employed in each test) or the excretion of 6 to 10 mg in twenty-four hours [9] The latter figure represents the excretion of pregnandiol in early normal pregnancy

In each case studied the physician was notified whether or not the patient excreted pregnandiol, and a tentative prognosis was made on this basis The ultimate clinical fate in each case was then compared with the prognosis made in the laboratory

## RESULTS

Table 1 lists the pertinent clinical data, the pregnandiol color reactions, the tentative prognosis and the clinical results in the 73 cases studied The cases are divided into four groups according to the mode of pregnandiol excretion In groups 1 and 2, in which the pregnandiol color reaction was persistently "positive" or became "positive," the symptoms of threatened abortion subsided and pregnancy continued normally In groups 3 and 4, in which the pregnandiol color reaction was persistently "negative" or became "negative," the patients aborted The prognosis indicated by the pregnandiol color reaction coincided with the clinical results in 68 of the 73 cases studied, indicating a correct correlation in 93 per cent of the cases

Table 2 summarizes the results obtained in this group of 73 cases studied to date In 39 cases the pregnandiol color reaction was persistently "negative" or became "negative," thereby indicating to us a poor prognosis or inevitable abortion Thirty-eight patients in this group went on to abort, and 1 resumed a normal course of pregnancy

The color reaction was persistently "positive" or became "positive," indicating to us a good prognosis, in 34 cases In 30 of these patients the symptoms of threatened abortion subsided and pregnancy resumed a normal uneventful course Thus the pregnandiol color reaction predicted correctly the course of 38 of the 42 patients who did abort. In the group that did not abort, prediction by the pregnandiol color reaction was correct in 30 of the 31 cases studied The correlation between the pregnandiol color reaction and clinical course of 73 pregnant patients threatened with abortion is 93 per cent correct.

In 5 cases the prognosis based on the pregnandiol color reaction did not coincide with the clinical result Four patients (4, 14, 20, 25) aborted although the pregnandiol color tests were "positive", 1 patient (57) did not abort in spite of persistently "negative" color reactions

In the former group a diagnosis of placenta previa was made in cases 4 and 14 A large fibroid contributed to the abortion in case 25 It is fruitless to employ a hormone function test to evaluate the clinical status of a threatened abortion if the etiology is nonhormonal

In the same group the symptoms of threatened abortion occurred in the fifth month of gestation in cases 14 and 20 From the chart it is seen that the excretion of pregnandiol is much greater in the fifth month of normal pregnancy than in the first three months The minimal "positive" color reaction represents an excretion of 6 to 10 mg in twenty-four hours, the average range for pregnandiol values in the first trimester Pregnandiol excretion in the fifth month normally ranges from 22 to 52 mg in twenty-four hours [3] Thus, if the abortion threat occurs after the first trimester it is possible for the pregnandiol excretion to decline from 50 or more mg in twenty-four hours to 10 mg in twenty-four hours in a short time with the color test being still read as "positive" in each test Quantitative estimations of pregnandiol are therefore necessary after the first trimester of pregnancy to ascertain the trend of excretion in predicting the course of threatened abortion For this reason my associates and I are adapting the pregnandiol color reaction for quantitative estimation by a colorimeter

For the patient (57) who did not abort in spite of persistently "negative" color reactions there is no explanation at present for the low pregnandiol excretion A few "negative" color reactions have been encountered in early normal pregnancy [9] The urine in case 57 gave a strong "positive" color reaction in the seventh month of pregnancy

After thus analyzing these 5 cases it is felt that cases 4, 14 and 25 should not be included as errors of prognosis on the part of the pregnandiol color reaction Also special consideration should be given case 20, with judgment reserved until the quantitative modification has been applied

The accuracy of 93 per cent in the series reported is uncorrected Even without correcting the data, the pregnandiol color reaction demonstrated a high degree of accuracy in predicting the course of threatened abortion

TABLE 2—*Summary of Results*

| Final Color Reaction | Number of Cases | Clinical Result: Abortion | Clinical Result: Normal Delivery | Percentage Correlation |
|---|---|---|---|---|
| Negative | 39 | 38 | 1 | 97 |
| Positive | 34 | 4 | 30 | 88 |
| Total | 73 | 42 | 31 | 93 |

The final pregnandiol color reaction formed the basis of prognosis and is correlated with the clinical results

8 Guterman H S A Human Pregnancy Test Based upon a Color Reaction of Pregnandiol in the Urine J Clin Endocrinol 4: 262-267 1944

9 Guterman H S Further Observations on the Value of the Pregnandiol Color Test for Pregnancy J Clin Endocrinol 5 407-411 1945

COMMENT

The pregnandiol color reaction, applied to predicting the course of threatened abortion, formed the basis of a correct prognosis in at least 93 per cent of the 73 cases studied These data corroborate the results of Browne, Henry and Venning[5] as well as those of others[6] who demonstrated by a complicated procedure the relationship between the trend of pregnandiol excretion and the fate of threatened abortion due to endocrine factors

Our method of determining urinary pregnandiol is a practical, reliable and accurate aid in predicting the course of threatening abortion The results of the pregnandiol color reaction are conveniently available to the physician the same day the specimens of urine are sent to the laboratory for analysis The prognosis is established in a few days by the indicated trend of excretion The physician thus has available an objective guide in evaluating a particular case of threatened abortion

The etiology of threatened abortion is varied Failure of maintained progesterone secretion is only one of the endocrine factors involved, for the pattern of estrogen excretion in threatened abortion is similar to that of pregnandiol excretion[10] It is possible that the secretion, metabolism and/or excretion of steroids in general depend on similar processes in normal pregnancy, abortion and parturition The practical, routine clinical applicability and the observed accuracy demonstrate the advantages of the pregnandiol color test over other procedures available at this time

It is important to eliminate anatomic or mechanical contributions to abortion by careful physical examination Failure to observe this precaution may lead to unjustified and needless use of pregnandiol determinations Pregnandiol excretion is an index of progesterone secretion and cannot be relied on to detect a placenta previa, fibroid or bleeding cervical polyp (see cases 4, 14 and 25 of the present series)

The large majority of threatened abortions occur in the first trimester of pregnancy "Positive" color reactions in this period of normal pregnancy are usually deep yellow, indicating the excretion of 6 to 10 mg of pregnandiol in twenty-four hours "Positive" qualitative color reactions are not applicable in cases of threatened abortion occurring later than the first trimester, as explained earlier Infrequently the excretion of pregnandiol is greater than 10 mg in twenty-four hours in the first three months of pregnancy These contingencies point to the necessity for quantitative estimations of the pregnandiol color reaction if it is to be applied in all stages of pregnancy Case 38 indicates the advisability and usefulness of such a procedure The trend of decreasing pregnandiol excretion, and thus the correct prognosis, was established by quantitative spectrophotelometric studies in spite of persistently "positive" color reactions The color reaction is now being adapted for quantitation to a colorimeter frequently employed in clinical laboratories, without complicating or unduly prolonging the procedure

The data in table 1 reveal that prognosis was made in half of the cases on the basis of single tests This was necessary because only single urine specimens were available It is advisable to establish the trend of pregnandiol excretion by serial determinations as the basis of prognosis

It appears then, from these considerations and from the data obtained, that the pregnandiol color reaction is an accurate prognostic guide in threatened abortion It can be applied as a routine clinical test The information supplied should obviate unnecessary therapy or anxiety when the pregnancy has failed or hormonal secretion is normal

SUMMARY

1 By means of a simple color reaction for urinary pregnandiol, the excretion of this hormone derivative was studied in 73 cases of threatened abortion

2 It was found possible to predict accurately the outcome of a threatened abortion by means of this test in 93 per cent of the cases studied (68 cases out of 73)

3 In threatened abortion (which is not due to mechanical factors) the continuing excretion of pregnandiol indicates that the particular pregnancy will be retained

4 However if pregnandiol is not excreted or the excretion diminishes during the course of observation the abortion becomes inevitable

5 Pregnandiol excretion measurements by means of the simple color test are of value in the prognosis of the fate of threatened abortion

10 Hain A M Further Observations on the Role of Progesterone (Pregnandiol) and Estrogen in Pregnancy J Endocrinol 3 10-63 1942 Browne Henry and Venning[5]

## MUMPS INVOLVEMENT OF THE CENTRAL NERVOUS SYSTEM

CAPTAIN EUGENE M HOLDEN
CAPTAIN ARCHIE Y EAGLES
and
CAPTAIN JOHN E STEVENS Jr
*Medical Corps Army of the United States*

It is of obvious military importance to recognize early the true nature of any meningeal infection in a large group of military personnel Likewise, in civilian practice the early knowledge of the exact nature of a meningeal involvement may prove to be of the utmost importance in treatment though possibly not involving as many important epidemiologic consequences as when encountered in the military services The possibility of mumps meningoencephalitis, which may occur prior to or in absence of the usual manifestations of mumps, is often overlooked in the differential diagnosis of cases showing signs of meningitis One reason why this entity is frequently overlooked is the prevalent idea that mumps is primarily a disease of the parotid glands which on occasion is accompanied by secondary involvement of the gonads and central nervous system It is becoming realized more and more, however, as pointed out by Wesselhoeft,[1] that mumps is basically a systemic disease which has a special predilection for the salivary glands, mature gonads, pancreas and breasts While few would support the hypothesis of Philibert[2] which states that mumps is primarily a disease of the central nervous system, the frequency with which clinical or subclinical involvement of the central nervous system occurs in the course of mumps is generally not recognized and thus is deserving of special emphasis

In reviewing the available literature, one finds that the reported incidence of mumps meningoencephalitis

From the Contagion Section, Medical Service ASF Regional Hospital, Fort Benning Georgia

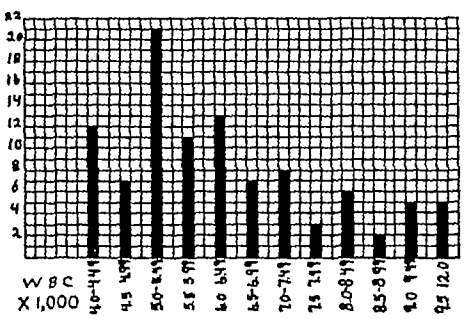
The present address of Dr Eagles is Department of Medicine Duke University School of Medicine Durham N C

1 Wesselhoeft C. Medical Progress Mumps, New England J Med. *226: 530 (March 26) 1942*

2 Philibert A. Nouvelle conception de la pathogénie des oreillons, Progrès med Jan 23 1932 p 145

varies greatly This lack of agreement is partially due to the fact that some authors report only the clinically recognized cases of central nervous system involvement while others report cases in which they use the spinal fluid pleocytosis as the prime criterion for diagnosis On the basis of clinical signs alone Radin,[3] in a careful analysis of 5,756 cases of mumps at Camp Wheeler, and Brooks,[4] in a study of 1,059 cases at Camp Upton, reported none complicated by meningoencephalitis, on the other hand de Massary [5] found 16 cases in a group of 635 and Steinberg [6] found 10 cases in a group of 165 which showed clinical signs of meningoencephalitis Using the pleocytosis of the spinal fluid as the criterion of central nervous system involvement, Dopter [7] had suggested that there is no increase in the spinal fluid cell count in clinically uncomplicated mumps However Lavergne [8] showed pleocytosis in 4 of one group of 17 mumps contacts and 4 in another group of 25 contacts In 3 from the second group he demonstrated the virus by intrathecal inoculations in rabbits Likewise Monod [9] found an increase of spinal fluid cells in 6 of 8 cases of fully developed mumps, Candel [10] in 30 of 38 cases, Finkelstein [11] in 16 of 40 cases, Teissier [12] in all of 20 cases and de Massary [5] in all of 40 cases One of the more recent reports by McGuinness and Gall [13] of an epidemic at Camp McCoy, Wisconsin, during the fall and winter of 1942-1943 records 55 cases among 1,378 in which "involvement of the central nervous system was either suspected or known to be present" Of these 55 cases, spinal punctures were done in 19 and an increased number of cells was found in 16 In view of the wide variation of the reported incidence of clinical meningoencephalitis and the lack of correlation between clinical and laboratory evidences thereof, additional data as to what percentage of routine mumps cases show subclinical involvement of the central nervous system are obviously desirable

However, when discussing the subclinical involvement of a system by a specific organism it is necessary to have some method of proof of the nature and identity of the suspected pathogen Until recently there was no practical laboratory method of differentiating the clinical or subclinical cases of mumps meningoencephalitis from others in that large and heterogeneous group which presents the clinical syndrome of "acute aseptic meningoencephalitis" Previously, in order to make a positive diagnosis of mumps meningoencephalitis, the virus itself had to be isolated from the spinal fluid by animal inoculation Lavergne [8] was one of the first to accomplish this by intrathecal inoculation of the rabbit with the suspected material Since the important contribution of Enders and his co-workers [14] in the development of the complement fixation test for the serologic diagnosis of mumps, the problem of differentiating the central nervous system involvement due to mumps from that of lymphocytic choriomeningitis, poliomyelitis and the encephalitides due to the other viruses is much simplified With use of an antigen consisting of a dilute suspension of heat-inactivated virus from infected monkey parotid glands, the complement fixing antibodies in the serum or spinal fluid are checked during the disease and again in convalescence If there is any rise in titer this is interpreted as showing that the patient has been exposed to the virus and has developed the specific antibodies during the course of the disease A dermatologic sensitivity test has also been developed by the same authors [15] with the same antigen, but the practical diagnostic value is often limited, owing to the frequently delayed dermal response to the infection, the interval varying from several days to three months Even more recently, Habel [16] has been able to grow the mumps virus in the developing chick embryo and has shown that the serologic tests are just as effective when the antigen is derived from this source The more accurate diagnosis of mumps meningoencephalitis,




Distribution of white blood cells

with or without salivary gland involvement, should result from the increased knowledge and use of these serologic tests

## METHODS OF STUDY

In order to determine the true incidence of clinical and subclinical involvement of the central nervous system in clinically proved cases of mumps, we have studied 100 consecutive hospitalized patients, each receiving a diagnostic spinal puncture on the fourth day of his disease At this time his drowsiness, headache, cervical rigidity temperature and general toxicity were evaluated to establish or rule out the presence of a clinical meningoencephalitis If any patient showed any additional significant signs after the fourth day, the spinal puncture was repeated and the more abnormal findings were used in our statistics This occurred in only 3 instances, with the highest rise being from 16 cells to 200 cells The criteria of central nervous system involvement were based on three factors (1) clin-

3 Radin M J The Epidemic of Mumps at Camp Wheeler October 1917 March 1918 Arch Int. Med **22** 354 (Sept) 1918

4 Brooks H Neurocirculatory Asthenia M Clin North America **2** 477 (Sept) 1918

5 de Massary, E. Tockmann and Luce La méningite ourlienne Bull Acad de méd Paris **78** 6 (July 3) 1917

6 Steinberg, C L Mumps Meningoencephalitis U S Nav M Bull **42** 567 (March) 1944

7 Dopter C. H A Paralysie faciale ourlienne, lymphocytose du liquide cephalo rachidien Bull et mém Soc med d hop de Paris **21** 912 904 Précis de pathologie interne—maladies infectieuses Paris J B Baillière et fils 1924

8 de Lavergne V Kissel P and Accoyer H Etude sur la période d incubation des oreillons Bull Acad de méd Paris **119** 534 (May 17) 1938

9 Monod R Reaction meningees chez l enfant Thesis Paris no 77 1902

10 Candel, S Wheelock, M C Turk J P Jr and Smoot J L Mumps Meningitis U S Nav M Bull **42** 861 (April) 1944

11 Finkelstein H Meningoencephalitis in Mumps, J A. M A **111** 17 (July 2) 1938

12 Teissier P and Schaeffer H Bradycardie dans les oreillons Cong franç de méd Compt. rend (1910) **11**: 30 1911

13 McGuinness A C and Gall E A Mumps at Army Camps in 1943 War Med. **5**: 95 (Feb) 1944

14 Enders J F Kane L W Cohen S and Levens J H Immunity in Mumps I Experiments with Monkeys (Macacus Mulatta) the Development of Complement Fixing Antibodies Following Infection and Experiments on Immunization by Means of Inactivated Virus and Convalescent Human Serum J Exper Med **81** 93 (Jan) 1945 Kane L. W and Enders J F Immunity in Mumps III The Complement Fixation Test as an Aid in the Diagnosis of Mumps Meningoencephalitis ibid **81**: 137 (Jan) 1945 Enders Cohen and Kane [13]

15 Enders J F Cohen S and Kane L. W Immunity in Mumps II The Development of Complement Fixing Antibody and Dermal Hypersensitivity in Human Beings Following Mumps J Exper Med **81** 119 (Jan) 1945

16 Habel K Cultivation of Mumps Virus in the Chick Embryo Pub Health Rep **60** 201 (Feb) 1945

ical signs of meningoencephalitis, (2) pleocytosis and (3) an increased spinal fluid total protein We considered as abnormal 10 cells per cubic millimeter or more in the spinal fluid and 30 mg of total protein or

TABLE 1.—*Summary of Thirty-Three Cases of Mumps Meningoencephalitis*

| | Spinal Fluid Findings | | | Clinical Manifestations of Meningitis | | | Clinical Manifestations of Mumps | | |
|---|---|---|---|---|---|---|---|---|---|
| | Spinal Fluid Cell Count | No. of Lymphocytes | Total Protein | Headache | Drowsiness | Stiffness of Neck | Parotitis | Orchitis | Age |
| 1 | 900 | 850 | 20 | +++ | +++ | +++ | Bilat | Left | 20 |
| 2 | 620 | 620 | 20 | +++ | +++ | +++ | Right | | 18 |
| 3 | 230 | 225 | 75 | +++ | +++ | +++ | Bilat | | 32 |
| 4 | 200 | 200 | 40 | +++ | +++ | +++ | Bilat | | 20 |
| 5 | 200 | 110 | 40 | ++ | +++ | ++ | Bilat | | 26 |
| 6 | 190 | 180 | 20 | ++ | ++ | ++ | Bilat | | 18 |
| 7 | 180 | 175 | 30 | +++ | +++ | +++ | Bilat | Right | 20 |
| 8 | 160 | 137 | QNS | ++ | ++ | ++ | Bilat | | 20 |
| 9 | 150 | 145 | 60 | ++ | +++ | ++ | Bilat | | 18 |
| 10 | 130 | 125 | 20 | ++ | ++ | ++ | Bilat | | 15 |
| 11 | 112 | 102 | 30 | ++ | +++ | + | Bilat | | 26 |
| 12 | 96 | 96 | 40 | ++ | ++ | ++ | Left | | 6 |
| 13 | 65 | 60 | 90 | + | ++ | ++ | Right | | 19 |
| 14 | 57 | 57 | 20 | ++ | +++ | + | Bilat | Right | 18 |
| 15 | 50 | 49 | 30 | 0 | ++ | + | Bilat | | 18 |
| 16 | 42 | 42 | 35 | + | + | + | Bilat | | 19 |
| 17 | 40 | 40 | 20 | ++ | +++ | +++ | Left | Left | 41 |
| 18 | 37 | 30 | QNS | 0 | ++ | + | Bilat | | 37 |
| 19 | 30 | 32 | 20 | ++ | ++ | +++ | Right | | 27 |
| 20 | 28 | 26 | 20 | + | + | + | Bilat | | 19 |
| 21 | 26 | 26 | 15 | 0 | 0 | + | Left | | 25 |
| 22 | 26 | 26 | 10 | + | ++ | + | Bilat | | 18 |
| 23 | 24 | 24 | 15 | + | ++ | + | Bilat | | 10 |
| 24 | 16 | 16 | 10 | 0 | 0 | + | Bilat | | 18 |
| 25 | 14 | 14 | 10 | ++ | +++ | +++ | Bilat | | 22 |
| 26 | 14 | 14 | 10 | 0 | + | + | Bilat | | 24 |
| 27 | 14 | 14 | 15 | + | + | + | Bilat | | 22 |
| 28 | 10 | 10 | 10 | ++ | ++ | + | Left | | 18 |
| 29 | 6 | 6 | 15 | + | + | + | Bilat | | 26 |
| 30 | 4 | 4 | 10 | + | ++ | ++ | Bilat | | 27 |
| 31 | 2 | 2 | 10 | ++ | + | + | Bilat | | 22 |
| 32 | 2 | 2 | 10 | ++ | ++ | ++ | Left | | 20 |
| 33 | 0 | 0 | 15 | ++ | +++ | ++ | Right | Right | 18 |

Symbols +, slight ++ moderate +++ severe

TABLE 2.—*Subclinical Meningoencephalitis Cases as Shown by Increase of Spinal Fluid Total Proteins to 30 Mg per Hundred Cubic Centimeters or More*

| | Spinal Fluid Findings | | | Clinical Manifestations of Mumps | | |
|---|---|---|---|---|---|---|
| Cases | Spinal Fluid Cell Count | Number of Lymphocytes | Total Protein Mg per 100 Cc. | Parotitis | Orchitis | Age |
| 1 | 0 | 0 | 75 | Left | 0 | 22 |
| 2* | 80 | 80 | 75 | Bilateral | 0 | 15 |
| 3 | 0 | 0 | 40 | Bilateral | 0 | 24 |
| 4 | 0 | 0 | 40 | Right | 0 | 18 |
| 5 | 4 | 4 | 30 | Bilateral | Right | 20 |
| 6 | 2 | 2 | 30 | Bilateral | 0 | 18 |
| 7* | 64 | 61 | 30 | Right | 0 | 18 |
| 8 | 0 | 0 | 30 | Left | 0 | 22 |
| 9 | 2 | 2 | 20 | Right | 0 | 18 |
| 10 | 3 | 3 | 20 | Bilateral | 0 | 23 |
| 11 | 0 | 0 | 20 | Left | 0 | 24 |
| 12 | 0 | 0 | 20 | Bilateral | 0 | 18 |
| 13 | 0 | 0 | 20 | Bilateral | 0 | 21 |
| 14 | 4 | 0 | 20 | Bilateral | 0 | 20 |
| 15 | 4 | 2 | 20 | Left | 0 | 18 |
| 16 | 0 | 0 | 20 | Bilateral | 0 | 22 |
| 17 | 0 | 0 | 20 | Right | 0 | 18 |
| 18 | 2 | 2 | 20 | Bilateral | 0 | 36 |
| 19 | 4 | 1 | 20 | Right | 0 | 18 |
| 20 | 0 | 0 | 20 | Bilateral | 0 | 20 |
| 21 | 2 | 2 | 20 | Right | 0 | 24 |
| 22 | 2 | 2 | 20 | Right | 0 | 22 |

* Cases also carried in table 3

above per hundred cubic centimeters.[17] Since the maximum level of total protein accepted by some authorities[18] varies from 15 to 40 mg., we also tabulated those cases with a total of 20 mg. per hundred cubic centimeters or over. Using these criteria as the basis, we divided the cases into two groups (*a*) the recognized cases of meningoencephalitis and (*b*) the subclinical cases which were asymptomatic but showed either or both pleocytosis and increased total protein.

## RESULTS

From the 100 cases 33 fell into the first group, and these data are summarized in table 1. The total spinal fluid cell count varied from 0 to 900, when cells were present the percentage of lymphocytes was always extremely high. The clinical signs are tabulated in degrees of severity, and it is easily noted that there is no correlation between these and the height of the cell count. In fact, in the last 5 cases a normal number of cells were present in the spinal fluid and yet there were signs of moderate to severe meningeal

TABLE 3.—*Cases of Subclinical Meningoencephalitis as Shown by Pleocytosis of 10 Cells or More*

| | Spinal Fluid Findings | | | Clinical Manifestations of Mumps | | |
|---|---|---|---|---|---|---|
| Cases | Spinal Fluid Cell Count | Number of Lymphocytes | Total Protein, Mg per 100 Cc. | Parotitis | Orchitis | Age |
| 1* | 80 | 80 | 75 | Bilateral | 0 | 15 |
| 2* | 64 | 61 | 30 | Right | 0 | 18 |
| 3 | 10 | 10 | 15 | Bilateral | 0 | 25 |
| 4 | 10 | 10 | 15 | Bilateral | Bilateral | 21 |

* Total protein above normal. These 2 cases included in this table because of accompanying pleocytosis

TABLE 4.—*Occurrence of Cases According to Length of Service*

| Military Service in Months | Number of Cases | |
|---|---|---|
| *One or less* | 44 | 80% in 5 months |
| Over 1 and including 2 | 16 | |
| Over 2 and including 3 | 6 | |
| Over 3 and including 4 | 10 | |
| Over 4 and including 5 | 4 | |
| Over 5 and including 6 | 2 | |
| Over 6 and including 7 | 2 | |
| Over 7 and including 12 | 7 | |
| Over 12 and including 24 | 5 | |
| Over 24 and including 54 | 4 | |

involvement. Not one of these patients was critically ill at any time, but the occasional extreme toxicity of this group is not to be minimized.

In table 2 are summarized the data on 8 subclinical cases with increased spinal fluid protein. Taking 30 mg. of protein per hundred cubic centimeters as the upper limit of normal, one finds 8 cases with protein ranging from 30 to 75 mg. per hundred cubic centimeters. It will again be noted that there is no correlation in this group between the number of cells and the amount of the protein in the spinal fluid. Table 3 shows 4 cases with 10 or more cells in the spinal fluid but without clinical signs of central nervous system irritation. Attention is drawn to the fact that 2 of these cases are presented in both of the latter tables. In summary, there are 10 cases of subclinical mumps meningoencephalitis and 14 others which could be called borderline with elevation of total protein to 20 mg. per hundred cubic centimeters.

Although our primary purpose in this article is to stress the frequency of the involvement of the central nervous system, several points of general and epidemio-

17. Simmons, J. S., and Gentzkow, C. J.: Laboratory Methods of the United States Army, ed. 5, Philadelphia, Lea & Febiger, 1944, p. 92. Todd, J. C., and Sanford, A. H.: *Clinical Diagnosis by Laboratory Methods*, ed. 10, Philadelphia, W. B. Saunders Company, 1943, pp. 598 and 607.

18. Kracke, R. R., and Parker, F. P.: Textbook of Clinical Pathology, ed. 2, Baltimore, Williams & Wilkins Company, 1940, pp. 496 and 504.

logic interest we believe are worthy of presentation These patients were admitted to this hospital from the whole population of the post, but by far the great majority originated from the Negro reception center and the special training units to which the recent inductees were assigned The patients from this source had all had recent induction examinations to rule out central nervous system syphilis, and none of our cases gave a positive spinal fluid Wassermann reaction Analysis of the general statistics reveals that 92 per cent of this series were Negroes and 90 per cent were in the age group of 18 to 26, with the average age being 22 27 years The average duration of service was 5 22 months, but the distribution is best shown by table 4

An effort was made to discover any possible correlation between the severity of the salivary gland involvement the presence of orchitis and the presence of meningoencephalitis In the series of 100 cases there were 68 cases of bilateral and 32 of unilateral salivary gland involvement, the latter affecting the right and left sides with equal frequency The incidence of epididymo-orchitis was 11 per cent, 6 on the left, 4 on the right and 1 bilateral

The lack of correlation of the occurrence of central nervous system involvement with the degree of salivary swelling or orchitis is easily noted from the tables

The total white blood cell count was usually between 5,000 and 5,490, the exact distribution is shown in the chart The differential count showed a slight decrease in the number of neutrophils, but no other significant alteration was noted No correlation between the severity of the disease in any of its manifestations and the white blood cell count was found

### CONCLUSIONS AND SUMMARY

In 100 consecutive hospitalized mumps cases a study was made in an effort to determine the incidence of clinical and subclinical involvement of the central nervous system by the mumps virus

1 Thirty-three cases showed clinical signs of meningoencephalitis, 28 of these showed abnormal spinal fluid

2 Ten cases presented evidence of subclinical involvement of the central nervous system 8 increased spinal fluid protein to 30 mg per hundred cubic centimeters or over, 4 pleocytosis of 10 cells or more per cubic millimeter and 2 both abnormal total protein and pleocytosis

3 There was no correlation between the occurrence of central nervous system involvement, the severity or number of salivary glands involved or the presence of epididymo-orchitis

4 Mumps meningoencephalitis is fast becoming a well known entity which can be definitely diagnosed with the aid of the newer serologic tests The exact diagnosis by these methods is frequently of the utmost importance in the absence of salivary gland involvement

**Heredity and Health in Mental and Physical Fitness.**—We now know enough of the role of heredity and health in mental and physical fitness to control the population percentage of the less fit more humanely and with less injury to man and nature than is done by war—Carlson A J Is There 'A Standard to Which the Wise and the Honest Can Repair?' *Science* **103** 377 (March 29) 1946

## CORONARY THROMBOSIS

RALPH L. FISHER, M D
and
MORRIS ZUKERMAN, M D
Detroit

A review of 108 cases of coronary thrombosis served as the basis for the material presented in this article Of the 108 patients 57 were known to have died and 51 were considered as follow-up patients The latter group consisted of two divisions those who had made regular visits to the outpatient department and those who had not been seen or heard of since their last visit to the outpatient department Questionnaires were then sent to the latter patients to determine the status of their health The final results of this questionnaire showed that 26 patients were still living, 77 were deceased and the status of 5 is unknown

The history of medically classified cases of coronary thrombosis is a relatively short one The first case of coronary thrombosis was recognized and proved at autopsy by Hammer[1] in 1876 In 1912 J B Herrick[2] described the classic picture of acute obstruction of the coronary arteries It was after Herrick's second publication in 1919 that the recognition of the clinical entity of coronary disease became widespread

### AGE OF INCIDENCE

A review of the age of onset of coronary occlusion clearly points to the fact that this condition appears in variable age groups The average age at the time of onset of the illness was found to be 57 6 years in the reviewed patients The youngest patient observed was 37 years of age and the oldest was 84

### TYPE OF ONSET

There were 79 instances in which the coronary occlusion took place suddenly and required that a physician be called immediately There were 36 instances in which variable time intervals elapsed from the time of the onset of the acute occlusion until the diagnosis was made The diagnoses in these cases were made by history, electrocardiographic reports and physical findings From this we might conclude that many cases of coronary thrombosis are never diagnosed and yet are entirely compatible with life

### SEX INCIDENCE

In our study there were 79 males and 29 females, giving 73 14 per cent males as compared with 26 85 females This gives a ratio of 2 72 males to 1 female

Smith, Sauls and Ballew[3] analyzed 100 cases of coronary occlusion with reference to sex incidence Of their 100 patients 15 were females, the ratio being 6 6 males to 1 female The ratio usually given in the entire literature is 3 to 1 However, some authors have reported as high as 13 to 1

Falk[4] declared that coronary disease is four to six times more prevalent among men than among women No definite explanation for this difference has been

From the Department of Internal Medicine Alexander Blain Hospital The authors are now of the Department of Internal Medicine, Riverside Clinic.

1 Richter H A Outstanding Clinical and Laboratory Findings in 56 Cases of Coronary Occlusion Bull. Irving Park Branch Chicago M Soc. February and March 1934

2 Baumgarten Walter Coronary Artery Disease South. M. J **36**: 426-429 (June) 1943

3 Smith Carter Sauls Cliff and Ballew James Coronary Occlusion A Clinical Study of 100 Patients Ann Int. Med. **17**: 681-692 (Oct.) 1942

4 Falk, O P J Thoughts on the Prevention of Coronary Disease J Missouri M A **39**: 162 164 (June) 1942

ascertained, however, as a hypothesis it has been suggested that, as a result of woman's child bearing capacities, nature has given her a cholesterol clearing mechanism which may be an important protective factor against coronary disease Fellner,[5] reporting his findings in autopsies on arteriosclerotic subjects, observed that, as a rule, women developed arteriosclerosis later in life than men and that they also suffered a milder form of the disease

TABLE 1—*Patients Classified on the Basis of Nationality*

| | | | | | |
|---|---|---|---|---|---|
| Americans | 62 | Irish | 3 | Rumanian | 1 |
| Germans | 8 | Swedish | 2 | French | 1 |
| Italians | 5 | Russian | 2 | Jewish | 1 |
| English | 5 | Syrian | 2 | Dutch | 1 |
| Polish | 4 | Danish | 1 | Scotch | 1 |
| Canadian | 4 | Greek | 1 | Austrian | 1 |

Three patients not classified

### NATIONALITY INCIDENCE

In a practice such as the one from which these cases were taken, multiple nationalities were presented The figures given in table 1 indicate that nationality is not an important predisposing factor Bearing in mind that our patient population is predominantly American, this cross section would seem to indicate that no one nationality group is predominantly afflicted with coronary occlusion

### WEIGHT OF PATIENTS

It has been stated that the patient s body build is an etiologic factor in coronary occlusion[6] The heavy set overweight, frequently athletic person is more susceptible to this disease than is the normal or underweight person Levine[7] feels that those who are underweight and in good health at the age of 40 have a better expectancy than the average, normal weight person In a series of 100 cases reported by Smith, Sauls and Ballew[3] 35 per cent of the patients were obese, while malnutrition occurred in only 4 per cent of the group

In analyzing the weight of the reviewed patients, the results presented in table 2 were noted

### EFFECT OF ALCOHOL AND TOBACCO

Smith, Sauls and Ballew,[3] in discussing the habit excesses of their patients, noted that smoking played an inconclusive part in coronary occlusion Seventeen per cent of their patients smoked excessively, and 12 per cent did not indulge in the use of tobacco at all

TABLE 2—*Weight of 108 Patients*

| | Total | Male | Female |
|---|---|---|---|
| Obese | 49 | 36 | 13 |
| Undernourished | 16 | 12 | 4 |
| Correct weight | 31 | 22 | 9 |
| Weight not stated | 12 | | |

Alcohol was found to play little if any part in causing coronary occlusion Eleven patients were excessive drinkers

In order to evaluate whether excessive habits were predisposing factors to coronary occlusion, excessive smoking was defined as smoking more than a package of cigarets a day or four to five cigars a day Thirteen patients were classified as excessive smokers, 24 were moderate smokers, 40 did not indulge in any tobacco and 31 were unclassified

In discussing alcoholism it is realized that it is difficult to determine what is excessive and what is to be considered moderate drinking, as this is influenced by cultural patterns Only 3 patients were found to consume alcohol daily Twenty-four patients stated that they imbibed occasionally, 49 patients did not use any alcohol and 32 patients did not state their drinking habits Therefore our findings concur with those already mentioned

### OCCUPATION OF PATIENTS

Hedley[8] analyzed 5,116 deaths due to coronary occlusion on the basis of the patient's occupation, and he calculated "the occupational mortality per hundred thousand as 154 for professional men, 144 for proprietors managers and officials, 128 for clerks and salesmen and 107 for workers (all classes) at ages 36 to 64"

Master, Dack and Jaffe[9] studied 1,700 proved cases of coronary thrombosis and drew the following conclusions 35 05 per cent of their patients were manual workers, 10 05 per cent housewives, 11 per cent business men, 10 per cent retired, 9 5 per cent white collar workers, 9 per cent professional people and 5 5 per cent store workers

TABLE 3—*Classification of Occupation*

| Occupation | No of Cases | Per Cent |
|---|---|---|
| Business men | 21 | 19.44 |
| Retired | 16 | 14.81 |
| Professional | 9 | 8.33 |
| Laborer | 30 | 27.7 |
| Housewives | 28 | 25.9 |
| Not classified | 4 | 3.7 |

Smith, Sauls and Ballew,[3] reviewing a hundred cases of coronary occlusion, noted that 67 per cent of the patients were business men of executive type or those engaged in small businesses which demanded excessive individual effort The frequent occurrence among traveling men was also noted They suggested that those who work hard and have irregular living habits are more vulnerable to this disease Ten per cent of the group were physicians

### HYPERTENSION

Hypertension antedating coronary occlusion has been reported in 33 to 73 per cent of the patients diagnosed as having myocardial infarction Of 100 studied by Smith, Sauls and Ballew,[3] 41 were observed to have preceding hypertension Hypertension persisted in 18 of the patients and normal or low blood pressure was found in 78 per cent after the attack The blood pressure reduction persisted from months to years following the coronary accident There was no relationship between the mortality rate and the previously existing hypertension It has been shown that the incidence of hypertension in women with coronary occlusion is 32 per cent higher than that found in men[9]

Of the women in our series 65 51 per cent had hypertension, while 39 23 per cent of the men had hypertension We wish to stress the fact that in women with coronary occlusion the patient is more frequently elderly (over 60) with hypertension and/or diabetes mellitus

5 Cited by Falk.[4]
6 Riesman and Harris, cited by Richter[5]
7 Levine cited by Richter[5]

8 Cited by Pedley F G Coronary Diseases and Occupation Canad M A J 40: 147 151 (Feb) 1942
9 Master A M Dack Simon and Jaffe H L cited by Smith Sauls and Ballew[3]

Hypertension per se, is not the only etiologic factor in the production of coronary heart disease This has been suggested by clinical and postmortem examinations, which point to the fact that, although the Negroes have more hypertension than white patients, they show a significantly lower incidence of coronary artery disease Therefore it has been postulated that if hypertension by itself were the major determining factor in producing coronary arteriosclerosis there would be proportionately more coronary disease among the Negroes than in the white population [4]

### TYPE OF INFARCTION

The relationship of anterior infarction to posterior infarction is 64 to 33, or a ratio of 1 93 to 1 Electrocardiograms were not obtained on 12 patients who died suddenly, however, diagnoses were confirmed by either autopsy and/or clinical interpretation

### LABORATORY FINDINGS

Rabinovitz, Shookhoff and Douglas [10] reported that an increased sedimentation rate accompanied coronary occlusion It was noted that the increase appeared later than the leukocytosis and fever, and that it persisted longer These observations were verified by Burak [10] In 1935 Bickel, Mazer and Sciclonoff [10] found a high sedimentation rate in coronary occlusion and felt that

TABLE 4—*Authors Findings on Hypertension*

| | Total | Men | Women |
|---|---|---|---|
| Total number of persons with hypertension | 50 | 31 | 19 |
| | | Mm Hg | |
| Average systolic pressure in all patients | 190 1 | | |
| Average systolic pressure for each sex | | 187.2 | 194 5 |
| Average diastolic pressure in all patients | 122 3 | | |
| Average diastolic pressure for each sex | | 109 7 | 106 6 |

this condition was caused by absorption of necrotic tissue Hoffmann [11] recording the sedimentation rate in 16 cases, concluded that in a majority of cases the leukocyte count and the temperature rise before the sedimentation rate In the first few days of the illness the sedimentation rate is therefore not as diagnostic as the temperature and the leukocyte count The sedimentation rate gradually returns to normal as healing of the infarction takes place, but it is not invariably true Elevation of the rate was found in every case studied It is important to remember that the sedimentation rate decreased with the onset of myocardial failure

Richter [1] reviewing 56 cases of coronary occlusion, noted that in 42 (75 per cent) a leukocytosis existed, usually between 12 000 and 18,000 With a few exceptions leukocytosis appeared on the second and third days following the onset of the clinical symptoms An elevated white blood cell count has been observed within two hours after the onset of the attack The usual count ranged between 12,000 and 20,000 [12] A transient glycosuria has been noted during the acute phase of coronary occlusion This condition clears up after the acute stages of the clinical picture have passed off [13]

The Wintrobe technic for determining sedimentation rate was utilized in measuring the rates in our patients 12 mm per hour being normal

The normal sedimentation rate in these patients was accounted for by the fact that a number of them died before the sedimentation rate became elevated or by the fact that some of the patients were examined at times when an elevated sedimentation rate would not be expected, also many of these patients were studied

TABLE 5—*Type of Infarction as Diagnosed by Electrocardiograms*

| | |
|---|---|
| Acute anterior infarction | 33 |
| Acute posterior infarction | 20 |
| Old anterior infarction | 31 |
| Old posterior infarction | 13 |

before the sedimentation rate was used as a laboratory aid in diagnosing coronary occlusion The normal white blood cell count is accounted for by the first two reasons given for the normal sedimentation rate

### POSITIVE SEROLOGIC REACTION

Syphilitic involvement is seldom noted The records of necropsies at the Mayo Clinic fail to reveal the mention of such a lesion It is, however, noted that one or both coronary ostia are frequently occluded by the scarring process consequent to syphilitic aortitis, however, in these cases the coronary arteries themselves are uninvolved [14]

In our series 3 males showed a positive serologic reaction, of these, 1 had a paretic colloidal gold curve Also 2 patients were known to have been syphilitic previous to onset of the coronary occlusion and were serologically negative at the time of their occlusion One can only conjecture as to the part antisyphilitic therapy played, if any, in bringing on their illness

### PATHOLOGY REPORTS

Appelbaum and Nicolson [15] reported their findings in 168 cases with occlusive diseases of the coronary arteries observed at the autopsy table In the atherosclerotic group (150 cases) the pathologic picture was that of sclerosis of the coronary arteries The weight of the heart in most of the cases studied showed considerable increase above the average considered normal for the sex and age of the patients reported Fifty cases exhibited a pericarditis In 113 of the cases complete occlusion of one or more vessels was demon-

TABLE 6—*Results of Sedimentation Rates and White Blood Cell Counts*

| | |
|---|---|
| Elevated sedimentation rate | 13 patients |
| Normal sedimentation rate | 38 patients |
| Average elevation | 2[illegible] mm p r hour |
| Highest elevation | 35 mm per hour |
| Elevated white blood cell count | 30 patients |
| Normal white blood cell count | 32 patients |
| Highest white blood cell count | 27,000 |
| Average white blood cell count | 13 98[illegible] |

strated Multiple occlusion, that is, involvement of more than one vessel or branch, was noted in 16 of the 113 cases The ratio of the occlusion of the left coronary artery to that of the right was 3 to 1

Infarction in the anterior and apical section is usually caused by occlusion of the anterior descending branch of the left coronary artery Infarctions of the posterior basal portion of the left ventricle is most

10 Cited by Hoffmann [11]
11 Hoffmann M H The Clinical Significance of the Sedimentation Rate in Coronary Occlusion Minnesota Med. **19** 512 519 (Aug) 1936
12 Smith F M cited by Richter [1]
13 Jensen J Coronary Occlusion J Missouri M A **34** 77 78 (March) 193[illegible]
14 Willius F A The Present Status of Coronary Disease J Oklahoma M A **26** 47 59 (Feb) 1933
15 Appelbaum Emanuel and Nicolson Gertrude H B Occlusive Disease of the Coronary Arteries Am Heart J **10** 662 680 (June) 1935

frequently caused by occlusion of the main trunk or of a branch of the right coronary artery

Aneurysm of the heart was noted in 57 of 157 cases, while 9 cases showed rupture of the heart involving the left ventricle

### SYMPTOMS AT TIME OF ONSET

The classic signs of coronary occlusion are often preceded by premonitory signs, which include slight pain or sense of tightness within the chest, which may or may not be associated with a dull pain that radiates especially to the left arm Epigastric distress of a vague type may accompany the chest complaints or it may be the only early sign of warning With the onset of the coronary occlusion there is usually an agonizing chest pain, which is either of a burning, constricting or pressure sensation Nausea and vomiting are also early symptoms Often the patient complains of a great weakness or a sense of prostration The pain noted with the onset of the illness may be referred to the left arm, neck, jaws, abdomen or right arm The face is often characterized by an ashy appearance, and the features register an almost unbearable pain The blood pressure frequently falls within a few hours after the onset of symptoms, the low pressure existing for an indefinite time Pulmonary edema is often associated with cyanosis Hemoptysis may be noted in severe congestion in the lungs Cerebral symptoms, such as mild delirium or a semicomatose condition, may be brought on by a sudden fall of pressure, associated pain, emotional disturbance and the sedative administered to the patient [16]

Painless coronary occlusion has been recognized frequently and was described soon after myocardial infarction became a clinical entity It has been observed that chronic infarction, as a result of gradual narrowing or closure of a coronary artery, is frequently detected in spite of the clinical history which does not include a bout of pain characteristic of acute coronary occlusion An occasional patient may have an acute myocardial

TABLE 7—*Results of Autopsy Reports in Ten Cases of the Reviewed Group*

| | |
|---|---|
| 1 Grade of coronary sclerosis | |
| Grade 1 | 0 cases |
| Grade 2 | 1 case |
| Grade 3 | 1 case |
| Grade 4 | 8 cases |
| 2 Hypertrophy of the heart | 4 cases |
| 3 Congenital anomalies of the heart | |
| Patent foramen ovale | 1 case |
| 4 Ruptured hearts | |
| Rupture of left ventricle | 2 cases |
| Rupture of aneurysm of left ventricle | 1 case |
| 5 Artery involved | |
| Right coronary artery | 1 case |
| Left coronary artery | 5 cases |
| Both coronary arteries | 4 cases |
| 6 Infarcts of anterior and posterior walls of left ventricle | 1 case |
| 7 Chronic adhesive pericarditis | 2 cases |

infarction without pain but will usually show profound shock or dyspnea [17] Dyspnea of varying degrees is sometimes the only indication that a coronary occlusion has occurred Fever is usually found two to three days after the onset of the illness and ranges between 101 and 103 F The duration depends on the size of the infarct [18]

There were 10 patients who showed no symptoms referable to the heart (asymptomatic) Sixteen instances of painless coronary occlusion were noted, 4 in women and 12 in men

TABLE 8—*Symptoms and Findings Observed in Our Patients*

| | Patients | | Patients |
|---|---|---|---|
| Shortness of breath | 59 | Palpitation | 7 |
| Substernal pain | 49 | Orthopnea | 5 |
| Edema of the legs | 14 | Shock | 5 |
| Exhaustion | 14 | Ascites | 5 |
| Pain radiating down left arm | 12 | Belching | 5 |
| Nausea and vomiting | 11 | Persistent cough | 4 |
| Sudden death | 11 | Hemoptysis | 1 |
| Pain radiating down both arms | 9 | Pain between shoulders | 1 |
| Nausea, with epigastric pain | 8 | Nausea | 9 |

### X-RAY FINDINGS OF THE HEART

Marvin,[19] quoting Master, states that the latter has described findings in fluoroscopy which he believes is typical of myocardial infarction He noticed localized abnormalities in pulsation of the ventricles, consisting of a localized decrease in movement of the ventricular wall and the lack of movement or reversal of pulsation Other roentgenologic evidence of coronary arteriosclerosis is calcification of the vessels or ventricular aneurysm [19] Calcium deposits may be occasionally demonstrated in a devitalized area of a heart muscle following coronary occlusion [20]

Palmer [21] studied 200 patients with coronary occlusion who had survived the attack by three months Cardiac enlargement was found in 128 (64 per cent) Master and Jaffe [22] reported 2 cases of pericardial effusion following coronary occlusion, both diagnoses being made by radiologic evidences Wolff and White [2] have called attention to rapid dilatation of the heart that could be noted on x-ray examination

### PHYSICAL FINDINGS OF THE HEART

Shock and collapse are measured by the fall in blood pressure and by other such signs as pallor and cold sweat Abnormalities of rhythm frequently occur after acute coronary occlusion Among these abnormalities are ventricular tachycardia and ventricular fibrillation, the latter often being the cause of sudden death Ventricular extrasystoles frequently appear after myocardial infarction If the extra beats originate from a single irritable focus, as shown by the fact that all have the same appearance on the electrocardiogram, they are probably of less importance than those which originate from different foci Auricular fibrillation is often noted two to three days after the attack It is transient in 70 per cent and permanent in 30 per cent of the cases in which it occurs It has not been determined just how serious this complication is

Paroxysmal auricular tachycardia is occasionally noted after coronary occlusion If such rhythm persists for many hours it may result in cardiac failure, pulsus alternans is occasionally found and suggests serious cardiac damage Gallop rhythm is a serious sign,

16 Carr J G The Symptoms and Diagnosis of Coronary Occlusion *Illinois M J* **68**: 155 159 (Aug) 1935

17 Barnes A R, and Pruitt R D Problems in the Differential Diagnosis of Coronary Sclerosis Michigan State M Soc **41**: 943 950 (Nov) 1942

18 Justice C W Coronary Occlusion Kentucky M J **35** 26-30 (Jan) 1937

19 Marvin H M The Diagnosis of Coronary Artery Disease New England J Med **226**: 251 254 (Feb 12) 1942.

20 Middleton W S The Prognosis and Treatment of Coronary Occlusion Minnesota Med **18**: 710-724 (Nov) 1935

21 Palmer J H The Size of the Heart After Coronary Thrombosis Canad M A J **36**: 387 392 (April) 1937

22 Cited by Palmer [21]

indicating myocardial damage [23] Ticktock sounds and extremely feeble cardiac tones, as well as murmurs of relative insufficiency of the valves, have been noted following coronary occlusion [10] Other physical signs of coronary occlusion are rapid or slow pulse, precordial friction rub and moist rales at the base of the lungs [16]

MODE OF THERAPY EMPLOYED

The treatment of coronary occlusion is by no means standardized, nor do all clinicians who are confronted with this problem agree on the effectiveness of the various medications used The treatment of each case of coronary occlusion must be individualized

It has been our practice to use morphine sulfate in large doses when there is extreme pain and restlessness after an infarction has taken place This is administered in ¼ grain (0 016 Gm ) doses, which is repeated in twenty to thirty minutes if there is no relief Only an occasional patient has been given ¾ grain (0 05 Gm ) of morphine to relieve the initial pain After pain has been relieved morphine is given as needed to counteract any further distress

If vomiting is profuse and is aggravated by morphine 1/16 grain (0 004) Gm ) of dihydromorphinone hydrochloride or ⅓ grain (0 02 Gm ) of pantopon is substituted Papaverine in ½ grain (0 03 Gm ) doses has been administered intravenously, as much as 2 grains (0 13 Gm ) being given in a period of a half hour in an effort to relieve coronary spasm It has been our impression that papaverine, orally as well as intravenously, has been of but little benefit in the treatment of this condition At no time has there been any remarkable relief of pain, nor has there been a tendency to diminish ventricular extrasystoles Recent work by other investigators has confirmed this opinion This drug has been discontinued in our clinic in the treatment of coronary artery disease

Recently isonipecaine has been used in an attempt to alleviate the pain of coronary occlusion, being administered in 75 to 100 mg doses, but it does not appear to be a valuable drug, as it does not relieve the severe pain of this condition Atropine has not found favor with us in an attempt to relieve the pain of coronary occlusion

Ammophylline has been employed freely in the treatment of this cardiac condition It is given orally in doses of 3 grams (0 2 Gm ) after meals At no time is it used intravenously during or immediately after an acute attack for fear of lowering the blood pressure further and creating a state of shock which originally did not exist The use of quinidine is debatable with few exceptions We have used it routinely in our cases of acute coronary thrombosis and feel that it is especially valuable in cases showing a well defined sinus tachycardia or the existence of many ventricular extrasystoles It is almost universally accepted that quinidine is the drug of choice when ventricular tachycardia is proved by electrocardiogram This is done to prevent ventricular fibrillation with resulting sudden death When quinidine is used it has been given in very small doses initially to detect any sensitivity (cinchonism), if this is absent, it is then given in the dosage of 12 to 30 grains (0 8 to 2 Gm ) daily

TABLE 9.—*X-Ray Findings of Reviewed Cases*

| | |
|---|---|
| Heart enlarged to the left | 54 cases |
| Normal size heart | 20 cases |
| Heart enlarged to the left with widened sclerotic aorta | 3 cases |
| Enlarged heart with pulmonary congestion | 2 cases |
| Heart enlarged to the right | 1 case |
| Associated aortic aneurysm | 1 case |
| No x ray taken | 22 cases |

TABLE 10.—*Physical Findings of Heart in Reviewed Patients*

| | |
|---|---|
| Heart enlarged to the left on percussion | 57 patients |
| Systolic murmur at the apex with enlargement to the left (interpreted as functional mitral insufficiency) | 28 patients |
| Faint heart tones with pulse of small volume | 13 patients |
| Extrasystoles | 3 patients |
| Diastolic murmur at the apex | 2 patients |
| Systolic murmur at aortic area | 2 patients |
| Dropped beats | 2 patients |
| Pericardial friction rub | 1 patient |
| Gallop rhythm | 1 patient |
| Auricular fibrillation | 1 patient |
| Normal findings | 29 patients |

We have been frequently called on to treat cases of acute coronary occlusion that have broken compensation Digitalis has been the drug of choice in spite of the dangers associated with more forceful action of the heart Venipuncture and the withdrawal of 250 to 500 cc of blood is a useful adjunct in relieving the load of the heart, and it is especially useful in the treatment of acute pulmonary edema associated with acute myocardial infarction Mercupurin has been valuable in helping to mobilize the excess tissue fluids associated with decompensation Whenever possible the patient is given ammonium chloride, which augments greatly the action of the mercurial diuretic One big disadvantage in the use of mercupurin is the interference by frequent urination with the patient's rest, which is so vital early in the disease In many cases 50 cc of 50 per cent glucose solution, given twice a day, has furnished a source of myocardial energy and at the same time has proved valuable as a diuretic when copious diuresis is undesirable

For sedation, phenobarbital has been the drug of choice If the patient is vomiting during the acute attack, it is given intramuscularly in 2 grain (0 13 Gm ) doses as needed When possible, the drug is given orally in ½ grain (0 03 Gm ) doses three to four times a day Sodium bromide has been used in place of phenobarbital on occasions in the dosage of 7½ grains (0 5 Gm ) three to four times a day

When the symptoms of circulatory collapse prevail, an oxygen tent is immediately ordered and continued as long as one to two days after this phenomenon has disappeared Nikethamide and caffeine with sodium benzoate are used in order to alleviate the shocklike picture Insulin is, of course, used when indicated in diabetes mellitus

Follow-up therapy has often necessitated the use of glyceryl trinitrate for angina pectoris We do not use this drug during an acute myocardial infarction because of the tendency to lower the blood pressure, with its disastrous results After the dismissal of the patient from the hospital we usually deem it safe to treat any complicating condition, such as hypertension, generalized arteriosclerosis or the menopause However, it is unwise to give vigorous antisyphilitic therapy for fear of causing occlusion of a coronary artery at its orifice This is especially true for arsenical medications

23 King H C Prognosis in Coronary Heart Disease and After Coronary Occlusion Ohio State M J 33: 524-527 (May) 1937

LeRoy and Snider[24] feel that intravenous atropine sulfate combats the generalized coronary vasoconstriction subsequent to myocardial infarction. Papaverine has been given intravenously in doses of ½ to 1 grain (0.032 to 0.065 Gm.). When this drug does not relieve the pain, morphine is given in doses of ⅙ to ¼ grain (0.01 to 0.016 Gm.).[25] Borg[24] has advised the use of quinidine in an attempt to avoid ventricular fibrillation. Myocardial failure subsequent to acute coronary occlusion has been treated with the careful use of digitalis, aminophylline and adequate oxygen (as a rule we routinely place acutely ill patients in an oxygen tent). Kilgore,[26] quoting Rizer, has called attention to the use of oxygen in the relief of pain in coronary occlusion. This has greatly reduced the need for morphine in many cases. Dextrose has been used intravenously, especially for the heart threatening failure.[26] Fowler and his associates[27] advised the use of aminophylline, since it has been shown to be effective in promoting collateral circulation. Either the intravenous or the oral route may be used, depending on the situation.

TABLE 11.—*Complicating Diseases in Reviewed Cases*

| | Cases |
|---|---|
| Hypertension | 50 |
| Obesity | 48 |
| *General arteriosclerosis* | 19 |
| Undernutrition | 16 |
| Diabetes mellitus | 11 |
| Chronic cholecystitis with cholelithiasis | 9 |
| Chronic nephritis | 9 |
| Secondary anemia | 9 |
| Syphilis | 3 |
| *Chronic bronchitis* | 3 |
| Cerebral hemorrhage | 3 |
| Pulmonary emphysema | 3 |
| Adenoma of the thyroid | 2 |
| Asthmatic bronchitis | 2 |
| Cerebral thrombosis | 2 |
| Chronic hepatitis | 2 |
| Syphilis *healed (serologic reaction negative at time of attack)* | 2 |
| Dementia paralytica | 1 |
| Aneurysm of circle of Willis | 1 |
| Primary polycythemia vera | 1 |
| Renal calculi with hydronephrosis | 1 |
| Duodenal ulcer | 1 |
| Rheumatic heart disease with mitral stenosis | 1 |
| Aortic aneurysm | 1 |
| Chronic pyelitis | 1 |
| *Hyperthyroidism* | 1 |

The diet which has been prescribed for our patients over the past fifteen years has been a variable one. Among those used was a cardiac diet (approximately 1,500 calories), which is a diet modified so that there is a low salt intake, with potassium chloride utilized as a salt substitute. For diabetes mellitus a diet which is adequate from a nutritional standpoint is used and is covered with insulin as needed. Occasionally patients have been put on a modified Sippy regimen when it was felt that it was necessary to treat a complicating peptic ulcer and to maintain nutrition and at the same time avoid reactivation of the upper gastrointestinal lesion. Intravenous fluids in the form of 50 cc. of 50 per cent glucose was used, being given very slowly twice a day (forenoon and afternoon). It is felt that this is a ready source of energy, especially for the myocardium. On occasion, patients have been given a general diet (approximately 1,500 to 1,800 calories a day). The diet most commonly used has been the soft diet, which most patients feel is adequate food at bed rest. This diet is a transition between the liquid and full diets. It contains all the liquid and solid foods low in residue, finely divided and well cooked. Total calories permitted are 1,500 to 1,800 calories a day.

At the present time we feel that the diet must be individualized for each patient. A patient who enters in shock or who has nausea and vomiting is usually given only liquids in small amounts as tolerated and is permitted solid foods as desired. Patients who are able to take solid foods at the time of entrance into the hospital are usually given a soft diet, with fluids as desired. Those who enter decompensated are put on a cardiac diet and permitted 1,500 cc. of fluid a day.

Formerly the patients treated in our clinic were put at complete bed rest for six to eight weeks. They were not permitted to bathe themselves and were fed by the nurses. At the present time our older patients (55 years or more) are treated by being put at absolute bed rest for a period of three weeks and our younger patients for six weeks. The patients are not permitted to bathe themselves and are fed for a period of two weeks. After this time they are permitted slight activity while in bed, namely, bathing and feeding themselves. At the end of three weeks the older patient is permitted to sit up in a chair for one-half hour the first day, with increases of fifteen to thirty minutes each following day. The younger patient is permitted out of bed at the end of the sixth week and put through the same routine. It is felt that prolonged bed rest slows the circulation in the older patient, thereby predisposing him to further attacks of myocardial infarction. Decreasing the period of bed rest also tends to lessen the incidence of pneumonia and the trouble some complication of painful joints and/or ankylosis of the joints.

The average length of stay in the hospital for the older patient is four weeks, and for the younger patient seven weeks. Follow-up treatments at home consist in permitting the patient to have bathroom privileges and gradually to increase his activities. Barring complications, the patient is permitted to make his weekly visits to the outpatient department ten days after leaving the hospital.

### COMPLICATING DISEASES

It has been found that there are many conditions which serve as complicating factors in coronary occlusion. Several of these conditions are often found in the same patient.

In a series of 100 cases reported by Smith, Sauls and Ballew,[3] diabetes mellitus occurred 8 times. Chronic cholecystitis was found 9 times among their patients. Four patients had oral sepsis, 9 had chronic bronchitis. Master, Dack and Jaffe[9] found 11.2 per cent of diabetes in a review of 500 patients, who were mostly Jewish.

Clinically, it would seem that the most important complicating factors appear to be those of hypertension, obesity, diabetes mellitus, generalized arteriosclerosis, polycythemia vera, chronic cholecystitis and cholelithiasis and underlying infection.

### ANGINA PECTORIS

The syndrome of angina pectoris is a manifestation of coronary arteriosclerosis. Barnes and Pruitt[17] feel that the diagnosis of angina pectoris is difficult to make for two reasons: first, the inability to recognize the

24. Cited by Falk.[25]
25. Falk, O. P. J.: Causes and Prevention of Sudden Death in Coronary Disease, J. A. M. A. **119**: 1250-1252 (Aug. 15) 1942.
26. Kilgore, E. S.: Treatment of Acute Coronary Occlusion, J. A. M. A. **100**: 315-317 (Feb. 4) 1933.
27. Cited by Middleton.[29]

syndrome and, secondly, the labeling of thoracic pain as angina pectoris when actually it is the manifestation of some other condition Three characteristics which constitute the diagnostic triad are distress located behind the sternum attacks of angina pectoris being precipitated by activity that increases cardiac work, especially physical exertion, walking or ingestion of food, and, thirdly, the attack of angina pectoris being very brief Usually the seizure is over in a few minutes, seldom lasting more than thirty minutes

Smith, Sauls and Ballew [3] studying 100 patients with coronary occlusion noted that 33 had angina pectoris before and after their attack Twenty-three patients complained of angina pectoris after myocardial infarction Thirteen patients noted that their anginal attacks disappeared after the occlusion Ten patients who gave a history of previous angina pectoris died in their immediate attack of coronary occlusion Twenty-one patients did not have angina before or after their coronary occlusion or gave histories which were too indefinite to use as a basis for conclusions

Forty-five patients (41 66 per cent) studied in our series gave a preceding history of angina pectoris Of this total 10 (9 25 per cent) were female patients and 35 (32 40 per cent) were males The ratio of males to females was 3 5 to 1 This high incidence of preceding angina pectoris indicates that from 30 to 40 per cent of all patients with this affliction will eventually have an attack of coronary occlusion

### MECHANISM OF DEATH

Appelbaum and Nicolson [15] reported rupture of the heart in 9 of 150 cases of coronary occlusion Rupture occurred through the left ventricle in all cases Cardiac rupture usually occurs in the acute stage of softening, but it may occur after the necrotic area has been replaced by scar tissue Two cases of ruptured cardiac aneurysm were reported

Falk,[25] discussing the causes of sudden death after coronary occlusion, states that ventricular fibrillation has been reported by several observers who took electrocardiograms just before death The occurrence of frequent ventricular extrasystoles is felt to be an ominous sign, since the more frequently they occur, the greater likelihood there is of sudden death Massive pulmonary embolism is another immediate cause of death which occurs following coronary occlusion The emboli do not come from the heart but usually from the iliac veins Thrombosis of the iliac veins is favored by the lowered blood pressure and the prolonged bed rest Myocardial failure, with pulmonary edema, has been noted during recovery from coronary occlusion Death is not an infrequent result of this complication

### TYPE OF DECOMPENSATION AFTER AN ATTACK OF CORONARY OCCLUSION

In our series 10 patients were noted to have acute decompensation coming almost immediately after the onset of the illness Forty-one of the patients developed a chronic form of decompensation, that is, recovered from their attack of occlusion and then went on to cardiac decompensation The latter form of decompensation usually takes place because of poor myocardial nutrition associated with coronary sclerosis The remainder of the patients did not show any decompensation from the time of the onset of their illness until death, and no statement was noted on the records with regard to this factor for 7 patients

### POSTOPERATIVE PATIENTS

It is always of major importance to know whether a given patient who has coronary artery disease is able to tolerate an operative procedure Three of our patients had their occlusions two weeks or less after their surgical operation In our clinic and hospital the surgical patients predominate greatly over the medical patients in number It would therefore seem that patients with coronary sclerosis definitely tolerate surgery and that surgery is a very minor point as a precipitating factor in coronary occlusion

### TIME OF ONSET

Thirty-six patients noted the onset of their illness during the day, whereas 21 patients had their attack at night The night was considered from 7 p m to 7 a m In the classic description of the onset of coronary occlusion it has always been stated that the patient is frequently aroused from his sleep between 2 a m and 4 a m, although no explanation for this has been definitely proved It has been suggested that the slower circulation noted during sleeping hours has been a predisposing factor

### DIFFERENTIAL DIAGNOSIS OF CORONARY OCCLUSION

The following conditions may be confused with coronary occlusion and therefore must be ruled out when making a differential diagnosis angina pectoris, ruptured peptic ulcer, gallbladder disease pancreatitis, pericarditis, pulmonary embolism mediastinal emphysema, neurocirculatory asthenia, metastatic lesions to the vertebrae and ribs, spinal arthritis myalgia and arthralgia in the region of the left shoulder, pain of the thoracic wall mediastinal lymphadenopathy penetrating diseases of the aorta, such as dissecting aneurysm of the aorta, rupture of the aorta and saccular aneurysms, such as in syphilis Still other conditions are pleurisy, cardiospasm, diaphragmatic hernia rib fractures or injuries intercostal neuralgia, herpes zoster scalenus anticus syndrome, pneumonia, pulmonary atelectasis, functional indigestion radicular pain and spontaneous pneumothorax

TABLE 12.—*Causes of Death of Reviewed Patients*

| | |
|---|---|
| Acute coronary occlusion | 38 |
| Congestive heart failure | 14 |
| Bronchial pneumonia | 6 |
| Chronic nephritis with uremia | 5 |
| Cause of death unknown | 5 |
| Cerebral hemorrhage | 2 |
| Rupture of a myocardial infarct | 2 |
| Cerebral thrombosis | 2 |
| Rupture of a cardiac aneurysm | 1 |
| Automobile accident | 1 |
| *Chronic myelogenous leukemia* | 1 |
| Carcinoma of stomach | 1 |

### MULTIPLE ATTACKS OF CORONARY OCCLUSION

Smith, Sauls and Ballew,[3] who reported a series of 100 cases, stated that recurrent attacks of coronary thrombosis occurred in 25 per cent With the exception of 3 patients the recurrent attacks came within two years after the first attack Fifteen of the 25 patients died in a subsequent attack, giving a mortality rate of 60 per cent as compared to the 34 per cent mortality rate following the initial attack Justice,[18] quoting Dr Frederick A Willius of Rochester, Minn who studied 370 cases of coronary thrombosis, noted that 80 per cent of the patients had only one attack, 17 per cent had two attacks, 2 2 per cent had three attacks and

0 05 per cent had four attacks It was also observed that the death rate increased progressively with the recurrent attacks of coronary occlusion The death rate for patients with solitary coronary occlusion was 47 5 per cent, while it was 70 per cent for patients having two attacks and 75 per cent for those suffering the third attack

TABLE 13—*Duration of Life After Attack of Acute Coronary Thrombosis*

| | |
|---|---|
| 29 patients died within 1 month s | time after onset of coronary occlusion |
| 7 patients died within 3 months | time after onset of coronary occlusion |
| 16 patients died within 1 year s | time after onset of coronary occlusion |
| 13 patients died within 2 years' | time after onset of coronary occlusion |
| 10 patients died within 3 years | time after onset of coronary occlusion |
| 2 patients died within 5 years | time after onset of coronary occlusion |

TABLE 14—*General Statement of Health*

| | |
|---|---|
| Good | 16 patients |
| Fair | 6 patients |
| Poor | 4 patients |

In our series 16 patients (14 8 per cent) had recurrent attacks of coronary occlusion Fifteen of these patients (93 7 per cent) died as the result of subsequent coronary accidents and 1 patient is still living Of the deceased, 11 patients suffered a second attack which was fatal, and 4 patients died as a result of their third attack, therefore 41 patients (37 9 per cent) of the total number of patients died in their initial attack, 11 patients (10 1 per cent) died in their second attack and 4 patients (3 7 per cent) died in their third attack

PROGNOSTIC FACTORS IN CORONARY OCCLUSION

No generalized statement can be made as to the definite prognosis of coronary occlusion Smith, Sauls and Ballew [3] observed 66 patients who survived their initial attacks of coronary occlusion Of this group 36 patients were followed for three years or less, 17

TABLE 15—*Type of Medication Used by Surviving Patients*

(Several medicaments used by same person)

| | | | |
|---|---|---|---|
| Aminophylline | 12 | Theophylline ethanol amine | 1 |
| Digitalis | 9 | Papaverine | 1 |
| Phenobarbital | 8 | Glyceryl trinitrate | 1 |
| Sodium thiocyanate | 3 | Ammonium chloride | 1 |

TABLE 16—*Type of Infarcts in Surviving and Deceased Patients*

| | |
|---|---|
| 14 with anterior infarcts survived | |
| 50 with anterior infarcts (78 12%) died | |
| 12 with posterior infarcts survived | |
| 21 with posterior infarcts (63 63%) died | |

patients were studied for three to six years and the final group of 12 patients were studied from six to nine years One of these patients was followed for a period of twenty-three years and was still alive at the time of the writing of the paper The life span of 34 patients following the initial attack of coronary occlusion showed that 13 patients died in less than twenty-one days, 10 died within ten months, 10 survived for twenty-eight months and 1 patient lived six years and two months

King [23] reviewing 62 cases of acute coronary occlusion, noted a mortality rate of 18 per cent The average age of the patients who died was 62 years, while the average age of the surviving group was 48 years Willius [14] has stated that one half of all patients with coronary occlusion die at the time of their first attack or within a few days thereafter He also claims that those surviving the first attack live a variable period from months to years after their illness In a report by Goodson and Willius [28] in which coronary occlusion among persons less than 40 years of age was observed, the authors reported that at the time of the conclusion of their study 8 persons (26 6 per cent) had died and that the average survival period from the initial attack was twenty-two months Ten (28 per cent) of the surviving patients developed a second attack of coronary occlusion within one month to six years following their initial attack Of the latter group 2 patients died the day of their second episode Middleton [20] feels that from the prognostic standpoint anastomosis plays an important part in coronary occlusion Occlusion of a coronary artery is inevitably fatal without adequate collateral blood supply It is felt that age is an important

TABLE 17—*Contrast of the Weight of the Total Reviewed Patients and of Surviving Group, Taken at Time of Onset of Illness*

| | Total Reviewed Patients | Surviving Group |
|---|---|---|
| Obese | 45.39% | 22 44% |
| Correct weight | 28 70% | 35.50% |
| Underweight | 14 81% | 25 00% |
| Unknown | 11 11% | |

TABLE 18—*Physical Findings of the Heart*

| | |
|---|---|
| Surviving group | |
| Normal heart findings | 19 (41.30%) |
| Abnormal heart findings | 14 (57 72%) |
| Total group | |
| Normal heart findings | 29 |
| Abnormal heart findings | 70 |

factor in the prognosis in any given case The general experience gives a better outlook to the younger patient with coronary occlusion It is often noted that the younger person more often resumes more of his previous activities It is felt that, with passing years, coronary sclerosis makes for collateral circulation preparing against the accident of coronary occlusion, but there is usually an underlying myocardial malnutrition and fibrosis resulting from the coronary sclerosis

STATISTICAL FINDINGS ON SURVIVING GROUP THEIR PROGNOSTIC VALUE

Of our total group of 108 reviewed patients there are 26 definitely known to be alive and it is questionable as to whether 5 are deceased or alive. Of the latter group 3 are males and 2 are females

*Time of Onset*—The interval of time from the onset of the illness to the time when the study was begun was thirty-four months, considering only the 26 patients known to be alive, whereas the average life span following illness for the deceased patients was 13 4 or 15 8

28. Goodson W H, and Willius F A. Coronary Thrombosis Among Persons Less than Forty Years of Age A Study of Thirty Cases Minnesota Med. 22 291 293 (May) 1939

months, not considering those patients who died within twenty-four hours after their initial attack

Five patients survived more than five years, of this group 1 patient lived five years and six months, 1 survived six years and one month, another survived six years and four months One patient lived seven years, and the longest life span was seven years and two months

*Sex of Patients*—There were 23 males and 3 females in the surviving group, therefore 29 11 per cent of the males survived their attacks as compared to 10 34 per cent of the females

*Age of Onset*—The average age at the time of onset of coronary occlusion of the surviving group was 54 73 years, as compared with the average age of 57 6 years for the total group The average age of onset for the deceased patients was 59 22 years

*Complaints of Shortness of Breath*—Fourteen of the patients complained of shortness of breath, while 12 did not This shortness of breath reflects the status of the coronary arteries One may conjecture as to what part cardiac decompensation might play in this

*Pain in Chest on Exertion or at Rest*—Ten patients responded yes to this question, while 16 patients said no

*Swelling of the Feet and Ankles*—Four patients stated that they continued to have swelling of the feet and ankles

*Inability to Sleep Flat in Bed at Night*—Three patients declared that they were unable to sleep flat in bed at night

*Fast Beating of the Heart*—Six patients stated that they had fast beating of the heart

The overall ratio of the total group of anterior to posterior infarcts was 1 93 to 1, whereas the death rate of the anterior to posterior infarcts was 1 06, showing a smaller death ratio, therefore, from the prognostic point of view, the type of infarct is not a very important factor

*Hypertension*—Fourteen patients in the follow-up group had hypertension previous to their attack, whereas 12 patients did not Thirty-six (72 per cent) of the patients with preceding hypertension died and 46 (79 13 per cent) not having preceding hypertension died Consequently, our findings concur with those previously stated, namely that high blood pressure is not a factor in prognosis

*Weight of the Patients at Time of Onset*—In reviewing the weight of the patients in the follow-up group, it was found that 11 patients were classified as obese, 11 as of correct weight and 4 underweight Therefore 60 5 per cent of the surviving patients were either at their correct weight or underweight This is a ratio of 2 61 to 1 when compared with the surviving obese patients Consequently we must conclude that weight is a definite prognostic factor, obesity giving a poorer prognosis

*Multiple Attacks*—Only 1 patient of the follow-up group survived more than one attack of coronary occlusion Therefore it is strongly indicated that multiplicity of attacks is a poor prognostic factor

*Preceding Angina Pectoris*—Forty-eight (44 44 per cent) of the total group had preceding angina pectoris, 12 patients in the surviving group had preceding angina pectoris, therefore 36 patients (75 per cent) of the patients having preceding angina pectoris died This seems to indicate that angina pectoris previous to the onset of coronary occlusion is a poor prognostic factor

*X-Ray Examination of the Heart*—There were 61 cases of the total group who exhibited abnormal findings on x-ray of the heart Of this group only 14 survived There were 25 patients who showed normal size hearts on x-ray and of this group 10 survived The ratio of abnormal x-ray findings as to normal findings was 2 44 to 1, whereas the death ratio was 3 13 to 1 Therefore we may conclude that a normal size heart on x-ray examination is a favorable finding

*Type of Decompensation*—In the surviving group 1 patient showed acute decompensation, 4 patients developed chronic decompensation, 20 patients showed no decompensation and for 1 patient it was not stated Therefore only 1 per cent of the patients with acute decompensation survived, 9 7 per cent of the patients with chronic decompensation survived, and 40 per cent of the patients with no decompensation survived Consequently we find that the lack of decompensation is a favorable prognostic factor

The ratio of those having pathologic change in the total group to those not having pathologic change was 2 72 to 1 The death ratio of patients having abnormal heart findings was 3 81 to 1 Therefore we may conclude that patients having normal heart findings have a better outlook for the future

## SUMMARY AND CONCLUSIONS

1 A study of 108 patients with coronary thrombosis was made from the point of view of symptoms, signs, therapy, complicating conditions, pathology and prognosis Tables were compiled illustrating graphically most of these factors

2 Of the group, 26 were definitely known to be alive at the time of this study and were asked to fill out a questionnaire with regard to their present health

3 The general statement of health, as judged by the patients themselves, was good in 16 cases, fair in 6 cases and poor in 4 cases

4 Factors causing the prognosis to be poor were age of onset (the older patient has less chance of recovery), obesity, multiple attacks and preceding angina pectoris

5 Conditions giving a better prognosis were normal size heart on x-ray examination, failure of the patient to develop decompensation, normal heart on physical examination and early rising in elderly patients

6 Factors not altering the prognosis were hypertension and location of the infarct

987 East Jefferson Avenue

---

**Fitness for the Enterprise**—Although there are noteworthy examples of eminent scientific achievement by men who were of frail physique—Darwin for example—it is easy to see that vigorous health is a great advantage in research as in other activities Perhaps it is especially valuable for the investigator, because he is subject to conditions which may make extreme demands on his physical strength and his resistance to disease. If he is studying infections for example, he runs the risk of being infected himself, as Zinsser was and even if he is in good health he may succumb as did Ricketts and Noguchi When the trail is hot and new results of high significance are being frequently disclosed the investigator may work himself to exhaustion He spends not only laborious days but also laborious nights and has but scant time for meals One of my students frequently followed an experiment all day and onward to its conclusion at 3 or 4 o'clock in the morning Only a stalwart man can for long endure such stresses—Cannon Walter B The Way of an Investigator, New York, W W Norton & Co Inc, 1945

## Special Article

### AMERICAN HEALTH RESORTS

# HEALTH RESORT THERAPY IN GASTRO-INTESTINAL DISORDERS

SAMUEL WEISS, M.D.
New York

*These special articles on spa therapy and American health resorts were prepared under the direction of the Committee on American Health Resorts. The opinions expressed are those of the authors and do not necessarily reflect the opinion of the committee. These articles may be published later as a Handbook on Health Resorts.*

Much of the popularity of mineral spring resorts is attributable to the high incidence of digestive ailments. Gastrointestinal sufferers are as a rule peculiarly susceptible to suggestion, so that their faith in the healing powers of mineral waters has often reached the point of fanaticism and cultism. At times this has been fostered by commercialization and even quackery, with extravagant claims for the efficacy of "cures" and disregard of their limitations. It is therefore regrettable that failures and disappointments have resulted in neglect of the really valuable services which properly applied spa therapy renders in the management of digestive disorders.

It is also essential to correct the general misconception that in some way American mineral springs are inferior in therapeutic properties to foreign ones. As Fitch [1] has remarked, "millions of patients have spent small fortunes in hunting health at European spas, when they could have had the same scientific care and considerate attention at home, and the additional advantage that our American waters are not only equal to any in the world but that many of them stand in a class by themselves."

The diversity and strength of American mineral springs is evidenced by Crook's table.[2]

Sigerist [3] recently pointed out that we have in the United States 2,717 areas with 8,826 known mineral springs, so that our spa reserves have scarcely been touched.

According to Rodari,[4] these medicinal springs may be classified as follows:

1. Alkaline carbonated waters. Their chief constituents are sodium bicarbonate and carbonic acid. In large doses they slightly stimulate peristalsis and have some mucosolvent action. They are chiefly useful in cases of hyperchlorhydria.

2. Alkaline muriated waters. In addition to sodium bicarbonate and carbonic acid, these contain sodium chloride. They stimulate peristalsis, especially when taken cold, and are used in mild cases of chronic constipation.

3. Glauber's salt waters. These contain principally sodium sulfate, with minor amounts of sodium bicarbonate, carbonic acid and sodium chloride. Their effect on peristaltic action is vigorous.

4. Sodium chloride waters. These also promote peristalsis, but their chief effect is to increase hydrochloric acid production in the stomach.

5. Bitter waters. Their high contents of sodium sulfate and magnesium sulfate render them strongly purgative.

Briefly summarized, the pharmacologic effects of mineral waters are antacid and buffering, mucosolvent, hydragogue, cholagogue, diuretic and remineralizing. McClellan [5] declares that, apart from the well known properties of the mineral constituents, the action of the Saratoga waters is due to the carbonic acid gas, which stimulates the mucous membranes of the upper gastrointestinal tract, inducing better circulation and a consequently improved secretion of gastric ferments. The carbon dioxide is expelled by belching or is eliminated through the lungs, while the salts increase the alkali reserve and render the urine alkaline. His experiments showed that, within two or three hours after ingestion of 1,000 cc. of the naturally carbonated, saline-alkaline mineral waters of the spa, the $p_H$ of the urine will reach 8.0. The stronger waters are hypertonic when compared with blood serum and draw fluids from the intestinal tract.[6]

The effect of saline mineral waters in stimulating the flow of bile may be observed in bile drainage during duodenal intubation.

Admittedly, experimental research in this field is thus far wholly inadequate to enable a satisfactory presentation of acceptable data, and it is to be hoped that spa laboratories will undertake thorough studies of pharmacologic actions both on animals and on human beings, so as to provide a more scientific and less empiric basis for spa therapy.

Whether natural mineral waters possess properties which are not exhibited by artificial mineral waters of apparently the same composition, so that some constituents of the former have escaped analysis, is not definitely established. If the reports of patients who have used both kinds are credible, there is some unaccountable difference but this may be purely psychic.

The etiology of gastrointestinal diseases largely explains the results from spa therapy. Generally speaking, and excluding particularly specific infections and neoplasms, most digestive disorders are neurogenic in origin and develop in chronicity to the accompaniment of a progressive neurosis. Improvement in digestion is concurrent with improvement in the nervous condition, and vice versa. Temporary relief follows pleasurable diversions just as exacerbations follow mental depression. "Nervous indigestion" may be regarded as the expression of a vagotonia induced by prolonged emotional strain, anxiety, overwork, lack of exercise and of rest, and above all by dietary abuses, including in some case overindulgence in alcohol and tobacco, and possibly sexual excesses.

Correction of these factors at home is difficult and often impossible. In his customary environment the patient frequently cannot be controlled sufficiently to insure implicit obedience to the necessary dietetic and hygienic regimen, and his tendency is toward infraction of the rules when there has been a little improvement, thus incurring setback after setback. A further handicap may be the presence of well meaning but interfering relatives and friends who pamper hypochondriacs or who irritate the patient with petty disagreements or worries when peace and quiet are most needed. In the case of men, the wear and tear of business or profes-

1. Fitch, W. E.: Mineral Waters of the United States, Philadelphia, Lea & Febiger, 1927.
2. Crook, James E.: A Word About American Mineral Waters and Mineral Springs Resorts, M. Rec., June 28, 1902.
3. Sigerist, H. E.: American Spas in Historical Perspective, Bull. Hist. Med. 11:133 (Feb.) 1942.
4. Rodari, W. E.: Lehrbuch d. Magen u. Darmkrankh., 1910.
5. McClellan, Walter E.: Recent Chemical and Clinical Studies of the Mineral Waters of the Saratoga Spa, M. Times 71: 40 (Feb.) 1943.
6. What role trace elements in the mineral waters may play was the subject of a special article in the symposium on health resorts.

sional activities is a constant drain for which medical management can hardly compensate

Sojourn at a distant health resort at once eliminates these complications The patients are put into an atmosphere most conducive to a healthful regulatory routine, so that the spa treatment can yield the maximum therapeutic benefit In consequence they return home with definite improvement in their objective and subjective symptoms It is impossible to evaluate separately just what portion of the benefit must be credited to drinking the waters plus the auxiliary baths, packs, massage and other forms of physical therapy, and what portion of the gain is contributed by freedom from the neurogenic factors which played a causal role

In general the indications for spa therapy in disorders of the digestive system may be classed as (1) gastric neuroses ("nervous dyspepsia"), (2) subacute and chronic gastritis, (3) intestinal atony, (4) chronic colitis, (5) gallbladder disease—dyskinesia, chronic cholecystitis, gallstones, (6) chronic hepatitis—congestion, enlargement, catarrhal jaundice—and (7) postoperative recurrence of digestive disturbances

Spa therapy is most useful in the treatment of gastric neuroses in which there is no demonstrable pathologic change in the stomach or other organs and in which the symptoms are anorexia, eructations, pyrosis and nausea, with epigastric pressure which disappears when the stomach is empty

Digestive disorders limited exclusively to the stomach are, however, comparatively infrequent Gastric dysfunction is usually soon followed by disturbed chemistry in the intestinal tract, and in long-standing cases hepatovesicular involvement is commonly encountered The patients present a syndrome which includes in variable number and degree slight jaundice, bilious vomiting, heaviness in the right upper quadrant and intolerance to eggs, fats and chocolate They may awaken during the night with pressure or pain in the epigastrium, right hypochondrium or lower part of the abdomen This may lead to an erroneous diagnosis of ulcer or chronic appendicitis, or the generalized abdominal discomfort may be ascribed to a colitis especially if the patient complains of postprandial diarrhea or several small unsatisfactory evacuations The real cause, however, may be found in a cholelithiasis cholecystitis or hepatitis following dietary excesses, malaria or amebiasis, or there may be a hepatic insufficiency due to familial cholemia with intestinal infection or intoxication The digestive disturbances may also be traceable to a biliary dyskinesia due to hypermotility or hypertonicity of the gallbladder or to atonic distention of the gallbladder caused by a spasm of Oddi's sphincter Occasionally a food allergy may be the primary exciting cause

When the condition has been correctly diagnosed, spa therapy may have a place in its treatment The waters may aid in relieving the gastric disturbances

*Comparative Potency of Representative American and European Springs**

| American | Parts per Million | Grains per Gallon | European | Parts per Million | Grains per Gallon |
|---|---|---|---|---|---|
| | | I Alkaline Waters | | | |
| Manitou Colo (Navajo) | 4,227 8 | 248 4 | Vichy France (Grande Grille) | 5,333.8 | 311 9 |
| Highland Calif (Neptune) | 3 001 5 | 179 0 | Fachingen, Nassau Germany | 3 822 0 | 233 5 |
| Juniper Springs Colo | 1 366 8 | 79.9 | Ems (Kesse) Brünnen) | 2,902 7 | 169 8 |
| Coalinga Calif | 617 4 | 36 1 | Weilbach Hesse Germany | 2,826 1 | 165.3 |
| Waukesha Wis. | 412 4 | 24.1 | Appollinaris Rhenish Prussia | 2 697 7 | 157.8 |
| Stafford Springs Miss | 309 0 | 18 1 | Wildungen Germany (Stadt Brünnen) | 1 152.9 | 67 4 |
| | | II Alkaline Saline | | | |
| Wilbur Hot Springs Calif (No 14) | 27 556 7 | 1 611 5 | Vals France (Desirée Spring) | 9 163.5 | 533 9 |
| Ballston Spa N Y (Hide Franklin) | 20 042 6 | 1 201.3 | Bourbonne France (Haute Marne) | 8,267.3 | 483.5 |
| Waconda Kan | 19,502 8 | 1 140.5 | Luhatschowitz, Moravia | 7 490.5 | 438.0 |
| Saratoga Springs N Y (Hathorn No 2) | 15,808.3 | 924 5 | Bilin Bohemia (Joseph s-Quelle) | 5 206 8 | 304.5 |
| Saratoga Calif (Azule) | 6,363 7 | 372 1 | Selters, Nassau Germany | 3 901.2 | 228 1 |
| Martinsville Ind (Home Lawn) | 1 658.2 | 97 0 | Obersalz Brennen Silesia | 2,361.2 | 138 1 |
| | | III Muriated Saline | | | |
| Watkins Glen N Y (Nauheim) (Used for Schott Nauheim treatment) | 157,995.2 | 9 239.5 | Nauheim Germany (Friedrich Wilhelm s Quelle) | 36 732 0 | 2 148 1 |
| Alden N Y (Alden Black Water) | 138,321 4 | 8 089 0 | Kreuznach Germany (Oranien Quelle) | 18 541.9 | 1 084 2 |
| Geuda Springs Kan | 22,545.5 | 1,318 5 | Homburg Germany (Eliz Brünnen) | 14,893 4 | 871 0 |
| Glenwood Colo (Azure-Yampah) | 21,375 7 | 1,250 0 | Harrogate, England | 14 781.8 | 864 4 |
| Byron Hot Springs Calif (No 2) | 13,304 0 | 781.5 | Cheltenham England | 11,012 4 | 644 0 |
| Mount Clemens Mich (Medea Hotel) | 11 428 6 | 668 8 | Wiesbaden Germany (Koch Brünnen) | 8 681 7 | 507 7 |
| | | IV Sulfated Saline | | | |
| Marlin Texas (Well No 1) | 8 604 8 | 503.5 | Carabana Spain | 120,390.3 | 7,291.2 |
| Excelsior Springs, Mo (sulfo saline) | 8 371.1 | 489 5 | Rubinat Spain (Serre) | 90 0.9 5 | 5,266 6 |
| Mineral Wells Texas (Baker) | 5 099 5 | 294 1 | Apenta Hungary | 43,452.6 | 2,541 1 |
| French Lick, Ind (Pluto) | 4 549 9 | 266.1 | Pullna Bohemia | 34 378.7 | 2 010.5 |
| Sharon Springs, N Y (White Sulphur) | 2 282 8 | 133 5 | Friedrichs Hall Germany | 26 674.6 | 1,559.9 |
| White Sulphur Springs W Va (White Sulphur) | 2,216 0 | 129 6 | Seidlitz Bohemia | 15 348 8 | 897 6 |
| | | V Chalybeate | | | |
| Bath Alum, Va | 468 4 | 26.8 | Brighton England | 262 4 | 15.3 |
| Brown s Wells, Miss (No 7) | 388.2 | 22 7 | Spa Belgium (Pouhon) | 92 7 | 5.4 |
| Howard Springs Calif (Hot Magnesia) | 78.6 | 4 6 | Schwalbach, Germany (Stahlbrünnen) | 64 0 | 3 7 |
| Saratoga Springs, N Y (Lincoln) | 78 0 | 4 6 | Pyrmont Germany (Trink Brünnen) | 42 4 | 2 5 |
| Excelsior Springs Mo (Regent) | 54 1 | 3.2 | Tunbridge Wells England | 38.0 | 2.2 |
| White Sulphur Springs W Va (Iron) | 22.8 | 1.3 | St Moritz, Switzerland | 23 6 | 1 4 |
| The figures refer to the amounts of ferruginous salts | | | The United States possesses innumerable chalybeates of the milder grades | | |
| | | VI Thermal Waters | | | |
| Arrowhead Springs, Calif (Penyugal Hot Springs) | 106-202 F | | Wiesbaden Germany (Koch Brünnen) | 140-150 F | |
| Hot Springs Ark | 76-157 F | | Bagneres de-Luchon France | 104-150 F | |
| Thermopolis Wyo (Big Horn Springs) | 135 F | | Baden Baden Germany (Haupt Quelle) | 120-145 F | |
| Glenwood Springs Colo | 124 120 F | | Gastein Salzburg Austria | 97 120 F | |
| Hot Springs, Va (Boiler) | 106 F | | Wildbad Germany | 91 104 F | |
| Warm Springs Ga | 87 F | | Nauheim Germany | 80- 94 F | |

* These represent the latest available analyses of American and European springs In some cases no recent analyses are available

and decongesting the viscera, thus acting on both cause and effect In about one half of the cases there is considerable improvement

In many cases of cholelithiasis which do not require surgical intervention spa therapy lengthens the intervals between biliary colics and occasionally even prevents recurrences Jaundice, choluria and bilinuria frequently clear up, the tenderness elicited in examining for Murphy's sign disappears, and the enlarged liver retrogresses in size

In intestinal atony the cases must be carefully selected and the use of mineral waters individualized, as the response in different subjects varies The sodium chloride waters are indicated when there is deficient gastric secretion, while sodium sulfate waters are preferable in cases of constipation with hyperacidity, duodenitis and colitis The immediate aim is to clear the intestinal tract of mucus and feces as gently as possible It is often astonishing to observe the enormous quantities of putrid, decomposed fecal residues which are passed, even by patients who have taken cathartics daily After the waters have served their purpose, it is of course advisable to correct the constipation by regulating diet, the intake of fluids and exercise rather than by reliance on laxatives Abdominal calisthenics, if conscientiously employed, are extremely helpful, as is light massage in cases in which there is no ulceration, colitis, chronic appendicitis or cholecystitis

The condition of the heart, kidneys and other organs must be taken into account when prescribing mineral waters Definite contraindications are formed by acute infectious processes, neoplasms or intestinal obstructions not caused by fecal impaction Mineral waters may also be harmful in cases of gastric succorrhea by increasing dilatation of the stomach though here the cautious administration of mineral water in very small and divided doses may be beneficial

According to Humphrey [7] the routine Saratoga spa treatment is as follows

The complete history is taken and the patient carefully examined to determine the most eligible procedure in each case The mineral water (Hathorn water No 2 or 3 or any other water of similar constitution) is taken three times daily before meals, preferably at the spring The patient sips 1 pint or more one-half hour before breakfast, allowing at least five minutes per glass and walking about while taking it, and this is followed by a twenty minute walk The same routine is carried out before the midday and evening meals, but at these periods Coesa or Geyser water is preferable as a stimulant of bile flow to prevent precipitation Should the patient have a biliary attack, a pint of Coesa or Geyser water is given every four hours, or a glass every two hours In order to prevent renal overactivity not more than this quantity should be taken per day

Twenty-one to thirty baths in the natural mineral waters of the spa, extending over a period of four to six weeks, depending on the frequency and severity of biliary attacks, constitute a course of treatment After one to three baths there is a day of intermission, not more than five baths each week are given The number of baths is adjusted to the patient's strength The temperature of the water must not exceed 97 or 98 F or fall below 92 F unless there is a special reason The bath is not to be taken within one hour after eating Its duration is fifteen to twenty-five minutes in accordance with the patient's condition, and it is immediately followed by resting half an hour Patients with valvular disease or myocardial degeneration may take these baths with a reduced amount of carbon dioxide gas, their response being carefully watched

Exercise is permitted when the patient has been free from biliary attacks for four weeks or longer Routine calisthenics consist of extension and rotation of the arms, without bending the body Moderate walking is encouraged

Colonic irrigations may be given to stimulate circulation in the hepatic area once a week on a rest day from bathing After the procedure the patient should rest for an hour

Massage is carefully applied for short periods daily, avoiding the gallbladder area

This course of treatment is repeated for two or more years

Unfortunately, many patients resume their former habits when they return home In such cases there is never complete recovery, and spa therapy repeated year after year is only of temporary benefit and finally of no avail

Indiscriminate use of the waters by the public may be exceedingly injurious The patient should be allowed to take them only under competent medical supervision Personal observation underlines the danger of self prescribing Thus a patient who took the waters haphazardly on the recommendation of friends at one of the well known health resorts developed an acute cholecystitis and empyema, necessitating an emergency operation Another one, who drank large amounts for his constipation, induced a severe attack of diarrhea with mucus and blood in the stools, his condition became so serious from loss of blood that a transfusion had to be administered

Finally, there must be complete team work between the physician at home and the medical department of the spa Information as to the clinical history, diagnosis, laboratory findings and previous treatment should be supplied to the spa physician, and during the patient's sojourn he should be subjected to periodic examinations so that the progress may be noted and any untoward development promptly checked A final report should be rendered to the referring physician to guide in the subsequent medical care required by the patient

Spa therapy must be considered as an adjunct to and not a substitute for, individualized management of digestive disorders It is not indicated in every case, and it cannot replace the medication and other remedial procedures adapted to the needs of each patient A month at a spa, no matter how beneficial, is no safeguard against the return of ailments which are due to somatic changes and for which uncorrected habits of life may be responsible These facts should be made clear to every patient, so that he may know that his future cooperation is indispensable to the maintenance of health

American health resorts, properly equipped and efficiently managed, with competent medical supervision of spa therapy, have an important place in the management of digestive disorders American spas should stand in the same high repute and enjoy the same wide popularity which continental spas have attained

7 Humphrey J F Personal communication to the author

# Clinical Notes, Suggestions and New Instruments

## ACUTE BACTERIAL ENDARTERITIS

DAVID M FLETT M D and W N POWELL, M D
Temple Texas

Patent ductus arteriosus is the most common lesion of the noncyanotic congenital heart disease group It is present alone or combined with other lesions in nearly 25 per cent of cases of congenital heart disease Usually the diagnosis is rather easily made by physical examination The murmur, present in the great majority of cases, is usually heard over the entire precordium but is most definite in the second and third left interspaces It is a continuous murmur, being present in both systole and diastole but with well defined accentuation during systole. It has been described as having a "humming top" or "machinery-like" character The pulmonic second sound is accentuated because of the increased pressure within the pulmonary circuit [1] Many patients carry this lesion throughout their lives with few or no physical symptoms However, according to Shapiro and Keys [2] their life expectancy is definitely shortened and eventually 80 per cent of them succumb to the disease Recently it has been noted that these patients suffer from an undetected asthenia, a fact forcibly brought out by their improvement following successful ligation of their patent ductus [3]

One of the most common and serious complications of a patent ductus arteriosus is the development of a bacterial endarteritis In Abbott's [4] series of 92 cases, approximately one fourth presented this complication In the postmortem series reported by Gelfman and Levine [5] 28.6 per cent of the cases showing a patent ductus were found to have a bacterial endarteritis Keys and Shapiro [2] state that 40 per cent of the patients in their series dying of this lesion had bacterial involvement.

The bacteriology of bacterial endocarditis is well covered in the literature, but considerably less information is available regarding the type of organisms found in the endarteritis complicating patent ductus arteriosus In the great majority of instances a streptococcus of the alpha or viridans type is responsible, but cases due to Staphylococcus aureus, Hemophilus influenzae and other organisms have been recorded A search of the literature thus far has not yielded a case of endarteritis of the ductus due to Diplococcus pneumoniae. Because of this fact the case reported here, due to Diplococcus pneumoniae type I, which was successfully treated with penicillin followed by surgical ligation, is thought worth reporting

Miss N J a white girl aged 10 years thin, pale and acutely ill, was admitted March 14, 1945 because of illness which had started about three weeks before with a severe headache, fever and pain in the left ear She was seen by her local physician at that time and a left myringotomy was performed and some form of sulfonamide drug was administered She made rather rapid recovery, the drainage from the ear ceasing within the week It was thought that she had made a complete recovery until about one week before admission here when it was noted that she continued to have some fever and then went on to develop pains in the legs and later in the knees and shoulders She also complained of headache and pains in the abdomen During the twenty-four hours before admission she had chills and some emesis

In the past and family histories the only item of importance was the information that since the age of 8 months she had been known to have some type of congenital heart disease. The parents had been informed that there was no treatment for it

On physical examination the weight was 62 pounds (28 Kg), the temperature 102.2 F, the pulse rate 140 beats per minute and the respiratory rate 28 per minute The blood pressure was 104 mm of mercury systolic and 44 diastolic. The skin was pale, hot and dry, no petechiae were noted The eyes reacted to light and in accommodation, no petechiae were noted in the conjunctivas The ear drums were normal The teeth were in poor condition and the tongue was coated The tonsils had been removed The heart was enlarged to the left, and a very loud, rough, "machinery-like" murmur was heard over the entire precordium but was most clearly defined in the pulmonic and mitral areas It was carried into the neck and left axilla and could be heard posteriorly below the inferior angle of the left scapula There was a distinct 'thrill," palpable in the second and third interspaces on the left about 2 cm from the sternal margin The abdomen was not distended, but the liver was felt 3 cm. below the costal margin and was very tender The spleen was palpable to the level of the umbilicus and extremely tender No joints were swollen or reddened, but the right knee was very painful on motion

She was admitted to the hospital with the diagnosis of acute bacterial endarteritis and congenital heart disease, probably patent ductus arteriosus

The admission laboratory examinations showed hemoglobin 10 Gm red blood cells 3,520,000, white blood cells 15,200, neutrophils 81 per cent, lymphocytes 18 per cent, monocytes 1 per cent Stained blood smears showed a normocytic, normochromic anemia with considerable left shift of the neutrophils The sedimentation rate was 76 mm in one hour (Westergren) The urinalysis was essentially normal, and x-rays of the chest and of the genitourinary area were reported as negative A blood culture on admission disclosed within eighteen hours Diplococcus pneumoniae type I, with 1,200 colonies per cubic centimeter of blood As soon as this report was obtained penicillin, 20,000 units intramuscularly every three hours was ordered On March 17 this was increased to 25,000 units every three hours A blood culture taken on the 17th showed Staphylococcus aureus thought to be a contamination Another blood culture taken on the 21st showed no growth in thirteen days A short trial of Dicumarol (3 3'-methylene-bis [4-hydroxycoumarin]) was given but it was discontinued after ten days of rather uncertain results On March 20 the hemoglobin was 9 5 Gm, with white blood cells 11,900 Transfusions of citrated whole blood were given on the 23d and again on the 27th in amounts of 250 cc each

On April 1 the patient had a slight chill and increase of temperature and pulse rate, with pain in the left chest on deep breathing Increased breath sounds were noted in the left side, but no rales or friction rub could be heard On April 2 a chest film showed some infiltration in the left midlung field at the level of the fourth and fifth anterior interspaces and some increase in markings from the right hilus as compared with a film of March 15 This had the appearance of an inflammatory process There was no evidence of effusion On a check film in twenty-four hours the process was reported to be more advanced and definitely inflammatory in appearance On April 2 the white blood cells numbered 25,050 with neutrophils 76 per cent, lymphocytes 19 per cent and monocytes 5 per cent. On April 3 the white blood cells numbered 31,400 The count then gradually receded, the last count being red blood cells 4,390,000 and white blood cells 15,550

With the advent of this complication the penicillin was again increased to 25 000 units every three hours The temperature and pulse rapidly approached normal, although x-ray films on April 9 and 12 continued to show infiltration in the left midlung field Penicillin was discontinued on the 13th after 3,875,000 units had been given over a period of twenty-eight days

The patient was dismissed on April 14 after arrangements had been made for operation for ligation of the patent ductus arteriosus to be performed elsewhere

On May 29 she underwent operation and we quote from the report [6] 'We performed transpleural multiple ligations

1 Winsor Travis and Burch George E Congenital Patent Ductus Arteriosus South M J 38 132 140 (Feb) 1945
2 Shapiro M J, and Keys Ancel The Prognosis of Untreated Patent Ductus Arteriosus and the Results of Surgical Intervention Am J M Sc 206: 174 183 (Aug) 1943
3 Gilchrist A R Patent Ductus Arteriosus and Its Surgical Treatment (George Alexander Gibson Lecture) Brit Heart J 7 1 36 (Jan) 1945
4 Abbott Maud Bedside Diagnosis edited by George Blumer Philadelphia W B Saunders Company 1928 vol 2 p 353
5 Gelfman Raymond and Levine Samuel A The Incidence of Acute and Subacute Bacterial Endocarditis in Congenital Heart Disease Am J M Sc 204 324 333 (Sept) 1942
6 Harrington S W Personal communication to the authors

through a posterolateral incision. There was an enormous amount of inflammatory reaction around the aorta and pulmonary artery, with marked enlargement of the lymph nodes. The vagus nerve was isolated and retracted to the outer side and the ductus was located. There was a large communication, more of a fistula, between the pulmonary artery and the aorta. The tissues were very inflammatory and fixed about this opening. The inflammatory tissue was carefully dissected free and the ductus was ligated with three strands of silk. Immediately on ligation of the ductus, the thrill stopped. During her postoperative course she developed an atelectasis which required bronchoscopic treatment for relief."

The patient was seen here again for observation about Sept. 25, 1945, six months after her original admission. At that time she had gained about 25 pounds (11.3 Kg.) in weight and at least 2 inches in height. Her voice was slightly husky and had been so since the operation. The chest expansion was normal on both sides, with normal breath sounds. The heart tones were good, the rate was regular and there were no murmurs.

SUMMARY

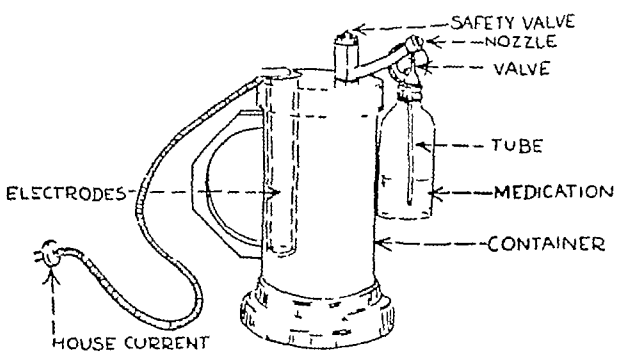
In a case of patent ductus arteriosus complicated by acute bacterial endarteritis due to Diplococcus pneumoniae type I, treatment with 3,875,000 units of penicillin sterilized the blood stream, permitting later surgical ligation of the ductus. The patient is apparently well ten months after the original period of treatment with penicillin.

## THE PRODUCTION OF AEROSOLS FROM MEDICATED SOLUTIONS

### A COMBINED STEAM GENERATOR AND AEROSOLIZER

SAMUEL J. PRIGAL, M.D.
Chief Allergy Clinic, New York Medical College, Flower and Fifth Avenue Hospitals
NEW YORK

Aerosol of penicillin, as advocated by Barach[1] after Bryson's[2] preliminary observations, is finding increasing use in the treatment of diseases of the upper and lower respiratory tracts. The method described by Barach consists in a special nebulizer containing concentrated solutions of penicillin in saline solution. Oxygen flowing through the nebulizer produces an aerosol of penicillin which can then be inhaled. To conserve the penicillin a rebreathing bag as well as a Y tube has been inserted into the circuit. The oxygen here is used primarily as a driving force. This led to the use of a cheaper source of power, namely, steam, and it was possible to convert a device[3] originally designed for the dispersion of solutions of insecticide for the purpose of producing medicated aerosols. To this apparatus has been added a valve for controlling the onset and rate of production of the aerosol.




Combined steam generator and aerosolizer.

The apparatus consists of a container sturdily constructed, which holds 16 ounces of water. Suspended from the lid into the chamber of water are electrodes which connect to an outlet of current. From ten to fifteen minutes after plugging into the current, steam begins to emerge from the spout. This spout is especially designed to allow a thin trickle of steam to pass over a fine tube with which it is connected and which extends into the container holding the medication in solution. Excess steam unable to escape through the spout emerges through a safety valve located on the lid. This safety valve can be regulated to work at different pressures. (The internal pressure can vary from 8 to 50 pounds.) The rapid passage of the steam creates a vacuum in the tube, allowing the medication to be drawn up and expelled from the nozzle in a fine mist mixed with the steam. To control the onset of flow of medication and its rate of flow, a special screw valve was designed. Thus, with the screw turned open, no medication will flow, even though the steam is escaping. As the screw is tightened, the flow of medication is increased. A given amount of medication can therefore be aerosolized in any length of time, as desired. The 16 ounces of water is consumed in twenty to twenty-five minutes, and the absence of water automatically shuts off the current, further enhancing the safety of this generator. The water can readily be replaced by unscrewing the safety valve and filling by means of a funnel. Steam can be generated for hours, if necessary.

Preliminary studies reported elsewhere[4] indicated that the brief contact with steam caused slight or no alteration of penicillin. The rapid expansion of the steam emerging from the small apperture of the nozzle cools it considerably, so that it may be inhaled with safety.

The combined steam generator and aerosolizer has the following advantages:

1. It is cheap, sturdy, small and conveniently handled.
2. It can readily be used in the home and office as well as the hospital. It works best on alternating current.
3. The apparatus and method are so simple that self administration is readily learned.
4. Larger amounts of solution can be aerosolized than with the present method.
5. The aerosol produced is warm and moist, and this may enhance its effectiveness.
6. It is possible to produce mixed aerosols (penicillin, sulfadiazine, penicillin and aminophylline, and others).
7. Aerosols need not be limited to aqueous solutions. Our best blood levels[5] of penicillin were obtained with aerosols of penicillin dissolved in propylene glycol.
8. Safety features, including a decompression valve and an automatic circuit breaker when no water is left, make it fool proof. There are no fire hazards, as with oxygen.

The aerosol produced by this device may be administered by simple inhalation (as with the old fashioned steam kettle), by confining the patient to a small chamber into which the aerosol is blown, by confining the aerosol in a tent covering the patient and by confining the aerosol in a box from which the patient breathes. These methods and the blood levels of penicillin obtained with each will be reported. Suffice it to say that excellent therapeutic levels of penicillin of five to six hours in duration have been obtained using penicillin in propylene glycol and the tent or breathing box for the purpose of confining the aerosol.

This device has also been used in the treatment of asthma with aerosols of aminophylline to relieve bronchospasm. The aerosol may succeed at times even after failure with aminophylline intravenously.[6] Ammonium chloride in aerosol form[6] has also been administered to a limited number of patients to liquefy the thick tenacious sputum commonly seen in asthma. These studies are continuing.

55 Park Avenue, New York 16

From the Department of Medicine, New York Medical College. Dr. Linn J. Boyd, Director.

1. Barach, A. L., and others: Inhalation of Penicillin Aerosol in Patients with Bronchial Asthma, Chronic Bronchitis, Bronchiectasis and Lung Abscess: Preliminary Report, Ann. Int. Med. 22: 485, 1945.
2. Bryson, V., Sansome, L., and Larkin, S.: Aerosolization of Penicillin Solutions, Science 100: 33, 1944.
3. Made by the Kaz Manufacturing Company, 540 Twelfth Avenue, New York.
4. Prigal, S. J., and Speer, F. D.: A New Method of Aerosolization of Penicillin, Sulfonamides and Other Medications for Inhalation Therapy, Bull. New York M. Coll. 8: 21, 1945.
5. To be reported.
6. Prigal, S. J., Brooks, A. M., and Harris, R.: The Treatment of Asthma by Inhalation of Aerosol of Aminophylline, J. Allergy, to be published.

# Council on Foods and Nutrition

*The Council on Foods and Nutrition has authorized publication of the following report*

JAMES R. WILSON, M.D., *Secretary*

## ENRICHED 80 PER CENT EXTRACTION FLOUR

The Council has noted with approval and endorses the decision of the millers and bakers of this country to enrich 80 per cent extraction flour and bread made with such flour The Council was among the first to advocate additions of thiamine to white flour and early endorsed the enrichment of white flour and white bread with niacin, riboflavin and iron as well as with thiamine according to standards developed at the public hearings of the Federal Food and Drug Administration The advantages of this enrichment will be largely lost unless enrichment is also applied to 80 per cent extraction flour and bread made with such flour Eighty per cent extraction alone will not accomplish that for which enrichment was designed.

The white flour in popular use for the last sixty years or more has represented a variable fraction of the wheat from which it was extracted. This fraction has been 72 per cent or less In other words, each 100 pounds of wheat yielded no more than 72 pounds of flour or, in the case of many 'patent" flours, only 58 to 60 pounds The remainder of the wheat, consisting mainly of the outer coatings, went into feed for stock. The outer coatings carried with them about seven eighths of the thiamine and niacin, three fourths of the riboflavin and four fifths of the iron, together with other nutrients of the wheat kernel Enrichment was developed as a partial remedy for these losses The standards for enrichment are such that the amounts of thiamine, niacin and iron in the finished flour approximate those present in whole wheat, while the amount of riboflavin considerably exceeds that contained in wheat.

Eighty per cent extraction flour is now manufacturered in compliance with War Food Order 144, effective March 1, 1946 The order requires that 'no miller shall produce any flour which consists of less than 80 per cent by weight of the cleaned wheat from which such flour is produced." This procedure is unquestionably desirable if, as is expected by its advocates, it results in saving flour for shipment overseas The flour also has some small nutritional advantages particularly with respect to certain protein qualities The serious disadvantage is the fact that to date the iron, thiamine, riboflavin and niacin values of 80 per cent extraction flour are decidedly variable but in the case of each of these four nutrients the levels consistently fall far short of the levels present in enriched flours Unenriched 80 per cent extraction flours carry around half or less than half as much thiamine, niacin and iron and less than 20 per cent as much riboflavin as enriched flour If, therefore, the 80 per cent extraction flours and bread made from such flours were not enriched, the result would be a decided reduction of the advantages to the American diet previously achieved through the enrichment of flour of lower extractions and breads made from such flour

On the other hand the 80 per cent extraction flour if enriched, as is now proposed by the milling and baking industries, is nutritionally superior to the flour it replaces Its baking qualities have been stated by bakers to be acceptable to the commercial bakers Whether the home baker will find it satisfactory will soon be seen, and time will tell whether it has sufficient keeping qualities for satisfactory marketing in the high temperatures prevailing in this country in the summer months

Enrichment of white pan bread became mandatory in this country through War Food Order Number I, but war food orders cease with the "official' ending of the war and flour enrichment never has been required by federal legislation. Laws requiring enrichment have been adopted by nineteen of the forty-eight states as well as by the legislatures of two territories Similar legislation was defeated in several other states, the defeat resulting mainly because of opposition by the dry milk industry It is hoped that this opposition will be withdrawn and that enrichment may be made obligatory in all the states However, until that is accomplished, it will continue to be important for purchasers of white bread and white flour to demand products which carry on their labels the word "enriched" Federal laws do not require enrichment, except temporarily, for white bread They do, however, penalize untruthful labeling, and the word "enriched" can safely be displayed on packages of bread or flour only when the products contain the nutrients specified by the federal standards established for enriched white bread and enriched white flour

# Council on Pharmacy and Chemistry

## NEW AND NONOFFICIAL REMEDIES

*The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies A copy of the rules on which the Council bases its action will be sent on application*

AUSTIN SMITH, M.D., *Secretary*

**PERTUSSIS IMMUNE SERUM (HUMAN)**—Hyperimmune Whooping Cough Serum (Human)—A sterile serum prepared from the pooled blood of healthy adult human beings who have had "whooping cough" in childhood and who have received repeated courses of Phase I Pertussis Vaccine. The bloods to be pooled and processed are drawn about one month after a course or courses of vaccine, when the donor's serum agglutination titer is 1 2,560 or higher The serum may be distributed in the liquid form or as a vacuum dried powder It complies with the requirements of the National Institute of Health of the United States Public Health Service.

*Actions and Uses*—Vacuum dried serum may be administered intravenously or intramuscularly for prophylaxis and treatment of "whooping cough"

*Dosage*—When exposure is only casual or of short duration, 20 cc. may be administered. Otherwise two 20 cc. doses may be give at three to five day intervals

For treatment three 20 cc. doses at forty-eight hour intervals may be injected. A fourth dose may be necessary Critically ill infants may be given 60 to 100 cc. intravenously, repeated one or more times.

PHILADELPHIA SERUM EXCHANGE, CHILDREN'S HOSPITAL OF PHILADELPHIA, PHILADELPHIA

**Pertussis Immune Serum (Human)** Vials containing vacuum dried powder representing 20 cc. of Pertussis Immune Serum (Human) preserved with merthiolate 1 35,000 Each vial is packaged with a 10 cc. ampul of sterile distilled water

**THEOPHYLLINE ETHYLENEDIAMINE** (See New and Nonofficial Remedies 1945, p 388)

The following dosage forms have been accepted

CARROLL DUNHAM SMITH PHARMACAL COMPANY, ORANGE, N J

**Solution Aminophylline with Benzyl Alcohol 2%** Ampuls 0 5 Gm. in 2 cc.

**Solution Aminophylline** Ampuls 0.5 Gm in 20 cc.

**Tablet Aminophylline** 0 1 Gm

**EPHEDRINE SULFATE** (See New and Nonofficial Remedies, 1945, p 285)

The following dosage forms have been accepted

PREMO PHARMACEUTICAL LABORATORIES, NEW YORK

**Ephedrine Sulfate *(Powder)*** 15 Gm., 30 Gm. and 120 Gm

**Capsules Ephedrine Sulfate** 24 mg., 32 mg and 50 mg

**PENICILLIN** (See New and Nonofficial Remedies, 1945, p 214)

The following additional dosage form has been accepted

WINTHROP CHEMICAL CO., INC., NEW YORK

**Penicillin Sodium** 200,000 Oxford unit vials.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - - Chicago 10, Ill

Cable Address "Medic, Chicago

Subscription price Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new, always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY, JUNE 1, 1946

## OIL TREATMENT OF BEDCLOTHES FOR THE CONTROL OF INFECTION

In the dissemination of infection, micro-organisms dispersed into the air when contaminated bedclothes are agitated play a considerable part Puck and his associates[1] point out that mineral oil, because of its hydrocarbon structure, has a lower surface tension and therefore a higher tendency to spread than any of the other common liquids, hence its capacity to engulf new particles will be great even when it is present in only minute quantities Water soluble liquids possess high polar chemical radicals, these groups strongly attract one another, hence molecules containing them will resist being separated, as must happen if the liquid is to flow over the newly acquired particles A water soluble compound which might theoretically regulate dust as effectively as does oil would probably not be effective because of the presence of the chemical groups that make a water soluble molecule a poorer spreading agent than mineral oil A number of commercial processes have been advanced with the claim that they render bedclothes and wearing apparel self sterilizing However, fabrics impregnated with high concentrations of strongly bactericidal substances, such as Zephiran, failed to produce any killing of dried bacteria allowed to settle on them Furthermore, they exhibited only moderate bactericidal action when the micro-organisms were deposited in droplets produced by atomization The investigators point out that these commercial processes will not be effective, except possibly toward liquid suspensions of micro-organisms that happen to wet the fabric, unless some agent can be incorporated to bring about intimate contact between the bacteria and the germicide

The authors have developed two oil-in-water emulsions, both of which can be used to deposit mineral oil in sheets and blankets in amounts appropriate for preventing the dispersal of dust and bacteria from them into the air These emulsions are nontoxic and non-irritating to the skin and can be readily applied to bedclothes in the course of the ordinary laundry procedure One of these, triethanolamine oleate emulsion, presents some difficulty in routine use because of its tendency to separate when stored in drums and to rancidify in blankets The other emulsion, T-13, employs Triton NE as the emulsifying agent, it is said to be free from both of these disadvantages and also to permit more accurate control of the amount of oil deposited in the fabrics Neither bactericidal substances alone nor water soluble dust-laying agents are as effective as mineral oil in preventing aerial dissemination of bacteria from contaminated bedding

Loosli and his associates[2] confirm the conclusion that mineral oil is by far the most effective agent for controlling the aerial dissemination of dust and bacteria from fabrics Of the two emulsion bases described, T-13 more nearly meets all the criteria set up for the oil treatment of textiles A number of observations on its usefulness and limitations were made during the course of the study by the Commission on Air-Borne Infections in collaboration with the Commission on Acute Respiratory Diseases on the control of respiratory diseases by the oil treatment of floors and blankets The oil emulsion base T-13 is composed of 87 per cent by weight of medicinal mineral oil and 13 per cent Triton NE, the emulsifying agent The latter is a 30 per cent aqueous solution of an aryl-alkyl-polyether alcohol The preparation of oil emulsion base T-13 is carried out by mixing in a suitable agitator the correct quantities of mineral oil and Triton NE until a thick white paste is formed The treatment of cotton and woolen fabrics with dilute T-13 oil emulsions is carried out as the final step of the washing procedure simply by adding the required amount of oil emulsion base to the washwheel containing the washed and rinsed textiles Blankets, cotton bedclothing and cotton and woolen wearing apparel containing from 2 to 5 per cent oil, by dry weight, are indistinguishable from the untreated fabrics in appearance, texture and touch. The treated materials are odorless During the period from October 1944 to April 1945 several thousand men have slept in bedding treated in T-13 oil-water emulsions There has not been a complaint of skin irritation Oiled bedding in conjunction with oiled floors gives the barracks a cleaner appearance and an atmosphere free of dust

Woolen blankets treated with T-13 oil emulsion and containing from 2 to 3 per cent oil yielded 90 per cent fewer bacteria than the untreated ones The oil treated blankets also showed 77 per cent fewer positive beta hemolytic streptococci than did the corresponding control samples Furthermore, in the positive cultures there were 80 per cent fewer streptococci recovered per culture from treated blankets as compared with untreated ones

1 Puck T T Robertson O H Wise, H, Loosli C. G, and Lemon, H. M Oil Treatment of Bedclothes for the Control of Dust Borne Infection I Principles Underlying the Development and Use of a Satisfactory Oil in Water Emulsion Am J Hyg 43:91 (March) 1946

2 Loosli C G Wise, H Lemon H M Puck, T T and Robertson O H Oil Treatment of Bedclothes for the Control of Dust Borne Infection II Use of Triton Oil Emulsion (T 13) as a Routine Laundry Procedure Am J Hyg 43 105 (March) 1946

The observations reported indicate that oil treated bedding will retain its bacteria and dust-holding efficiency for long periods if dust-laying measures are used on the floors as well The diminution of infections of the respiratory tract by the use of dust control measures appears to be feasible Additional data as to the advantages and limitations of this technic in relation to other preventive procedures are needed before the effectiveness in controlling infection can be clearly evaluated

## THIAMINE AND ESTROGEN IN UTERINE CANCER AND MENORRHAGIA

The work of Allen [1] with castrate monkeys and of Shorr and his associates [2] with human beings has shown that estrogens can produce enormous proliferative growth of the vaginal epithelium with an increase in the number of growing bulbs along the basement membrane, the cells containing many mitotic figures The chemical similarity of the carcinogenic substances of certain coal tar products to some of the active substances in the sex hormones has been established Rhoads [3] has demonstrated the protective action of a diet rich in vitamins of the B complex against induced cancer in rats to which the two benzene ring substance "butter yellow" has been administered Ovarian tissue implants in mice have produced cancer of the breast in cancer susceptible animals, this fact has been thought to implicate some secretion of the ovary in the production of cancer Henry [4] has reported 2 cases in which the prolonged administration of diethylstilbestrol has been followed by the discovery of malignant growths in the uterus Hodgson and his associates [5] after surveying estrogenic activity in 62 cases of granulosa cell tumors, reported proliferative endometrium in 67 per cent and concluded that "this phenomenon of coexistent ovarian, endometrial and mammary carcinoma in the human being bears a marked similarity to the results of experiments on laboratory animals in which estrogen stimulation appears to be a factor in carcinogenesis"

While further investigation is needed to clarify the exact relation of the liver to estrogen metabolism, the Biskinds [6] found that the liver loses its ability to inactivate estrogen in B complex deficiency in female rats and that this can be controlled at will by the administration of vitamin B complex or its restoration in the diet Further, Singher and his associates [7] have demonstrated that the inactivation of estradiol in liver slices is dependent on the concentration of thiamine and riboflavin in the liver, possibly through the role of these vitamins as part of an oxidative enzyme system The protection of the liver by vitamin B against many toxic agents is well known, Gyorgy and Goldblatt [8] reported that cirrhosis of the liver may result from nutritional deficiency Menorrhagia and metrorrhagia may occur early in the course of cirrhosis of the liver The work of the Biskinds indicated that administration of large doses of B complex and liver extract correct the functional disorders of a large percentage of cases of menorrhagia and metrorrhagia

In an attempt to correlate these factors of B complex deficiency, decreased liver function (in which liver block of estrogen deactivation may occur), and high estrogen activity, Ayre and Bauld [9] studied two series of 150 and 20 cases of proved uterine cancer These authors used as the simplest and most sensitive measure of estrogen activity the specific hormonal cornification reaction in the squamous epithelial cells of vaginal and cervical smears, first described by Allen This cornification with accompanying proliferative growth is related to the deposition of glycogen in these cells under the mediation and control of the estrogenic stimulus Smears were examined before and after the administration of thiamine and other constituents of the B complex and liver extract Although vitamin and liver function studies were incomplete, a definite relationship was noted between the intake of B complex and the rise and fall of estrogen levels

Three patients with similar cytologic findings were investigated as to their nutritional biochemical status by a vitamin tolerance technic All presented abnormal bleeding Abnormally high estrogen levels demonstrated by the cytologic smears were verified by the endometrial patterns The first patient, aged 64, exhibited an early rapid growing, undifferentiated, squamous carcinoma of the cervix, pathologic tissue study of the second patient, aged 29, with a suggestive erosion about the external cervical os, justified the diagnosis of a squamous intraepithelial carcinoma or a precancerous secondary hyperplasia, microscopic study of the third patient, a girl aged 14 years with puberal bleeding following a total dental extraction, presented an appearance of overstimulated proliferative glands with mitosis and adenomatous formation Lower than normal excretion values for thiamine and riboflavin were found The other B factors were normal in amount Liver function tests presented uncertain results

Over 66 per cent of the first series of 150 proved cases of uterine cancer demonstrated evidence of abnormally high endogenous estrogenic activity In the supplemental series of 20 patients with proved uterine cancer 90 per cent were found to have a low thiamine excretion with an abnormally high estrogen level The

1 Allen Edgar Am J Anat. **34**: 133 (Sept) 1924 The Physiology of Estrogenic Principles J A M A **104** 1498 (April 27) 1935
2 DeAllende Ines L. C Shorr Ephraim and Hartman Carl G in Contributions to Embryology, Pub 557 Carnegie Inst **32**: 1 1943
3 Rhoads C P Bull New York Acad Med **18** 53 (Jan.) 1942
4 Henry J S Canad. M A J **53**: 31 (July) 1945
5 Hodgson J E Dockerty M B and Mussey R D Surg Gynec & Obst **81**: 631 (Dec.) 1945
6 Biskind M S and Biskind G R Endocrinology **31**: 109 (July) 1942 Biskind M S Biskind G R. and Biskind L. H Surg., Gynec. & Obst **78**: 49 (Jan.) 1944
7 Singher H O Kensler C. J Taylor H C Jr Rhoads C P and Unna Klaus J Biol Chem **154**: 79 (June) 1944
8 Gyorgy Paul and Goldblatt Harry J Exper Med. **75** 355 (April) 1942
9 Ayre J Ernest and Bauld W A. G Science **103** 441 (April 12) 1946

average thiamine excretion level was less than half that of controls with normal estrogen levels. Twenty per cent of this group also showed deficient excretion of riboflavin. The same correlation was demonstrated in a similar series of menorrhagic patients. Controls of nongynecologic cases did not show similar vitamin B deficiencies.

Ayre and Bauld state that it has long been the feeling among gynecologists that dietetics was not directly concerned with the production of pelvic pathologic changes and that the need for vitamins in particular was generally overstressed. However, in the light of this investigation, the nutritional status of gynecologic patients on supposedly adequate diets should be studied carefully with reference to the intake and metabolism of thiamine and other components of the vitamin B complex. Fixed habits of diet and dietary errors over long periods of time may produce unrecognized chronic deficiencies. These may act on the liver in man as in animals and thus allow the accumulation of estrogens in the body and permit them to act as a growth stimulant to estrogen susceptible tissues such as the pelvic organs and possibly also the glands of the breast. Two tests are recommended by the authors: (1) a cervical cytologic test to tell (*a*) whether the patient has uterine cancer and, (*b*) if not, whether the endogenous estrogen level is abnormally high, and (2) a test of the urinary thiamine level.

Ayre and Bauld conclude that there appears to be excellent circumstantial evidence that nutritional deficiency may be a primary factor in the production of uterine cancer and that recognition of this possible dangerous precancerous linkage of low thiamine and abnormally high estrogen may permit correction and possible prevention of cancer. Further investigation is needed before critical evaluation of this important correlation can be made.

## EQUIPMENT FOR THE CALLING OF MEDICINE

C. H. Browning,[1] in an address recently delivered before the Southern Medical Society (Scotland), expressed skepticism as to the validity of present day methods of training physicians. He feels that our methods leave much to desire in the selection of medical students. The capacity to excel in examinations may be associated with good general gifts but need not necessarily reflect the candidate's qualities of originality or common sense, much less his enthusiasm for the subject of his studies. Browning feels that the only way to surmount this difficulty would be the wasteful one of accepting applicants on a lavish scale but with due warning that rejection may occur at any time up to the end of the second professional stage. During this period the teacher should come into an intimate contact with each student, being sympathetically although critically observant of his personality and performance. Definite promise in any subject should be held to more than counterbalance a poor average or even a particular weakness. Rejection before the end of the second professional stage would be premature, because there are those of good ultimate promise who are late in finding themselves. Written examinations of the usual type should play only a minor part in deciding a student's progress. Powers of observation should be tested by capacity for description either in words or with the pencil, and watch should be kept for evidence of sound judgment and ability to draw conclusions. The system of written examinations does not, in his opinion, test these qualities except to a minimal degree, while a premium is placed on memory.

Browning places great stress in the preparatory period on cultural studies. The acquisition of the faculty of clear and accurate expression in one's own language and appreciation of fine examples of its literature will insure enjoyment for a lifetime. He believes that "a little Latin" is good when regarded as yielding access to much of the source of our language, otherwise it is to most just like elementary mathematics, an exercise in logic but devoid of the interesting and valuable applications to real life that mathematics possesses. Greek is probably a luxury most students could afford to forego, especially since effort spent on literary English will open the masterpieces of the classical languages in translation. A similar time spent on their linguistics will usually fail to do this. The sciences should be taught to enlighten and also to whet the student's curiosity and wonder about the phenomena of the world. An essential objective in these school years is exercise of the hands, together with training in power to use the senses.

Browning considers the first year of the medical studies "a nightmare." He believes it a herculean task to impart in nine months a knowledge of the fundamental principles of four sciences and also a smattering of their experimental technics. Anatomy should be excluded at this stage. Pathology, including morbid anatomy and biochemistry, is the basis of medicine and surgery. Every student should be provided with a schedule of conditions with whose nature, recognition and treatment he would become familiar by actual experience. The courses should be simplified to afford a sound scientific basis, culminating in a thorough understanding of pathology, both structural and functional. Clinical instruction in common diseases and obstetrics could be introduced early by deleting instruction in purely manipulative expert performances. The abolition of operative surgery as practiced on the cadaver marks a radical change in this direction, but probably more will be required, such as reduction to a minimum of attendance in the operating theater.

Browning feels that it is much more difficult to produce a competent general practitioner than a specialist

1. Browning, C. H.: Equipment for the Calling of Medicine, Glasgow M. J. 27: 63 (March) 1946.

The general practitioner must deal with every conceivable emergency, must know when specialist help is required and, if such help is not available, do the best that circumstances allow Barring exceptions, the general practitioner has little opportunity to add to the fundamental knowledge acquired as an undergraduate He has little opportunity to meet with authorities who are in a position to review new ideas in the light of practical experience Browning therefore reiterates the commonly accepted recommendation that retention of licensure depend on return to a teaching center for at least three months every three or four years for courses designed to keep the practitioner in touch with current methods

## Current Comment

### STREPTOMYCIN THERAPY OF EXPERIMENTAL SYPHILIS

Dunham and Rake[1] of the Squibb Institute for Medical Research infected several groups of rabbits intracutaneously in the clipped skin of the back with suspension of rabbit testes infected with the Nichols strain of Treponema pallidum Within three days intravascular injections of streptomycin were begun and repeated every four hours for four days When lesions developed at the site of the intracutaneous inoculation their syphilitic nature was confirmed by dark field examination All apparently negative rabbits were kept for at least four months, when a suspension of the popliteal lymph nodes of each rabbit was injected intratesticularly into 2 rabbits If the testes of these 2 rabbits remained normal, the donor rabbit was judged to have been cured None of the four rabbits in the group that received a total of 374,000 or more units per kilogram developed lesions Of the 4 rabbits that received a total of 187,000 units per kilogram only 1 developed a chancre All rabbits that received a total of 93,500 units or less per kilogram and all untreated controls developed typical lesions The smallest dose of streptomycin that cured any of the rabbits was 79,000 units per kilogram in one group and 187,000 units in another Parallel tests showed that a similar effect could be obtained with as little as 147 units of crystalline penicillin G From these and other data Dunham concludes that if used in adequate doses the preparations of streptomycin employed by him were effective antisyphilitic agents Unit for unit, however, crystalline penicillin G was at least three thousand times more effective This conclusion is in line with therapeutic data recently reported by Herrell and Nichols[2] of the Mayo Clinic Herrell treated each of 4 cases of syphilis with 10 million units of streptomycin over a period of ten days Improvement was noted, but relapses occurred in all cases Assuming that each patient weighed 150 pounds (68 Kg ), his dosage would be equivalent to 150,000 units per kilogram This is less than the effective therapeutic dose for experimental rabbit syphilis

1 Dunham W B., and Rake G Science **103** 365 (March 22) 1946.

2 Herrell W E. and Nichols D R. Proc. Staff Meet Mayo Clin. **20** 449 (Nov 28) 1945

### COMPLICATIONS OF THERAPEUTIC MALARIA

Read and his associates[1] studied the complications encountered during therapeutic malaria given to 300 patients, 75 per cent of whom had asymptomatic neurosyphilis The treatment included ten to twenty-five malarial paroxysms during an eleven month period Two hundred and eleven of these completed therapy with Plasmodium vivax and 89 with Plasmodium malariae There were 22 cases of jaundice, but jaundice did not develop after the termination of malaria therapy in spite of the fact that ten daily injections of oxophenarsine hydrochloride were administered in approximately 35 per cent of the cases during the period of convalescence. Palpable enlargement of the liver developed in 74 cases (24 7 per cent) Splenomegaly was found in 242 cases (80 7 per cent), in most of which (203 cases) treatment with vivax malaria was given Of the 22 per cent with jaundice, 9 were without gastrointestinal complaints and repeatedly showed negative direct van den Bergh reactions but increased blood bilirubin Icterus in these cases was considered to be the result of excessive red cell hemolysis Cephalin flocculation tests were positive during active malaria in every one of 102 patients who had had this test performed Of the 13 patients with severe hepatic dysfunction, 2 showed remarkable improvement on supportive therapy, consisting of glucose infusions and a high carbohydrate and protein diet without requiring interruption of malaria Nineteen patients in this series had edema of the ankles during malaria therapy A low total serum protein (less than 5 8 Gm ) with a decrease in serum albumin to less than the critical level of 3 Gm was found in 11 cases The authors felt that most of the cases of unexplained edema were probably due to individual variations in response to hypoalbuminemia, but some may have been initiated by transient anoxemia with increased capillary permeability during each malarial paroxysm, when large numbers of red cells were being destroyed Acute nephritis complicated the courses of 4 patients, who recovered completely from the acute attack following bed rest, controlled fluids, high protein diet and termination of malarial therapy There were 10 instances of neuritis, 7 of which were caused by vivax malaria The peripheral nerve syndromes included trigeminal neuralgia, the ophthalmic branch, in 2, involvement of the greater occipital nerve in 2, brachial plexus neuritis in 3, ulnar neuritis in 2 and peroneal neuritis in 2 The duration of these neuritides varied from five to thirty-five days Thirteen patients developed respiratory difficulty unaccompanied with pneumonitis Four presented precordial pain and dyspnea, 4 asthmatic wheezing, 2 severe dyspnea and cyanosis, 2 moderate dyspnea and 1 functional dyspnea Except for the asthmatic, none were left with residual symptoms or signs following completion of malarial therapy There were two fatalities in this series, one being caused by spontaneous rupture of the spleen, while the other was apparently

1 Read H S Kaplan, L. I and Becker F T An Analysis of Complications Encountered During Therapeutic Malaria Ann Int. Med **24** 444 (March) 1946

due to hypocalcemic tetany. Although jaundice, edema, mild renal damage and neural syndromes are relatively common features of untreated malarial infection, none of these are followed by a permanent sequela. The neurologic and psychiatric manifestations of vivax and quartan malaria are mild and are readily amenable to antimalarial therapy. Therapeutic malaria, although somewhat different in its course from natural malaria, nevertheless presents an opportunity for the clinical study of the various manifestations of the disease.

## SOCIAL MEDICINE IN OLD AGE

Estimates indicate that over 20 per cent of the population of Great Britain will consist of women over 60 years of age or men over 65 by the year 1971. Howell[1] has recently discussed certain social problems involved in caring for the enlarged population of the elderly. The provision of domestic help during illness, especially for those who are living alone, is more than just an individual problem. By providing domestic help in such emergencies the entry of many older persons into institutions may be deferred, often for several years. The institutions for elderly people should be more differentiated in type and, where possible, should be much more homelike than they are at present. A more humane approach is indicated when elderly couples are in an institution, strict segregation of the sexes is often a practical cruelty which could easily be avoided. Sympathy for the sorrows of old age is not enough, Howell says, and it is time to translate it into action.

## POLICE TRAFFIC SAFETY CHECK

The toll of injuries and deaths due to highway accidents following the removal of gasoline rationing is growing. The National Committee for Traffic Safety has been organized, in this activity the American Medical Association participates with more than one hundred other agencies. The President of the United States has called a Traffic Safety Conference to meet in Washington May 8-10. Among the agencies which will go into definite action earliest is the International Association of Chiefs of Police, which through its safety division is sponsoring the police traffic safety check. This safety check was begun May 15 throughout the United States and will be followed up intensively through July 7. It is a follow-up of the brake emphasis program conducted in the spring of 1945. The chiefs of police request the cooperation of all agencies interested in reducing traffic casualties. They offer for local use a comprehensive service of publicity, including posters, leaflets, booklets, newspaper stories, pictures and cartoons, suggested advertising and information for radio talks and spot announcements. The active interest of the American Medical Association in this important project can be supported by state and local medical societies through publicity in their journals and bulletins and by participation in local community groups which will be organized throughout the nation immediately subsequent to the President's conference. In the meantime the highly important police traffic safety check can be supported locally by active cooperation. Further information is available from the International Association of Chiefs of Police, 1704 Judson Avenue, Evanston, Ill.

1. Howell, Trevor H.: Social Medicine in Old Age, Brit. M. J. 1:399 (March 16) 1946.

## INTERNATIONAL BIOLOGIC STANDARDS

Among the activities of the League of Nations were some which were successfully pursued. The activities of the Health Organization of the League of Nations for promoting biologic standardization have been of inestimable value to physicians and scientists throughout the world. Gautier[1] has reviewed the work of the Health Organization's Permanent Commission on Biological Standardization and its record in establishing and defining international standards for important drugs. Since 1922, when the first international standard—that for diphtheria antitoxin—was established, standards have been adopted for thirty-five substances. Of these, thirteen concern bacterial serums or antitoxins, five standards for vitamins, seven miscellaneous drugs such as the arsphenamines and penicillin, and ten various hormones. Such international standards enable comparison of the results obtained in laboratories of one country with those of another country. The character of the scientific work on which the international standards have been established has been described by Hartley.[2] The cooperation of the best laboratories throughout the world and the advice of an international group of scientists have guided the Health Organization in this work and insured the adoption of standards only after their permanence and reproducibility have been demonstrated. As a corollary to their work on biologic standardization, the Health Organization has been attempting a unification of pharmacopeias. Although the Unified Pharmacopeia has not been widely adopted, the work is still proceeding. Eventually there may be general recognition of the need for an international pharmacopeia. When that time comes, the groundwork will have been laid. The United Nations Charter contains provisions for carrying on the work of the Health Organization. This will insure the continuation of a form of international cooperation of immense value to biologists and physicians throughout the world.

## ENRICHMENT OF FLOUR

The Council on Foods and Nutrition, elsewhere in this issue (page 399), announces approval of the decision of millers and bakers to enrich 80 per cent extraction flour and bread made with such flour. Such enrichment is desirable because unless it is done the flour will contain less than half as much thiamine, niacin and iron and less than 20 per cent as much riboflavin as when the flour is not enriched. This step can be looked on as a useful measure to improve the nutrition of the American people.

1. Gautier, R.: Bull. Health Organ. League of Nations 12:1, 1945-1946.
2. Hartley, Percival: Bull. Health Organ. League of Nations 12:76-98, 1945-1946.

# REPORTS OF OFFICERS

*NOTE—At the 1925 session of the Association, the House of Delegates suggested that all reports of officers, committees, etc, and resolutions to be brought before the House, if available, be published in advance of the session so as to permit careful consideration and discussion—Ed*

## REPORT OF THE SECRETARY

*To the Members of the House of Delegates of the American Medical Association*

The following report of the Secretary is respectfully submitted

On April 1, 1946 Dr Olin West resigned as Secretary and General Manager of the American Medical Association Dr West came to the Association as Field Secretary in April 1922 and was appointed in November 1922 by the Board of Trustees subsequent to the death of Dr Alexander R Craig to serve as Secretary until the next meeting of the House of Delegates He was elected Secretary by the House in June 1923 and since that time had been reelected each year The undersigned was appointed by the Board of Trustees to serve as Secretary of the Association until the House of Delegates meets in July

### MEMBERSHIP

The number of members of the American Medical Association is constantly increasing On Dec 31, 1944 the official membership list contained the names of 124 595 members On the corresponding date in 1945 there were 125,471 members enrolled Because a reapportionment of delegates is made every third year based on the number of members recorded on April 1 of the reapportionment year it has been customary to report annually the enrolment as of that date. On April 1 1945 125 302 members were enrolled On April 1, 1946 the recorded membership was 126,835, showing a gain in twelve months of 1,533

### FELLOWSHIP

There were 67,567 names on the Fellowship roster on Dec. 31, 1945 as compared with 68 637 the preceding year It is anticipated that with the return to civilian practice of thousands of medical officers the number of Fellows will increase steadily In the twelve month period from April 1 1945 to April 1 1946 the deaths of 964 Fellows were recorded the names of 491 Fellows were dropped because of nonpayment of dues and 360 resigned their Fellowship for various reasons On April 1, 1946 68 366 Fellows were enrolled

The usual table showing the organization of constituent state medical associations is included in this report

### REAPPORTIONMENT OF DELEGATES

Section 3 of chapter I of the By-Laws of the Association which provides for a reapportionment of delegates every third year, reads as follows

SEC 3 APPORTIONMENT OF DELEGATES—At the annual session of 1925 and every third year thereafter the House of Delegates shall appoint a committee of five on reapportionment, of which the Speaker and the Secretary shall be members The committee shall apportion the delegates among the constituent associations in accordance with Article 5 Section 3 of the Constitution and in proportion to the membership of each constituent association as recorded in the office of the Secretary of the American Medical Association on April 1 of the year in which the apportionment is made This apportionment shall take effect at the next succeeding annual session and shall prevail until the next triennial apportionment whether the membership of the constituent association shall increase or decrease (As amended 1925)

The last apportionment was made at the annual meeting held in Chicago in 1943 A new apportionment is due to be made at the 1946 session of the House of Delegates

### PROPOSED AMENDMENTS TO CONSTITUTION AND BY-LAWS

At the meeting of the House of Delegates in December 1945 Dr Henry A Luce, delegate of the Michigan State Medical Society, offered an amendment to the Constitution article 5, section 3 proposing that the figure 176 be substituted for the figure 175 in the second line of that section so that the first sentence of section 3 article 5 will read 'The total voting membership of the House of Delegates shall not exceed 176 Under the provisions of the Constitution and By Laws, it will be possible for the House of Delegates to take action on this proposed amendment at the 1946 meeting

*Organization of Constituent State and Territorial Medical Associations, April 1, 1946*

| | Number of Counties in State | Number of Component Societies in State | No of Counties in State Not Organized | | No of Physicians in State 17th Ed A M Directory | No of Members of State Associations | | Number of Fellows in State |
|---|---|---|---|---|---|---|---|---|
| | | | 1945 | 1946 | | 1945 | 1946 | 1946 |
| Alabama | 67 | 67 | | | 2 123 | 1 539 | 1,497 | 639 |
| Arizona | 14 | 13 | 1 | 1 | 615 | 407 | 401 | 259 |
| Arkansas | 75 | 59 | 9 | 9 | 1 800 | 1 110 | 1 129 | 429 |
| California | 58 | 40 | 0 | 0 | 12,305 | 7,890 | 8 069 | 5 110 |
| Colorado | 63 | 27 | 1 | 1 | 1 880 | 1 180 | 1 185 | 675 |
| Connecticut | 8 | 8 | | | 2,720 | 2 039 | 2 009 | 1 040 |
| Delaware | 3 | 3 | | | 360 | 243 | 230 | 123 |
| Dist Columbia | | | | | 4,540 | 985 | 1 003 | 780 |
| Florida | 67 | 34 | 16 | 16 | 2,301 | 1 448 | 1 488 | 980 |
| Georgia | 159 | 92 | 37 | 37 | 2 814 | 2 000 | 2,000 | 800 |
| Idaho | 44 | 9 | | | 446 | 312 | 328 | 165 |
| Illinois | 102 | 92 | 6 | 6 | 12 548 | 8 644 | 8,874 | 3,926 |
| Indiana | 92 | 83 | 1 | 1 | 4,165 | 3 401 | 3 444 | 1,530 |
| Iowa | 99 | 97 | | | 3 102 | 2,386 | 2,302 | 1 000 |
| Kansas | 105 | 73 | 16 | 15 | 2,042 | 1,482 | 1 481 | 800 |
| Kentucky | 120 | 113 | 4 | 3 | 2 717 | 1 909 | 1 880 | 730 |
| Louisiana | 64 | 42 | 15 | 15 | 2 601 | 1 530 | 1 527 | 847 |
| Maine | 16 | 15 | | | 1 011 | 765 | 750 | 340 |
| Maryland | 23 | 23 | | | 3 085 | 1 740 | 1 772 | 1 020 |
| Massachusetts | 14 | 18 | | | 8 095 | 5,534 | 5,597 | 2 600 |
| Michigan | 85 | 65 | | | 6 509 | 4,520 | 4 445 | 2 170 |
| Minnesota | 87 | 34 | 1 | 1 | 3 614 | 3 000 | 3 082 | 1,290 |
| Mississippi | 82 | 21 | 3 | 3 | 1,525 | 948 | 966 | 380 |
| Missouri | 114 | 79 | 7 | 7 | 5 183 | 3 808 | 3 810 | 1 715 |
| Montana | 50 | 17 | 22 | 21 | 500 | 443 | 422 | 201 |
| Nebraska | 93 | 50 | 16 | 16 | 1,637 | 1 105 | 1 103 | 604 |
| Nevada | 17 | 5 | 12 | 12 | 174 | 133 | 140 | 71 |
| New Hampshire | 10 | 10 | | | 687 | 527 | 511 | 265 |
| New Jersey | 21 | 21 | | | 6 008 | 4,218 | 4 474 | 2,282 |
| New Mexico | 31 | 14 | 17 | 17 | 447 | 318 | 303 | 169 |
| New York | 62 | 61 | 1 | 1 | 27 928 | 19 102 | 19 634 | 10,220 |
| North Carolina | 100 | 67 | 24 | 24 | 2,871 | 2 000 | 2 020 | 980 |
| North Dakota | 53 | 13 | 11 | 11 | 520 | 390 | 388 | 195 |
| Ohio | 88 | 87 | 1 | 1 | 9 400 | 6 868 | 6,932 | 3,300 |
| Oklahoma | 77 | 63 | 6 | 6 | 2,284 | 1 487 | 1 538 | 710 |
| Oregon | 36 | 28 | 1 | 1 | 1 403 | 1 000 | 1 010 | 480 |
| Pennsylvania | 67 | 60 | 5 | 5 | 13 503 | 9 761 | 9 761 | 5 414 |
| Rhode Island | 5 | 6 | 1 | 1 | 908 | 783 | 791 | 360 |
| South Carolina | 46 | 37 | 4 | 4 | 1 427 | 915 | 923 | 480 |
| South Dakota | 69 | 12 | 1 | 1 | 403 | 316 | 320 | 185 |
| Tennessee | 95 | 52 | 24 | 23 | 2 901 | 1 755 | 1 832 | 840 |
| Texas | 254 | 120 | | | 6 052 | 4 729 | 4 807 | 2,255 |
| Utah | 29 | 8 | 4 | 4 | 585 | 514 | 530 | 275 |
| Vermont | 14 | 10 | 3 | 3 | 531 | 377 | 331 | 182 |
| Virginia | 100 | 52 | 8 | 8 | 2 920 | 1 915 | 1 936 | 1,210 |
| Washington | 39 | 24 | 13 | 13 | 2 234 | 1 650 | 1 669 | 974 |
| West Virginia | 55 | 30 | 5 | 5 | 1 834 | 1 338 | 1,344 | 610 |
| Wisconsin | 71 | 52 | | | 3,501 | 2 693 | 2 722 | 1,320 |
| Wyoming | 24 | 11 | 11 | 11 | 267 | 188 | 173 | 101 |
| Alaska | | | | | 70 | 38 | 37 | 20 |
| Hawaii | 5 | 4 | 1 | 1 | 395 | 348 | 361 | 120 |
| Isthmian Canal Zone | | | | | 181 | 138 | 101 | 31 |
| Philippine Islands | 50 | 28 | 28 | 28 | 4 200 | 1,247 | 1 247 | 40 |
| Puerto Rico | 7 | 7 | | | 570 | 477 | 480 | 70 |
| Foreign | | | | | 37 | | | 80 |
| Total | 3 141 | 2 053 | 345 | 341 | 185,903 | 125,302 | 126,835 | 67 913 |
| Commissioned Medical Officers.. | | | | | | | | 4 453 |
| Grand Total | | | | | | | | 68,366 |

A resolution was introduced by Dr L S Goin, delegate of the California Medical Association, at the December 1945 meeting of the House of Delegates as follows

*Resolved That section 2 of chapter XII of the By Laws be amended by striking out the words and subscribe to THE JOURNAL and further amend section 2 chapter XII by inserting after the words 'is disapproved by the Judicial Council (line 8 p 30) a new sentence to read Fellows shall receive THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*

Since this proposed amendment to the By-Laws was submitted to the House on the last day of the 1945 meeting, action could not be taken until the next meeting of the House of Delegates

The Reference Committee on Legislation and Public Relations at the December meeting of the House approved the suggestion of President-Elect Roger I Lee that two meetings of the House of Delegates be held each year and recommended that an amendment to the By-Laws be prepared for consideration at the 1946 session The report of the reference committee was approved The Board of Trustees has had the matter under consideration and will offer a report to the House.

### Annual Conference of State Secretaries and Editors

The annual conference of secretaries of constituent state medical associations and editors of state medical journals, which usually is held late in November each year, was postponed in 1945 because of adverse travel conditions and also because the meeting of the House of Delegates was set for the first of December

The conference was held on Feb 8 and 9, 1946 Nearly every constituent state medical association was represented at the conference, as were practically all the state medical journals A large number of other officials of state medical associations and representatives of several component county medical societies were also present This conference affords a valuable opportunity for the administrative and other officers of the constituent organizations to exchange ideas on all sorts of problems to the end that the efficiency and usefulness of their own societies may be increased. It also gives those attending the conference an opportunity to become better acquainted with the scope of the work being done by the American Medical Association, since it is always held at the headquarters offices in Chicago Papers presented at the conference are the result of suggestions received from conference members and there is full and free discussion of any matters that may be brought up for attention

### In Appreciation

The Secretary wishes to express his gratitude for the kindly consideration and aid given him in his new position by the officers and members of official bodies of the Association The directing heads of the Bureaus and Councils and the personnel at the headquarters offices have given invaluable help and have rendered a very high degree of service Dr Olin West has drawn on the wealth of his experience to aid and assist the Secretary in every way possible.

Respectfully submitted,

George F Lull, Secretary

## REPORT OF THE BOARD OF TRUSTEES

*To the Members of the House of Delegates of the American Medical Association*

The following annual report of the Board of Trustees is respectfully submitted to the House of Delegates The activities of the various councils, bureaus and departments of the Association during 1945 are covered in this report and, because the annual meeting of the House was held so late in 1945, reference will be made to some matters that have received attention during the current year

### Resignation of Dr Olin West

On March 15, 1946, after twenty-four years of devoted service to the American Medical Association, Dr Olin West tendered his resignation as Secretary and General Manager to take effect on April 1 Because Dr West's own letter of resignation explains the acquiescence of the Board of Trustees better than anything else that could be said, it is reproduced in this report

Dr R L. Sensenich,
Chairman Board of Trustees
American Medical Association
South Bend, Indiana
Dear Doctor Sensenich

After careful consideration having conferred with elected officers of the Association in whose judgment I have complete confidence I hereby submit my resignation as Secretary and General Manager to take effect April 1 1946

For twenty four years under the splendid guidance of the House of Delegates and the Board of Trustees and with the excellent cooperation of the fine group composing administrative and other personnel I have lived and worked to the limit of my capacity to promote the great cause which the Association was created to serve. By force of the tides that flow in human affairs and in the course of unfolding destiny' to use the language of a noted statesman we live in a changing world Great and significant changes affecting our own nation have already developed and other changes impend Medicine will be affected in many of its relations to the public and otherwise as will be the course of action of the American Medical Association Many new problems have arisen within the recent past, and others are clearly in prospect. The duties and responsibilities of the office of Secretary and General Manager are constantly increasing in volume and weight and demand the attention and effort of a younger and more vigorous man than the present incumbent.

If I may do so with due propriety, I respectfully suggest that Dr George F Lull be appointed by the Board of Trustees to serve as Secretary of the American Medical Association until the next meeting of the House of Delegates Dr Lull has within the last three months familiarized himself with the nature of the policies and general activities of the Association and has won the friendship, confidence and respect of the office personnel

It is useless for me to attempt to express to the members of the Board of Trustees and others with whom I have been associated my gratitude for their heartening encouragement and support, their forbearance and all their kindnesses and for the great privilege of having had opportunity to serve in an effort to promote the aims and objects' of our society

Very respectfully yours
Olin West

### Appointment of Dr George F Lull

On Jan 1, 1946 Dr George F Lull, Major General, U S Army, became Associate General Manager of the American Medical Association Dr Lull retired from the Army after thirty-three years of distinguished service as an officer in the Medical Corps He was Chief of Personnel Service in the Office of the Surgeon General in Washington from 1940 to 1943, when he became Deputy Surgeon General Dr Lull was born in Pennsylvania March 10, 1887 and received the degree of Doctor of Medicine from Jefferson Medical College in 1909, a Certificate of Public Health from Harvard Technology School of Public Health in 1921 and the degree of Doctor of Public Health from the University of Pennsylvania in 1922.

On the retirement of Dr West the Board of Trustees appointed Dr Lull to succeed him as General Manager and to serve as Secretary of the Association until the meeting of the House of Delegates in July

### Mr Will C Braun

In November 1891 Mr Will C. Braun accepted a position with the American Medical Association, then located in a small rented office on North Wabash Avenue in Chicago, as a subscription solicitor and office helper The staff at that time consisted of less than ten persons On Dec 31, 1945, after fifty-four years of service with the Association in its Advertising and Business Department, Mr Braun became Business Manager Emeritus His voluntary retirement closes a career of most useful and devoted service to the Association. The circulation of The Journal, which was one of Mr Braun's primary responsibilities throughout the years grew from 3,500 copies in 1891 to 112,510 in 1945 Mr Braun's invaluable service in helping to keep the activities of the Association on a sound business basis has contributed immeasurably to the organization.

The Board of Trustees takes this opportunity to tender to Will C Braun the sincere and grateful appreciation of the American Medical Association for his many years of splendid service.

### Employment

The personnel problem in connection with the operation of the Association's headquarters offices has improved considerably since the last annual report was made to the House of Delegates Even now, however, it is not possible to secure the quantity of personnel necessary to carry on most effectively the constantly growing activities of the Association. Until V-J day the headquarters offices were relatively handicapped by the imposition of an employment ceiling of 482 employees working thirty hours or more a week. Shortly after the relaxation of employment controls, efforts were made to obtain necessary personnel

As of Jan 1, 1946 the Association had 548 employees on a full and part time basis and 597 as of May 1, 1946 This compares with a total of approximately 630 in March 1942

The normal operations of the Association have also been complicated by the intervention of other factors, such as personnel turnover due to the consequences of employment conditions in so-called war industries, current controversies in the printing trades in the Chicago area government imposed restrictions on the use of paper, and shortage of equipment and essential materials

### Matters Referred by House of Delegates

Several resolutions and suggestions adopted by the House of Delegates at the 1945 session were referred to the Board of Trustees for consideration and action, and the Board reports thereon as follows

Proposed Midwinter Session of House of Delegates At the 1945 meeting of the House of Delegates President-Elect Roger I Lee suggested that two sessions of the House be held each year This suggestion was referred to the Reference Committee on Legislation and Public Relations which approved the suggestion in principle and recommended that a proper amendment to the By-Laws be prepared for consideration at the 1946 session The report of the reference committee was adopted A question arose as to the necessity of amending the By-Laws, since it is already provided that a special session of the House can be called by the Speaker at any time on the written request of twenty-five or more delegates representing one third or more of the constituent associations or on request of a majority of the Board of Trustees However, that section of the By-Laws also provides that no business other than that which is specifically stated in the official call shall be transacted at the special session, and therefore, no new business could be introduced from the floor of the House. The Board of Trustees respectfully suggests that it would seem to be advisable to amend the By-Laws at the 1946 session in order to accomplish the purpose suggested by Dr Lee and approved by the House of Delegates

Proposed International Congress on Tropical Medicine and Malaria A resolution introduced at the last meeting of the House of Delegates by Dr Thomas K. Lewis, delegate of the Medical Society of New Jersey and restated by the Reference Committee on Miscellaneous Business, authorized the Board of Trustees to appoint a member of the American Medical Association to represent the Association at an International Congress on Tropical Medicine and Malaria being sponsored by the American Academy of Tropical Medicine. The Board of Trustees has appointed Col Thomas R Mackie as the official representative of the Association at the coming International Congress.

With respect to resolutions dealing with federal control of the practice of medicine and health legislation beneficial to the people, the report of the Council on Medical Service and Public Relations will show that the Association has been very active in carrying on an aggressive campaign to improve the public health and to provide a better medical service for more of the population

### Survey of Public Relations

The Board of Trustees obtained the services of the Raymond Rich Associates, a nationally known firm of public relations counsel to make an extensive survey of the public relations activities of the American Medical Association. This survey is being made on broad lines and has been in progress for a number of months The Board has the report under consideration and will make its findings available to the House of Delegates

### Income and Expenditures

The official reports of the Treasurer and of the Association's auditors are appended as a part of this report of the Board of Trustees

In 1945 the net income of the Association amounted to $990,708 81 and compares with $933 091.34 in 1944 an increase of $57,617 47

Wages and salaries paid in 1945 totaled $1 342,149 45, or $86,748 61 more than in 1944 Substantial increases in wage scales were negotiated by certain printing craft unions, particularly in the latter part of the year, which, together with others similarly effective, are not fully reflected in the total for 1945 Operating expenses other than wages approximated those of the previous year Greater activities of the councils bureaus and committees in 1945 is reflected in the larger disbursement of $537,611 66 for this group as compared with $459,740 12 in 1944

In 1945 $159 132 32 was expended in employees' annuities, miscellaneous expenses and legal fees representing $23,071 93 more than in 1944 when the amount was $136 060 39

The cost of publication of the Association's periodicals published in 1945 amounted to $1,808,381 36 as compared with $1,730 400 70 in 1944, or an increase of $77,980 66, largely accounted for in higher wages and paper costs Books, pamphlets and reprint sales and costs were approximately the same in 1945 as in 1944

Income from subscriptions to periodical publications totaled $1 332,631 22 in 1945 as compared with $1,303,043 68 in 1944 and advertising income amounted to $1,920 465 58 in 1945, as compared with $1,707,232 10 in 1944 Interest received from investments during 1945 amounted to $116,840.21, a gain over 1944 of $18,346 17

### The Journal of the American Medical Association

The end of the war made possible the reintroduction into THE JOURNAL of correspondence from most of the great medical centers in the world. THE JOURNAL now has correspondents who write regularly from London, Paris, Rome, Amsterdam, Brussels Stockholm, Oslo, Ankara, Jerusalem Tel-Aviv, Buenos Aires Rio de Janeiro, São Paulo and Mexico City No other medical periodical has ever attempted such coverage This feature has won acclaim for THE JOURNAL throughout the world

The end of the war made desirable regular publication in the pages of THE JOURNAL of the names and addresses of physicians released from the armed forces Only THE JOURNAL has attempted this feature, which again has proved of tremendous benefit to the medical profession and to the public.

Increasingly THE JOURNAL reflects current interest in social and economic problems related to medical practice A special section has been devoted to the Council on Medical Service and Public Relations The various conferences on medical care such as the regional conferences of the Council on Medical Service and Public Relations, the conferences on rural and industrial health and hearings before committees of the Senate and the House of Representatives have been covered in THE JOURNAL with a completeness not available in any other publication

The continued difficulty in securing paper and the pressure on printing facilities have made it impossible to enlarge THE JOURNAL to meet the increasing demand as much as would be desirable. However, some expansion already is taking place

THE JOURNAL receives each year as volunteered contributions of authors, between 2,000 and 2,500 manuscripts Not more than 400 of these volunteered manuscripts can be accepted for publication In selecting manuscripts the editor has to be guided by the interests of the readers, who include a large proportion of general practitioners as well as many representatives of each of the medical specialties The editor also endeavors through the editorials and the abstract features of THE JOURNAL to meet the needs of this varied audience

The place occupied by THE JOURNAL in the medical literature of the world may be estimated from the fact that the Board of Trustees has received requests since the end of the war for the right to publication of THE JOURNAL in whole or in part in German, Italian French Spanish and Portuguese. While it has not been possible to facilitate such arrangements the Board of Trustees has been lenient in authorizing republication in whole or in part of the contents of THE JOURNAL in other publications

The net paid weekly average circulation in 1945 was 111,407, compared with 109,828 in 1944 The weekly average of copies printed during 1945 was 112 460 compared with 111 386 in 1944

Table 1 shows the number of Fellows and subscribers on the mailing list of THE JOURNAL as of Jan. 1, 1946. Table 2 indicates the number of physicians in each state, the number receiving THE JOURNAL and the approximate percentage of subscribers in each state.

TABLE 1.—*Approximate Count of Fellows and Subscribers on The Journal Mailing List Jan. 1, 1946, Showing Gain or Loss*

| State | Fellows | Subscribers | Totals | Gain | Loss |
|---|---|---|---|---|---|
| Alabama | 5[illegible] | 304 | 923 | | 1 |
| Arizona | 234 | 166 | 400 | 10 | |
| Arkansas | 306 | 260 | 626 | | 2 |
| California | 4 40[illegible] | 4,0[illegible]1 | 0,3[illegible]6 | 140 | |
| Colorado | 579 | 377 | 9[illegible]6 | | 9 |
| Connecticut | 9[illegible]6 | 779 | 1,735 | 22 | |
| Delaware | 114 | 96 | 210 | 9 | |
| District of Columbia | 666 | 887 | 1,5[illegible]3 | | 179 |
| Florida | 822 | 589 | 1,411 | | 54 |
| Georgia | 665 | 624 | 1,287 | | 72 |
| Idaho | 12[illegible] | 96 | 224 | | 14 |
| Illinois | 3,840 | 3,430 | 7,270 | 247 | |
| Indiana | 1 431 | 800 | 2 231 | 20 | |
| Iowa | 1 014 | 447 | 1,461 | 47 | |
| Kansas | 701 | 357 | 1 058 | | 12 |
| Kentucky | 627 | 436 | 1 063 | | 26 |
| Louisiana | 653 | 583 | 1,236 | | 51 |
| Maine | 278 | 158 | 436 | | 18 |
| Maryland | 900 | 1 085 | 1,985 | 12 | |
| Massachusetts | 2,411 | 2 031 | 4 442 | 155 | |
| Michigan | 1,99[illegible] | 1 641 | 3 636 | | 14 |
| Minnesota | 1 184 | 816 | 2 000 | 31 | |
| Mississippi | 285 | 238 | 523 | | 49 |
| Missouri | 1 521 | 1 214 | 2 735 | 38 | |
| Montana | 176 | 85 | 260 | | 13 |
| Nebraska | 538 | 363 | 901 | | 20 |
| Nevada | 58 | 41 | 99 | | 11 |
| New Hampshire | 231 | 122 | 353 | 7 | |
| New Jersey | 2 076 | 1,545 | 3 620 | 74 | |
| New Mexico | 145 | 123 | 268 | | 4 |
| New York | 9 016 | 8 058 | 17 074 | | 1 149 |
| North Carolina | 811 | 736 | 1 547 | | 78 |
| North Dakota | 16[illegible] | 97 | 262 | | 9 |
| Ohio | 3 092 | 1 759 | 4,851 | 77 | |
| Oklahoma | 588 | 416 | 999 | 32 | |
| Oregon | 427 | 385 | 812 | | 2 |
| Pennsylvania | 4 0[illegible]4 | 3,201 | 8 155 | | 212 |
| Rhode Island | 303 | 211 | 514 | | 26 |
| South Carolina | 360 | 202 | 5[illegible]2 | | 55 |
| South Dakota | 102 | 99 | 201 | | 20 |
| Tennessee | 697 | 638 | 1,33[illegible] | | 67 |
| Texas | 1 800 | 1 445 | 3,[illegible]0 | | 123 |
| Utah | 232 | 171 | 403 | | 17 |
| Vermont | 157 | 119 | 276 | 5 | |
| Virginia | 1 0[illegible]0 | 733 | 1 792 | | 17 |
| Washington | 775 | 593 | 1 367 | | [illegible] |
| West Virginia | 542 | 305 | 847 | 5 | |
| Wisconsin | 1,219 | 727 | 1,946 | 31 | |
| Wyoming | 8[illegible] | 50 | 135 | | 4 |
| U. S. Army | | 2 020 | 2 020 | | 58 |
| U. S. Navy | | 2,500 | 2,500 | | |
| U. S. P. H. S. | | 117 | 117 | | 3 |
| Alaska | 10 | 28 | 47 | 2 | |
| Canada | 6 | 1 177 | 1,183 | 63 | |
| Cuba | 8 | 403 | 411 | 68 | |
| Hawaii | 9[illegible] | 134 | 229 | 6 | |
| Mexico | 10 | 377 | 387 | 41 | |
| Panama | 18 | 40 | 58 | | 11 |
| Puerto Rico | 80 | 9[illegible] | 175 | 21 | |
| Virgin Islands | 1 | 1 | 2 | | |
| Foreign | 54 | 3,930 | 3,990 | 781 | |
| Advertisers and agents | | | 281 | | 35 |
| Exchanges | | | 225 | 33 | |
| Complimentaries | | | 97 | | |
| Total on Mailing List | 56,344 | 56 160 | 113 113 | 1 940 | 2 425 |

## Special Journals

The American Medical Association now publishes nine special journals, including the ARCHIVES OF SURGERY, ARCHIVES OF INTERNAL MEDICINE, ARCHIVES OF OPHTHALMOLOGY, ARCHIVES OF OTOLARYNGOLOGY, ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY, ARCHIVES OF NEUROLOGY AND PSYCHIATRY, ARCHIVES OF PATHOLOGY, AMERICAN JOURNAL OF DISEASES OF CHILDREN and OCCUPATIONAL MEDICINE. At the end of the war it seemed desirable to discontinue publication of WAR MEDICINE and to substitute for it a new periodical OCCUPATIONAL MEDICINE. WAR MEDICINE had a tremendous success not only in circulation and influence but also financially.

The exigencies of the war placed a tremendous burden on the presses of the American Medical Association, which was reflected particularly in the publication of the special journals. It became necessary to reduce the number of pages, to change the editorial format and to eliminate supplements and special editions. A strike in the printing department late in 1945 resulted in considerable delay in the issuance of some of the numbers of the special journals so that it became necessary to combine two issues into a single issue at the end of the year.

All the special journals increased in circulation to a considerable extent with the exception of the ARCHIVES OF SURGERY, which suffered a minute loss, and, very naturally, WAR MEDICINE. Net income from the nine special journals in 1945 amounted to $118,448.46, exceeding the 1944 net income by the sum of $10,486.09.

## Hygeia

The success of HYGEIA as a periodical for the health education of the public has now been fully established. When this periodical was launched more than twenty years ago, some physicians expressed doubt as to its desirability. Today the value of health education is unquestioned and many agencies are participating in the effort to inform people properly regarding health and disease. HYGEIA prints authentic health information and gives it in clear, concise and simple terms that even a school child can understand. It supplies reliable information regarding quacks, faddists and cultists, thus safeguarding the public against exploitation. This leads to the formation of intelligent health habits.

TABLE 2.—*Percentage of Physicians Receiving the Journal**

| State | Number Receiving Journal | Physicians in A. M. A. Directory | Approximate Percentage Receiving Journal |
|---|---|---|---|
| Alabama | 923 | 2,123 | 43 |
| Arizona | 400 | 615 | 65 |
| Arkansas | 626 | 1,806 | 35 |
| California | 9 3[illegible]6 | 12,365 | 76 |
| Colorado | 9[illegible]6 | 1,896 | 51 |
| Connecticut | 1 73[illegible] | 2 729 | 64 |
| Delaware | 210 | 360 | 58 |
| District of Columbia | 1,553 | 4,540 | 34 |
| Florida | 1,411 | 2,391 | 59 |
| Georgia | 1,287 | 2,814 | 46 |
| Idaho | 224 | 446 | 50 |
| Illinois | 7,270 | 12 648 | 58 |
| Indiana | 2,231 | 4 10[illegible] | 54 |
| Iowa | 1 461 | 3,102 | 47 |
| Kansas | 1 0[illegible]8 | 2,042 | 52 |
| Kentucky | 1 063 | 2,717 | 39 |
| Louisiana | 1,236 | 2 601 | 48 |
| Maine | 436 | 1 011 | 43 |
| Maryland | 1 98[illegible] | 3 08[illegible] | 64 |
| Massachusetts | 4 442 | 8 085 | 55 |
| Michigan | 3 636 | 6,509 | 56 |
| Minnesota | 2 000 | 3 614 | 55 |
| Mississippi | 523 | 1,52[illegible] | 34 |
| Missouri | 2 73[illegible] | 5 183 | 53 |
| Montana | 260 | 556 | 47 |
| Nebraska | 901 | 1 637 | 55 |
| Nevada | 99 | 174 | 57 |
| New Hampshire | 3[illegible]3 | 687 | 51 |
| New Jersey | 3,620 | 6 008 | 60 |
| New Mexico | 268 | 447 | 60 |
| New York | 17 074 | 27,028 | 61 |
| North Carolina | 1,547 | 2,871 | 54 |
| North Dakota | 262 | 5[illegible]0 | 50 |
| Ohio | 4 851 | 9 400 | 52 |
| Oklahoma | 999 | 2,284 | 44 |
| Oregon | 812 | 1 493 | 54 |
| Pennsylvania | 8 15[illegible] | 13 503 | 60 |
| Rhode Island | 514 | 9[illegible]8 | 54 |
| South Carolina | 6[illegible]2 | 1 427 | 46 |
| South Dakota | 201 | 403 | 50 |
| Tennessee | 1,335 | 2 961 | 45 |
| Texas | [illegible],80[illegible] | 6,9[illegible]2 | 48 |
| Utah | 403 | 58[illegible] | 69 |
| Vermont | 276 | 5[illegible]1 | 50 |
| Virginia | 1 792 | 2,920 | 61 |
| Washington | 1,367 | 2 234 | 61 |
| West Virginia | 847 | 1,834 | 46 |
| Wisconsin | 1 946 | 3 5[illegible]1 | 55 |
| Wyoming | 13[illegible] | 263 | 51 |

* This table gives the number of physicians (based on the 17th Edition of the American Medical Directory) in the United States, the number receiving The Journal and the approximate percentage in each state. Copies to physicians in the United States Army, Navy and Public Health Service are not included.

In addition HYGEIA has proved to be the voice of the medical profession to the public in emphasizing the point of view of American medicine on questions related to social and economic problems. Since 1940 HYGEIA has published more than twenty-five articles on the subject of federalized medicine and legislation introduced to change the nature of medical practice. The

total circulation of the issues in which these articles appeared exceeded 3,000,000 copies

Today HYGEIA is probably the most quoted periodical in the United States Following the appearance of each monthly issue from twenty to thirty requests are received for the privilege of republishing articles from HYGEIA in other publications Hardly an issue of the popular digest magazines appears—including particularly *Scientific Digest, Magazine Digest, Fact Digest, Read, Reader's Scope, This Month* and the *Woman*—that does not contain a reprint from HYGEIA

During 1945 HYGEIA published 147 articles stressing doctor-patient cooperation and education The following titles are indicative "Doctors Guard Your Health," "You Cannot Doctor Yourself," "Can Chiropractic Cure?" "Choosing a Doctor," "Be a Good Patient," "An Appreciation of Doctors," 'Country Doctor' and "Appointment with the Doctor" HYGEIA is carefully edited to avoid any suggestion that it replaces the services of a physician It enlightens people regarding the need of early diagnosis and treatment, the value of periodic health examination and the dangers of quackery and self medication All advertising in HYGEIA is subject to the same rules and regulations that apply in THE JOURNAL.

During 1945 an average of 15,000 physicians made HYGEIA available to patients in their reception rooms Estimates indicate that more than 1 500 000 people thus have access to HYGEIA each month If far more physicians extended this service to the public, the influence of HYGEIA would be greatly enhanced and corresponding good would result to the advancement of medicine. Several physicians give from eight to a dozen subscriptions to HYGEIA to their patients each year

The Woman's Auxiliary to the American Medical Association has been of great help to HYGEIA In 1945 they sent a total of 11,383 subscriptions For this cooperation the medical profession owes appreciation to the Auxiliary

The net paid circulation on Dec. 31, 1945 was 143,105 subscribers as compared with 135,685 at the end of 1944 The average net paid circulation was 128,680 in 1945, as compared with 118,830 in 1944 The financial statement shows a gain of $108,214.21, compared with $68,117 81 for 1944 and $52,758.79 for 1943 Since it was established in 1923, HYGEIA has shown a total gain over the years of $388,851 58, compared with total losses in the various years of $258,984 48 The periodical is thus well on the profit side financially and has also rendered a tremendous service to medical public relations

## Library

In 1945 about 1,800 requests were received in the Association's Library for package libraries, and 1 784 were prepared and lent to members and subscribers The subjects most frequently requested were anesthesia, heart disease, peptic ulcer, syphilis, penicillin, undulant fever and Rh factor Various types of reference questions were also answered by the Library staff compliance with which involved the preparation of recommended lists of books the compilation of short bibliographies of recent literature on a multitude of subjects and the location of vast numbers of articles appearing in past issues of THE JOURNAL. Approximately 4,800 requests for assistance in this type of reference work were received and were answered by letter and telephone. It is also the responsibility of the Library to assist members of the headquarters staff, and much work of this type was done during the year All this work during 1945 was accomplished with a reduced personnel Because of the national scope of the work of the American Medical Association the majority of requests for service from the Library are answered through correspondence. In 1945, however, there were 507 visitors to the Library

Through the periodical lending service 9 946 periodicals were lent. It is interesting to note the increased frequency of requests for this service from Chicago libraries whose holdings greatly exceed those of the American Medical Association Library For example, 453 periodicals were lent to staff members of the University of Chicago, 555 to the American College of Surgeons, 146 to Northwestern University Medical School, 218 to the John Crerar Library and 61 to the University of Illinois Medical School This demand indicates clearly the value of this unusual type of library service.

Three separate volume indexes to THE JOURNAL were, as usual, prepared in the Library

## Quarterly Cumulative Index Medicus

The publication of the QUARTERLY CUMULATIVE INDEX MEDICUS fell far behind schedule in 1945 Much of the delay was due to the printers' strike which occurred in October and much to unavoidable delay in binding Only two issues were published, the January-March 1945 paper issue, which was distributed Aug 6, and the January-June 1945 bound volume, which was not ready for mailing until Feb 2, 1946 A prompt return to the usual schedule of publication cannot be expected in view of present difficulties, there is still an acute shortage of trained personnel for the editorial work and an overloaded printing department

Many foreign periodicals covering the year 1942 were received in November 1945 They had been ordered in March 1942 through the Joint Committee on Importations of the American Library Association The titles received were primarily periodicals published in France Germany and Italy There are still many gaps to be filled for the period from 1940 to date It is hoped that it will be possible to index the missing issues gradually by borrowing them from other libraries About 120 periodicals were removed from the "List of Journals Indexed" because no issues had been received for four or five years If it is possible to borrow or purchase back or current issues of any of the titles dropped, they will, of course, be reinstated in the list The covering of the foreign literature for the war years will, of necessity, be a gradual process The 1945 and 1946 issues of a few foreign periodicals are gradually being received, and approximately 130 foreign exchanges have been reestablished during the past few months. In the January-June 1945 issue of the QUARTERLY CUMULATIVE INDEX MEDICUS 7,617 foreign articles were indexed. In the July-December 1945 issue 7,612 articles were indexed, making a total of 15,229 foreign language articles indexed for the year This figure is slightly under the total for 1944 About 63 per cent of the foreign articles in 1944 represented Spanish and Portuguese material In 1945 the percentage of Spanish literature dropped to 56 5

The net loss sustained in the publication of the Quarterly Cumulative Index Medicus in 1945 amounted to $16,722 08 as compared with a loss in the preceding year of $9,131 89

## Cooperative Medical Advertising Bureau

The Cooperative Medical Advertising Bureau, established thirty-one years ago was entirely reorganized in 1945 and had its most successful year Net gain over 1944 in the earnings of the Bureau amounted to $19,288 51 The volume of advertising obtained for the thirty-five journals of constituent medical associations which continue to be served by the Bureau was considerably larger, and commissions returned to the member journals amounted to $77,800, exceeding the amount returned in the preceding year by the sum of $31,800

Several meetings of the Advisory Committee to the Bureau were held during the year and resulted in the setting up of revised operative principles for the conduct of the Bureau The Council on Pharmacy and Chemistry of the Association, the Secretary of which is an ex officio member of the Advisory Committee, has revised some of its rules with respect to advertising of products considered by the Council The Director of the Bureau resigned his position in late December, and the Board of Trustees appointed as his successor Mr A J Jackson, for many years employed in the Association s Advertising Department. The Bureau staff has been enlarged, and innovations and needed changes have been made in Bureau procedures In view of these facts, it is anticipated that the Cooperative Medical Advertising Bureau will continue to increase its value to the journals which it represents

### Order and Mailing Department

The Order Department in 1945 handled a total of 51,021 orders for 386,844 individual units. The number of units distributed during the year exceeded by almost 100,000 the number sent in 1944. The greatest demand was for material issued through the Bureau of Health Education and the Council on Medical Education and Hospitals. In handling the orders nearly 4 000 mail bags were used having a total weight of more than 120 tons.

The total number of pieces of mail handled through the Mailing Department in 1945 was 1 384,595 including 590,468 pieces of first class metered mail, 27,521 pieces of air, foreign and overweight first class mail and 766,606 pieces of third class mail. Several thousand additional pieces of first class mail were sent out by various departments in the Association's offices without passing through the central Mailing Department.

---

### Council on Pharmacy and Chemistry

Since its establishment in 1905 the Council on Pharmacy and Chemistry has been primarily concerned with the evaluation of drugs and their uses and has pointed its activities to gather facts and to disseminate information in this field of therapy. In more recent years the activities have been enlarged, so that the Council has come to be regarded not only as an advisory body for drug therapy but also as a leader in the field of therapeutics, a leader actively interested in promoting improvements and recommending the discontinuance of outmoded practices. During World War II the Council's advisory functions assumed added significance and its work was greatly increased. Even so, it found the time to plan for new fields of exploration and has developed as one project, the Therapeutic Trials Committee. This standing committee of the Council, which is intended to provide a means of adequately investigating new drugs of promise, is now functioning. It is designed to meet a real need in the research field. At the same time the Council and its headquarters office are studying means of further service to the medical profession in the interest of guarding and improving the health of the nation.

The policies and work of the Council can now be said to include the preparation of special treatises, articles and status reports, the preparation of books designed for the practitioner and the medical student, the giving of grants-in aid for therapeutic research, the securing of therapeutic trial of promising new preparations, the encouragement of basic research on fundamental therapeutic problems and, of course, the answering of inquiries from members of the medical and other professions. The Council is best known to many for its annual publication New and Nonofficial Remedies, which contains statements on standards, tests, actions, uses and dosage of drugs and of other articles which the Council believes should be included for the information of the medical profession.

#### REVISED RULES

In keeping with its expanding endeavors the Council has revised its rules for "acceptance," which eventually will mean the admission of more drugs to New and Nonofficial Remedies. The Federal Food, Drug and Cosmetic Act has made into legal requirements conditions which were formerly controlled only by the Council rules. In view of this added protection, the Council feels that it may safely relax or omit certain rules which have become more of a hindrance than a help in its endeavor to provide informed guidance in the use of drugs. As a result of revision there are now seven basic principles governing Council action (formerly there were eleven). These are available in booklet form, together with explanatory comments and an outline of the form for presentation of articles and may be obtained from the office of the Secretary of the Council at American Medical Association headquarters.

#### MEETINGS

The Council held two meetings in 1945. The topics discussed included the promiscuous use of vitamins and the need for further studies on vitamin therapy, the consideration of cosmetic creams containing estrogens, the external use of sulfonamide preparations, the spread of infectious hepatitis by contaminated syringes and needles, acceptance of drugs for manufacturing use, the cooperative report on thiouracil, the Therapeutic Trials Committee, furtherance of the use of the metric system and revision of the Council's rules.

#### PUBLICATIONS AND REPORTS

During the year over 30,000 copies of New and Nonofficial Remedies, Useful Drugs, the Epitome of the U. S. Pharmacopeia and National Formulary, Annual Reprint of the Reports of the Council, and Glandular Physiology and Therapy were distributed. Of this number New and Nonofficial Remedies comprised over 17,000 copies. One indication of the increasing popularity of this book is the frequency with which copies are requested for review purposes. The 1946 volume of New and Nonofficial Remedies is now being printed. Under the twenty-three general classes of preparations contained in the 1945 volume, approximately 1,000 brands of medicinal agents (exclusive of dosage forms and modifications) were listed and described. This number, of course, varies from year to year.

The Council also adopted for publication various reports concerning the use of drugs in the prevention and treatment of disease. Deserving special mention are reports on Dangers from the External Use of Sulfonamides, Dermatophytosis Treatment and Prophylaxis, Dysentery Bacteriophage, Status of Cosmetics Containing Hormones, The Status of Passive Immunization and Treatment in Pertussis, Status of Poison Ivy Extracts. Many of the articles were requested in reprint form a service available to physicians and to other interested scientists or organizations. These statements have been widely quoted and have been the basis of many references in periodicals and elsewhere.

#### RESEARCH

In addition to organizing the work of the Therapeutic Trials Committee and to initiating and sponsoring research resulting from certain phases of problems facing the Council in its considerations, the Council's Committee on Therapeutic Research issued twenty-two grants ranging from $100 to $3,000. Many articles have been published during the year as a result of work done under these grants.

#### MEMBERSHIP

During 1945 Drs. Fishbein, Long, McCoy and Nelson were reelected to membership on the Council and Dr. Isaac Starr was elected to fill the vacancy created by the resignation of Dr. Eugene M. Landis.

#### PROFESSIONAL RELATIONS

The Council continued to enjoy cooperative relationship with many agencies of the federal government and with other bodies, and it supplied information and other assistance whenever possible. It encourages professional relations with agencies associations and societies to promote helpful understanding of problems of mutual interest. An example of the Council's wide interest and its desire to be helpful is its cooperation with the Office of War Information in the preparation of a booklet on the Control of Communicable Diseases a manual to be distributed for use in occupied countries. The Council provided assistance by appointing a committee to supply statements on treatment of the various diseases mentioned in the manual.

The Secretary of the Council attended a conference called under the auspices of the American Pharmaceutical Association to permit discussion of the sale of barbituric acid compounds and the steps that may be taken to effect control over this sale. It is apparent that the enforcement permissible under the present state laws and the Federal Food, Drug and Cosmetic Act is not preventing abuse of the barbiturates. There was representation at the conference from many interested organizations and the consensus seemed to be in favor of enforcing control at the state level, probably by means of a uniform state law and adequate personnel. It would seem desirable for the House of Delegates of the American Medical Association to reiterate the stand which it took at the annual meeting in 1941.

The Council and its office continued to be of assistance to other Council offices, bureaus and departments at American Medical Association headquarters and to work cooperatively on

projects of mutual interest For example, it considered with the Council on Industrial Health the status of the use of aluminum compounds in the modification and treatment of silicosis, for the Bureau of Health Education it provided information for replies to lay inquirers and assisted in the preparation of a number of radio programs Such cooperation was given the editorial department, the business department, the Council on Medical Education and Hospitals, the Council on Foods and Nutrition, the Council on Physical Medicine, the Bureau of Investigation, the Bureau of Legal Medicine and Legislation, the Council on Medical Service and Public Relations, and other offices

The Council also provided assistance for all medical and other journals interested in following Council policies particularly the state medical journals It has been especially interested in the problems of the state medical journals and societies and is working closely with the Cooperative Medical Advertising Bureau The Secretary of the Council is ex officio a member of the Advisory Committee to the Cooperative Medical Advertising Bureau

OTHER ACTIVITIES

Other efforts to extend the usefulness of the Council and its office include the filing of data on patents for treatment measures, so that all possible approaches to drug therapy which have been studied will be available at the Council office, the collection of data on reactions to and deaths from drugs so that a repository of such information may be established, and the abstracting and filing of federal and state laws on research, the sale and distribution of drugs, and other problems of a similar nature When pooled with the data now available at the Council office and the data accumulated under the auspices of the Therapeutic Trials Committee, this information should make the Council an outstanding source of information on the prevention, diagnosis and treatment of disease. The Council is even expanding its consideration of agents for inclusion in New and Nonofficial Remedies to include such products as insecticides, scabieticides and cosmetic preparations creating a physiologic change in the body All of this information will be freely available as fast as it can be released Only lack of personnel created by the exigencies of war has prevented more rapid expansion of Council activities

Inquiries directed to the Council office are encouraged and during 1945 there was much correspondence concerning drugs used in this country and in other countries The Council's file on foreign drugs especially those sold in Latin American countries is rapidly increasing

The Secretary addressed a number of scientific and nonscientifically trained audiences on varied subjects He and his medical assistants in the Council office will continue to be available when invited and, furthermore, will be available with exhibits for scientific meetings The Secretary also attended a number of meetings to represent the Council and present its views and information, and he worked particularly closely with the U S Pharmacopeia and National Formulary committees

During 1945 a new step in cooperation was undertaken by the Food and Drug Administration, the Council and several representatives of the drug and pharmaceutical industry Before thiouracil a new drug for the treatment of hyperthyroidism was released in interstate commerce, six manufacturers interested in this compound and the Food and Drug Administration prepared a survey by questionnaire of the toxicity of the drug The study, which involved the results of use in 5,745 cases was reported to the Council with a view to informing this body and through it the medical profession. The study was published in THE JOURNAL as a report to the Council and then was given wide distribution by reprint and by reproduction in a journal published by the American Pharmaceutical Association Such cooperation is to be commended, and manufacturers are urged to show a similar spirit in other therapeutic problems of common interest.

Representatives of the Council met with representatives of the Food and Drug Administration the United States Pharmacopeia and the National Formulary to discuss ways and means of expediting the exclusive use of the metric system. Following consultation, several proposals were adopted which will encourage and hasten more extensive use of this system by industry, the medical and pharmaceutical professions and other groups

Announcements of acceptance of new drugs by the Council are now being carried also in the Practical Pharmacy Edition of the *Journal of the American Pharmaceutical Association*, the *American Professional Pharmacist* and the *Journal of the National Association of Retail Druggists* All published Council statements are being circulated to all state medical journals for reproduction if they see fit

## The Chemical Laboratory

The American Medical Association Chemical Laboratory entered the thirty-ninth year of its work with an increased number of new medicinal products before it for examination The types of compounds examined and the problems encountered made necessary a considerable amount of investigative work In addition, a wide variety of substances and dosage forms were considered during 1945 More and more products are being submitted for consideration to the Council on Pharmacy and Chemistry as a direct result of its expanded activities during the war, and the activities of the Chemical Laboratory have been devoted almost exclusively to work requested by the Council

The Laboratory, however, found it possible to cooperate in an original study of the elimination of carbon monoxide from the blood of dogs surviving critical carbon monoxide anoxia This investigation was undertaken as a part of the broad problem of resuscitation being studied under the auspices of the Council on Physical Medicine.

WORK FOR THE COUNCIL ON PHARMACY AND CHEMISTRY

The investigation of new products submitted to the Chemical Laboratory is necessarily of two types First, examinations are made to determine whether or not the products are of the identity and composition claimed, many such investigations going beyond what would be required merely for the elaboration of standards for the drugs, secondly, suitable tests and standards must be prepared for publication in New and Nonofficial Remedies if the products are found to be satisfactory from a chemical point of view and otherwise meet the scrutiny of the Council on Pharmacy and Chemistry These standards are elaborated from original data and from information supplied by manufacturers, with a view to ensuring that marketed products are as pure as possible without undue hardship on the manufacturer The highest standards for medicinal products consistent with proper practical manufacturing technics provide attainment of the ultimate aim—the protection of the sick.

During 1945 the Laboratory aided in the elaboration of tests and standards for products such as diethylstilbestrol dipropionate, a synthetic estrogen, mercuhydrin and mercuhydrin sodium solution a new synthetic mercurial diuretic naphuride sodium, synthetic trypanosomicide, succinchlorimide employed in sterilization of drinking water, testosterone propionate, new synthetic androgen, thrombin topical, employed to control bleeding, pravine hydrochloride, tuamine and tuamine sulfate and vonedrine—examples of new synthetic vasoconstrictors The Laboratory also gave consideration to tests and standards for digitoxin, digoxin ethinyl estradiol, heparin sodium, natural estrogens and protein hydrolysates

The Laboratory continued to assist the Council in connection with the preparation of a number of monographs and descriptions of dosage forms of various drugs published in THE JOURNAL during the year Some assistance was provided in connection with the revision of New and Nonofficial Remedies, 1945, and in replying to correspondence and questions on chemical subjects

WORK FOR OTHER DEPARTMENTS OF THE ASSOCIATION

The Laboratory was of assistance to the Bureau of Investigation, the Library staff, the Editorial Department, the Advertising Committee and other departments through technical advice and a limited amount of chemical examination

Members of the Laboratory staff have attended a number of scientific and technical conferences during the year

## Council on Physical Medicine

The year 1945 marked the twentieth anniversary of the standing committee of the Board of Trustees known as the Council on Physical Medicine. Its name was changed in 1944 from the Council on Physical Therapy to the Council on Physical Medicine. Physical therapy was in a chaotic state at the time the Council was organized twenty years ago. Its membership was made up of specialists in important fields of medicine who were interested in the advancement of physical therapy. A period of self education was required. The Council sponsored special scientific studies in fields in which little was known at that time. Eventually, by diligent study and scientific research the truth began to emerge out of the confusion of countless claims and counterclaims for the efficacy of physical medicine.

The change in name of the Council was considered advisable because its scope had been broadened and its responsibilities increased. Although physical agents coming under its purview had included diagnostic and therapeutic appliances, greater stress was attached to them, and occupational therapy and rehabilitation were added to the agenda of the Council.

There are many mechanical contrivances which are used in one way or another in the practice of medicine. In view of the large number, the Council voted to limit its consideration to products the physical properties of which are applied directly to the human being as, for example, autoclaves and ultraviolet lamps which are used for sterilization purposes. The autoclave is used to sterilize instruments, bandages and other material employed by a physician in the practice of medicine, but the autoclave itself is not directly applied to a patient. Ultraviolet lamps on the other hand, produce radiation which has a limited usefulness as a disinfectant but which also has an effect on the skin of human beings that might cause serious burns.

As a result of the restrictions placed on raw materials during the war, it was understandable that new equipment for the trade was not developed. At the conclusion of World War II, several pieces of apparatus were submitted for consideration, but the reconversion lag and the labor unrest have curtailed the manufacture of new equipment. During the year the Council considered thirty-one pieces of apparatus and published notices of acceptance of fourteen and of rejections of two pieces.

### PUBLICATIONS

The booklet Apparatus Accepted was revised and is now available. Approximately 10,000 copies have been distributed among the members of the senior and junior classes at seventy-eight approved medical schools. The Council is grateful for the willingness of the deans of medical schools to distribute Apparatus Accepted among the students. In the future the Council will provide copies of the booklet for students in the junior classes at the medical schools, since physical medicine is usually taught in the third year. The Manual of Occupational Therapy has been revised and is now ready for printing. The Handbook on Physical Medicine was revised in 1944 and is enjoying wide distribution. It is now in its second printing. Special articles on phases of physical medicine have been published from time to time.

### RESEARCH

The Council on Physical Medicine has supported research on problems of a controversial nature. One such problem is artificial respiration. The "Five Year Survey of Methods for Artificial Respiration" by Bernard D. Ross, M.D., Ph.D., has been completed, and reprints are available. This article is a compilation of case histories of the emergency life saving crews of the U. S. Coast Guard and of fire departments in certain large cities. All methods of artificial respiration in current use were considered in this report. The investigation of methods of artificial respiration is going forward satisfactorily in the Department of Physiology of Northwestern University School of Medicine. One article has been published entitled "Safety of Modern Alternating Positive and Negative Pressure Resuscitators," by Henry Schwerma, Ph.D. and A. C. Ivy, Ph.D., M.D. Reprints of this article are available. The results of this investigation confirm a previous decision reached by the Council with reference to problems involving artificial respiration. The studies are being continued, and it is believed that new information will be forthcoming bearing on this important field.

### PHYSIATRIST

A physician specializing in and practicing physical medicine has been in the unenviable position of not having a term to designate his specialty. There has been a general acceptance of "physical medicine," which is now regarded as including the broad fields of physical therapy and occupational therapy. The Council has gone on record as favoring the term "physiatrist" to designate a physician specializing in physical medicine. The Council believes that this term is etymologically correct and is of pure Greek origin. It is derived from the two Greek words "physis" and "iatreia." "Physis" pertains to the physical or natural phenomena, and the terms "physicist" and "physiologist" derive their first syllable from the same origin. "Iatreia" refers to healing or to the healer. Since the physician is a healer, a "physiatrist" would be a physician who employs physical agents for the treatment of disease.

### RADIUM AND RADIUM PRODUCTS

Radium and radium products are important agents in physical medicine. Several years ago the Council launched an investigation of radon and radon products. As the result of recent inquiries regarding the rental of radium and the selling of radon, the Council is going forward more energetically with the consideration of these methods of treatment and has assigned to its Consultants on Roentgen Ray Therapy, now called Consultants on Roentgen Rays and Radium, the additional duty of advising the Council relative to therapeutic and reputable methods of distribution of radium and radium products.

### COUNCIL CONSULTANTS

In view of the diversified field of physical medicine, the Council has from time to time appointed various groups of specialists to aid in solving the problems and now has Consultants on Artificial Limbs, Audiometers and Hearing Aids, Contraceptive Devices, Education, Electrocardiographs, Electroencephalographs, Occupational Therapy, Ophthalmic Devices, Respirators and Roentgen Rays and Radium.

### AUDIOMETERS AND HEARING AIDS

The development of the miniature vacuum tube, which is being made smaller and smaller and consuming less energy, has led the way to the development of the modern vacuum tube hearing aid. With the help of its Consultants on Audiometers and Hearing Aids the Council has prosecuted its examination of audiometers and hearing aids and has published reports on them. The Council on Physical Medicine greatly appreciates the cooperation and advice it receives from the American Academy of Ophthalmology and Otolaryngology, the American Otological Society, the American Laryngological, Rhinological and Otological Society and the American Society for the Hard of Hearing and its several chapters.

### OPHTHALMIC DEVICES

The Consultants on Ophthalmic Devices, who are also members of the American Committee on Optics and Visual Physiology, have given valuable assistance to the Council in the investigation of charts for testing vision and muscle balance, instruments for orthoptic training and other devices utilized in the ophthalmic field.

### DIATHERMY APPARATUS

During World War II the Federal Communications Commission reviewed the assignments of frequency channels for various radio services. The improvement in radio transmission in the higher frequencies presented a problem which required careful study. When the short wave diathermy apparatus first came on the market some ten years ago there were few radio services in the frequency bands corresponding to the high frequency energy emitted by diathermy equipment which was not absorbed by the tissues undergoing treatment. At the present time there are various short wave diathermy machines being used for certain types of communications which extend

far beyond the regional use of diathermy in the radio spectrum The Council on Physical Medicine has cooperated with the Federal Communications Commission in an effort to solve this problem The commission has carefully surveyed the field in which high frequency electrical energy is used and has recommended three channels for medical and industrial heating applications The final decision has been handed down by the commission, but agreement has not been reached on the exact type of equipment which will meet the requirements The Council on Physical Medicine is now revising its minimum requirements for acceptance of diathermy apparatus in view of the rulings of the commission

EDUCATION

The Council gave consideration to the establishment of a section on physical medicine in the Scientific Assembly of the American Medical Association The Council welcomes and regards as a move in the right direction the new special journal OCCUPATIONAL MEDICINE. Its editorial board was so selected that representation of physical medicine and occupational therapy was included. The activities of the Baruch Committee on Physical Medicine and of the National Foundation for Infantile Paralysis in the field of physical medicine have been enthusiastically acclaimed by the Council and acknowledged as spearheads in the advancement of true physical medicine.

## Council on Foods and Nutrition

The Council on Foods and Nutrition, which was created in 1929, is now entering its seventeenth year of service as an integral part of the American Medical Association This body of twelve experts in the field of nutrition has had an important role in shaping progressive policies in food and allied industries and in encouraging the use of sound, nutritive diets While its leadership was apparent during the war years, it was especially emphasized in 1945 as attention was given to improving the quality of foods and to disseminating information on the value of obtaining the best possible quality for the maintenance of a healthy nation Its increased attention to special foods, frequently referred to as special purpose foods, has elicited many commendations The Council plans to pursue this objective even more energetically during 1946

COOPERATION

The Council continued during 1945 to make its services available to individuals and groups interested in foods and nutrition Harmonious relationship existed with agencies of the government and with other organizations, a relationship that has been in existence for years and is constantly encouraged by all participating groups The Council also worked closely with the other departments of the Association headquarters in problems of mutual interest, of which there are many during the course of the year Plans are being made to extend this cooperation

PUBLICATIONS AND COUNCIL REPORTS

During 1945 there were sold over 1,000 copies of the Handbook of Nutrition, and almost 2,000 copies of the Council's food chart were distributed Both publications have been widely acclaimed

A series of nine articles discussing the significance of protein nutrition in health and disease was printed under the Council auspices in THE JOURNAL. This series received wide acclaim and was subsequently made available in booklet form by two industrial organizations, one organization alone printing in English 250 000 copies and in Spanish 25,000 copies The series included discussions on the role of protein in human nutrition, the importance of protein in pregnancy, protein nutrition in problems of medical interest, protein in surgery, protein nutrition in pediatrics, proteins and resistance to infection clinical detection of protein deficiencies selection of protein-containing foods to meet protein requirements, and the practical use of amino acids in human nutrition

Included in other reports published by or under the auspices of the Council were discussions on the restoration, enrichment and fortification of food, with special emphasis on processed cereals, corn meal, hulled rice, white flour, white bread and rolls, farina, milk, oleomargarine and salt, the preventive and therapeutic use of vitamins, the effect of cocoa on the utilization of dietary calcium, iodized salt for the prophylaxis of endemic goiter, and the addition of synthetic vitamins to confectionery All these subjects play an important part in our everyday life, and the Council has made worth while and revealing contributions by preparing or sponsoring reports which will clear away confusion and encourage rational dietary habits

COUNCIL MEETINGS

Only one meeting was held during the year at which time Dr James S McLester and Dr Howard B Lewis were reelected chairman and vice chairman respectively Among the subjects discussed were tomato and citrus juices containing comparatively large amounts of vitamin C, the value of placing reliance on the proper selection of natural foods for good nutrition instead of on fortified foods, permissible claims for vitamin D and the need for establishing a reasonable standard of quality for white bread and rolls including minimum levels for thiamine, riboflavin, niacin and iron

In connection with the latter problem the Council discussed the progress which is being made in the matter of state enactment of laws which may lead toward the goal of universal requirements for enrichment of white bread and rolls and concluded that it seems apparent that considerable time may elapse before a majority of states will have laws requiring enrichment Thus some other means of accomplishing this objective should be sought. It was pointed out that under the Food, Drug and Cosmetic Act there is provision for setting standards of quality on certain types of foods Application of such a principle to white bread and rolls would provide a standard by which the quality of this food material could be readily determined. With this purpose in view, the Council adopted a resolution urging that the administrator of the Federal Security Agency hold a hearing at the earliest practicable date under the provisions of the Food, Drug and Cosmetic Act for the purpose of considering a proposal to fix and establish a reasonable standard of quality for white bread and rolls including provisions for minimum levels for thiamine, riboflavin, niacin and iron

The Council decided that, in addition to being prepared and marketed as a special purpose food, an article must also serve a nutritionally valuable or significant purpose in order to be placed in the accepted list of foods, that infant food preparations with an unnecessary multiplicity of ingredients cannot be looked on with favor, and that the Council seal cannot be provided for articles manufactured and sold for use exclusively in foreign countries

MEMBERSHIP

Dr A A Weech of the Children's Hospital Research Foundation, Cincinnati, was elected to membership on the Council to fill the vacancy created by the expiration of the term of Dr Irvine McQuarrie, who had served for a period of six years

ASSISTANCE TO MEDICAL PROFESSION

In addition to its normal activities, the Council provides answers to inquiries on food and nutrition problems Many of the questions come from the medical profession, and the Council office sincerely hopes that its facilities will be increasingly used by physicians and others No stone will be left unturned to gather information for those who seek it. Evidence of the recognition given to this assistance is the frequency with which persons visit the Council office.

NEW ACTIVITIES

Several projects are now in the process of development to further the usefulness of the Council As the groundwork is completed, the details of operation will be made known by publication in THE JOURNAL, by amendment to the explanatory comments accompanying the Council rules or by other methods Primarily the projects are intended to aid the medical profession in its constant search for information. In turn, the general population will be benefited by these and other activities that will be undertaken by the Council

## Council on Industrial Health

The immediate postwar months have been characterized by considerable reductions in the health and safety programs of the Army, Navy and U. S. Maritime Commission, and in the great armament centers owned by the government and operated under private auspices. There have been inevitable readjustments with respect to private industry during conversion from war to peace, but, on the whole, interest in medical supervision over workers and over working environment continues at a high level.

### PUBLIC RELATIONS

The status of industrial health in the current planning for an international health body in the United Nations organization has been of considerable interest to the Council on Industrial Health. The proposals are all in the planning stage, but it has been learned that the important field of industrial hygiene will occupy a prominent place, that technical committees will be created to govern these matters and that these committees will undoubtedly be mixed or joint in nature, including in them representation from the International Labor Office and other interested bodies as well as representatives from international and national official and private organizations having legitimate interests in this field.

In keeping with the recommendation of the House of Delegates at its 1945 meeting, the Council has set in motion certain inquiries regarding its part in promoting cultural and scientific relations with Canada and Latin America in matters dealing with industrial health and welfare.

The Council's relations with governmental agencies in this country have shifted from those responsible for the conduct of the war to those mainly concerned with conversion to private civilian enterprise. Of these, the most important are the Division of Industrial Hygiene of the U. S. Public Health Service, the Bureaus of Labor Standards and Labor Statistics in the U. S. Department of Labor, the U. S. Civil Service Commission, the Veterans Administration and the Office of Vocational Rehabilitation in the Federal Security Agency. The Council is still impressed with the necessity for improving its relations with influential leaders in the labor and management fields. Medicine has a great opportunity to contribute to improved human relations in industry, and certainly there are great areas of agreement on the values of industrial health services. The possibility of national and state industrial health conference boards is under discussion in the hope that such agencies may do much to overcome resistance to occupational health service and to promote the ultimate objectives in this field. An additional factor tending toward greater public acceptance is health education for industrial workers, which the Council actively advocates but in which both labor and management must intimately participate. There is no great advantage in setting up ideal health conditions in the working environment when such influences can be dissipated by unhealthful living conditions, poor nutrition, poor use of leisure time and other factors encountered by the working population outside of employment.

There is value in some form of registration of industrial medical services in order to have a clear idea of how extensive these services are, the nature of physician participation therein and how well they conform to accepted standards. This activity will be pursued as soon as sufficient help is available.

### PROFESSIONAL RELATIONS

Variations in interest and activity expressed by the committees on industrial health in the state and county medical societies are still very large. Resumption of field services by the Council is expected to improve this situation measurably. The duties of these committees and the best methods of organizing for better industrial health at state and local levels will be reviewed in the light of new and changing relations—especially demands made in employment contracts and in the proposed wide extension of industrial hygiene activities in industrial hygiene divisions of state governmental agencies. The committees on industrial health in the special sections of the Scientific Assembly of the American Medical Association are great potential contributors to improved care of occupational disabilities. Several exceptionally meritorious investigations are now under way. Other professional groups such as dentists, nurses, nutritionists, engineers and chemists are active in the field, and appropriate matters are discussed with them from time to time.

A gratifying amount of interest has been expressed by returning medical officers in opportunities in occupational medicine. In order to facilitate such placement, the Council has recommended that an attempt should be made to fill vacancies locally if possible. If local facilities are not available, recourse should be made to the secretary of the state medical society. If neither of these procedures is productive, the office of the Council on Industrial Health is prepared to be as helpful as possible in bringing notice of vacancies and opportunities to the attention of physicians. The Council has been asked to express its opinion about the ethical and organizational relationships in setting up services of this kind in both large and small industries. The "Outline of Procedure for Physicians in Industry," prepared by the Council on Industrial Health and approved by the Judicial Council, needs some further interpretation in these directions. Illustrating this point, the Committee on Industrial Health of the Medical Society of the City of New York believes that one of its principal objectives is to clarify the relationships which ought to exist between industrial and private practitioners.

### SCIENTIFIC DEVELOPMENTS

Education in the field of industrial health was reviewed by representatives of the Council, the American Association of Industrial Physicians and Surgeons and the American Public Health Association, all of whom are interested in advancing the standards of medical accomplishment in this field. There has been no change in the directions of major attack on the educational problem—orientation courses to undergraduates, wide availability of introductory and refresher courses to physicians in community practice and implementation of a certification program at the earliest possible opportunity. The Council has noted with satisfaction that a number of medical and professional schools are actively interested in establishing institutes or divisions of industrial health. These centers will not only provide specialty training but will promote improved teaching of the subject throughout the whole field of medical education.

The Council on Industrial Health has been greatly concerned over medical participation in research and investigative phases of environmental hygiene as well as standards of supervision over individual workers themselves. As the situation now stands, the field of industrial hygiene is almost entirely preempted by nonmedical people—sanitary engineers, chemists and toxicologists. Here again is an example of the urgent necessity for diverting medical brains to useful fields of investigation which have great potentiality for widespread good and professional advancement. The Council is well aware of this problem and hopes that active support will be forthcoming to improve the general situation.

The program of national and regional conferences in industrial health has been resumed. These are concerned with important problems in the administrative industrial medical relationships, in public health and preventive medical fields and in specific problems in industrial hygiene and toxicology as well as improved standards of traumatic surgery and occupational disease management.

The decision of the Board of Trustees to publish the journal OCCUPATIONAL MEDICINE is regarded by the Council as the outstanding development in advancement toward higher professional standards in recent years.

### INDUSTRIAL HEALTH STANDARDS

The Council has issued reports from time to time covering standards governing the objectives of industrial health, procedures for physicians in industry, the setting up of an industrial medical department, the conducting of plant hygiene surveys, standing orders for industrial nurses and similar reports. All of these are currently under revision. In addition the Council is actively engaged in establishing standards for physical examination in industry, both preplacement and periodic and especially the relationships which should exist between jobs and physical and mental fitness. To this basic physical

examination formula special addenda will be prepared dealing with such matters as the evaluation of the cardiovascular system, the respiratory apparatus, neurologic examinations and appraisals based on mental and emotional makeup All these factors are of increasing importance to sound employee relations in industry and in the growing specialty of vocational counseling Physicians are eminently adapted to conduct these services for industry, and the Council is anxious that this concept be brought to the profession at large at once

It is essential that there be better reporting of occupational morbidity and mortality, without which no clear sense of direction and organization is possible There are reasonably accurate data on the occurrence of industrial accidents, but statistical information in the related fields of occupational disease and of the incidence of ordinary illnesses are very fragmentary and incomplete There is widespread opinion on the part of physicians in industry that greater attention to these details would constitute an important contribution to the whole subject of epidemiology

Health examinations and conservation programs among the management and supervisory groups in industry is a neglected subject. Physical and mental wreckage in these classifications is far greater than ordinarily realized, especially during times of extraordinary responsibility and attention to details Much education based on a real understanding of the elements of the problem is a practical necessity

During the year the Council issued reports on "Mass Health Surveys in Industry" and 'The Effect of Fluorescent Light on Vision." More recently a joint report has been issued with the Council on Pharmacy and Chemistry on "Aluminum in the Prevention and Treatment of Silicosis"

### WORKMEN'S COMPENSATION

The Council has actively fostered the formation of a National Workmen's Compensation Conference Committee to promote discussion of all matters dealing with the administration of workmen s compensation statutes and with medical relations associated therewith Other groups represented on this committee are the International Association of Industrial Accident Boards and Commissions, the Combined Claims Committee of the Stock and Mutual Casualty Insurance Companies, the American Federation of Labor, the Congress of Industrial Organizations, the National Association of Manufacturers, the Chamber of Commerce of the United States and the Bureau of Labor Standards of the U S Department of Labor This committee is regarded, at least by some of the participants, as the most significant development in workmen s compensation affairs since the original enactment of this form of legislation. Medical subjects to be considered deal with improved treatment of compensable disability, proper control over medical testimony, disability evaluation, greater participation in the administration of workmen's compensation by properly trained medical people and greater recognition of the inherent values of rehabilitation as a factor in compensation work

The Council expects to continue its other activities in workmen's compensation which have to do with effective relations in state medical societies, with individual industrial commissions and compensation boards and with insurance groups In this connection it is hoped to be able to accomplish some basic work in the general field of simplification and uniformity of medical records

### REHABILITATION

The Council is of the opinion that rehabilitation is a preeminent medical problem and likely to continue as such for many years to come. Although the policies of many official and unofficial groups in this field are relatively uniform, the Council has attempted to represent the medical point of view in all discussions dealing with this large field. The attitude expressed has been that physical restoration is the fundamental principle in the rehabilitation of the crippled and disabled and that these services can be adequately carried out only under medical direction and supervision. Other aspects of the problem, notably vocational training and placement, are important but must rest fundamentally on the best possible medical reduction of the disability It is felt that the medical profession on the whole is not entirely conversant with the size and urgency of the rehabilitation problem and the Council expects, therefore, to give more and more attention to reviewing this whole field and medicine s place in it, to educating the profession about current trends and methods, to maintaining a clearing house of information, to fostering effective state relations, to maintaining proper contact with official and voluntary agencies and to working closely in this field with other official groups in the American Medical Association, particularly the Council on Physical Medicine.

### COMMITTEE REORGANIZATION

Because of circumstances outlined in this report, the Council undertook to revise its internal organization, which now is to consist of committees dealing with public relations, professional relations, standards, scientific development workmen's compensation and rehabilitation The headquarters staff will be designed to carry forward the work of these committees as effectively as possible.

---

## Bureau of Health Education

Although the war ended on both the European and Asiatic fronts in 1945, the difficulties under which the work of the Bureau of Health Education was carried on were not relieved In some ways they were intensified.

### PERSONNEL

The most important change in Bureau personnel during the year was due to the death of Dr Paul A Teschner, Assistant Director Dr Teschner died on May 25 1945 after eight years and six months' service with the Association. His death was keenly felt because he was not only a competent and conscientious professional worker but also a warm, human personality

After a comprehensive search the Bureau procured the services of a new Assistant Director, Dr William W Bolton, who is well prepared to perform the duties of his position. Dr Bolton began his service with the Association on Oct. 16, 1945

During most of the year the Bureau had one or more vacancies in the stenographic force, but in general there was less turnover than in the preceding year

### CORRESPONDENCE

Correspondence with physicians and cooperating agencies increased from 3,825 to 4 545, question and answer letters from 6,598 to 7 955 Queries from museums and exhibits decreased from 1,259 to 1,129 The total increase was from 11,718 to 13,629

### BUREAU PUBLICATIONS

The Bureau reviewed eleven books for THE JOURNAL and nine for HYGEIA and prepared eighteen other contributions to THE JOURNAL and three to HYGEIA, including editorials, radio announcements and news items

The Bureau originated seventeen articles published in periodicals other than those of the American Medical Association The Director supervised the revision of medical items in the American People s Encyclopedia and miscellaneous items for Britannica Junior Consultation was furnished on an unpublished manuscript for Scott, Foresman and Company and for the Zurich Insurance Companies

### RADIO

The radio work of the Bureau falls into four principal classifications

1 The network program was continued into its twelfth consecutive year of dramatized broadcasts on a nationwide network of the National Broadcasting Company Under the general theme "Doctors at Work" the series title for 1945 was "Doctors Look Ahead." The first broadcast was made on January 6 Twenty-five broadcasts were made, and there was one cancellation, owing to the death of President Roosevelt.

2 The script library again shows a shrinkage both in number of available talks and in local usage. This library now offers 254 fifteen minute and 157 ten minute talks Eight county medical societies and auxiliaries, one state medical association, seven local health departments and eleven miscellaneous agencies used these scripts in 1945, borrowing 1,132 scripts There is no record of how many of these scripts were broadcast.

3 Electrical transcriptions continued to constitute a large proportion of the work of the Bureau in 1945 Starting with an experimental project over radio station WLS and continuing through 1944 the Bureau has continued to make and distribute electrical transcriptions Seeking variety in program structure in order to enhance listener appeal an attempt has been made to diversify the programs so that they now include interviews, round tables, dramatizations and musical programs with brief health hints As of the later months of 1945, distribution accounted for an average of between eighty and ninety local broadcasts weekly well distributed over the United States, with special activity in Arizona, Wisconsin, Texas and Pennsylvania as a result of active cooperation from the medical societies of those states As a general rule from 60 to 65 per cent of the stock of transcriptions is on loan and 35 per cent available for new borrowers This seems to be an adequate margin of reserve. Losses from breakage and failure to return recordings continues to be surprisingly small Loss of shipping containers is greater It is estimated that 2,921 local broadcasts were made from the Bureau s transcriptions in 1945, more than double the 1 052 made in 1944

During 1945 the following transcription series were made

A Guardians of Your Health in which thirty two authorities in public health were interviewed by Harriet Hester Each program was summarized by Dr W W Bauer

B Keep Cool Interviews of Dr W W Bauer by June Merrill, director of women s programs station WJJD

C Why Do You Worry? A dramatized series on mental hygiene under the general supervision of Dr Jules Masserman Department of Psychiatry University of Chicago with thirteen well known psychiatrists contributing the details

D More Life For You! In this series, begun in 1944 and finished and released in 1945 twenty two prominent physicians were interviewed on health problems of middle and advancing age

### MEETINGS AND CONFERENCES

The Director traveled 76 352 miles to attend meetings or address audiences in fourteen states Travel difficulties were greater than ever, with hotel room scarcity added to the difficulty of procuring railroad transportation. Audiences numbered sixty nine totaling 17 185 persons The Director participated in fourteen conferences and committee meetings

### HYGEIA CLIPPING COLLECTIONS

The loan of HYGEIA clipping collections to local physicians addressing lay audiences reached the lowest point since the introduction of this service Only fifty-eight collections were lent, but these went to doctors in twenty-three states The principal topics called for were cancer adult mental hygiene and sex education

### HEALTH PUBLICATIONS

Fourteen new titles were added and seven discontinued Distribution of Bureau publications through the Order Department was 161 580, and the Bureau disposed of 104 480 reprints direct to quantity purchasers, making a total of 266 060 as compared with 217,879 in 1944

### COOPERATIVE RELATIONSHIPS

Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association The 1945 meeting of the joint committee was held for the second successive year at American Medical Association headquarters The committee reelected Dr Thurman B Rice as chairman, Dr Anne Schley Duggan vice chairman and Dr W W Bauer secretary Dr George M Lyon attended the meeting for the first time since entrance in the U S Navy, and Dr Louis R Burnett was a new member representing the National Education Association, otherwise the personnel of the committee remained unchanged

The principal items dealt with by the committee were (1) conservation of hearing in school children, (2) health implications of the physical education program, (3) ration point problems in school lunch projects, (4) comment on the use of tampons as menstrual guards, (5) sanitary requirements for school lunches, (6) principles governing school lunches and (7) health appraisal procedures during shortages of school physicians or nurses

Mimeographed press releases of these items, except the ration point statement, were mailed to one hundred and thirty-five educational journals and medical journals, and there are indications that many have published them either in whole or in part.

U S Children's Bureau Advisory Committee The committee held one meeting in 1945 The proceedings of that meeting were summarized in a report issued by the Children s Bureau and published in brief in THE JOURNAL, Jan 26, 1946. The meeting was not devoted to the normal maternal and child health programs for which the Advisory Committee was appointed or even to the Emergency Maternity and Infancy Care Program but to the pending legislation known as the Pepper bill, which proposes to place under the Children's Bureau a comprehensive program of medical care for all pregnant women and for children up to the age of 21 Significant in this meeting was opposition to administration of this program by the Children s Bureau, entirely aside from medical objections to the program itself Opposed to Children's Bureau administration were a number of representatives of state health departments as well as representatives of the medical profession. The Advisory Committee, however, is so constituted that there is always present a majority of members who can be depended on to support policies of the Children's Bureau At this meeting, for the first time, opportunity was given to include a minority report in the proceedings

National Committee for Boys and Girls Club Work and National Congress of Parents and Teachers There is nothing of special interest to report with relation to these committees

American Public Health Association The annual meeting was canceled, but the committees continued to function The Committee on Professional Education, of which the Director of the Bureau of Health Education is a member, met twice with particular reference to accreditation of schools of public health. The Director submitted the proposals to Dr Victor Johnson, Secretary of the Council on Medical Education and Hospitals and received his guidance and advice

National Conference for Cooperation in School Health Education Committees of this agency were active during the year, producing reports on school health policies, which should prove of great value The conference revised and published the highly successful 'Suggested School Health Policies" report previously sponsored by other agencies This report embodies policies which are acceptable to the profession. A report dealing with the function of school administrators, school physicians and school nurses is in preparation, and its publication in tentative form was authorized The Director attended one meeting of a revision committee for Suggested School Health Policies and one meeting of the conference. The new Assistant Director also attended the latter meeting

U S Government Agencies The Bureau continues to cooperate largely by correspondence, with government agencies Materials or information have been furnished during 1945 to

War Department Army Service Forces Lawson General Hospital Army Medical Library, ASF Library Branch, Edgewood Arsenal Office of the Surgeon General Second Service Command Regional Hospital, Eastern Signal Corps Training Center Office of Secretary of War Civilian Medical Division Army Air Forces Atlantic Overseas Air Technical Service Command Convalescent Hospital Florida
Department of Labor Children s Bureau.
Federal Trade Commission
Federal Security Agency Joint Committee on Physical Fitness U S Office of Education U S Public Health Service
Department of State
Patent Office
War Food Administration Office of Labor
Department of the Interior Office of Indian Affairs War Relocation Authority
Department of Agriculture Food and Drug Administration
Government Printing Office
Office of Inter American Affairs.
Navy Department Naval Hospital Santa Cruz Calif Surgeon General Naval Hospital Philadelphia Bureau of Medicine and Surgery, Office of Naval Officer Procurement
Office of War Information Library Servicing Division Science and Medicine Unit Foreign Information Research Division Bureau of Overseas Publications
War Manpower Commission

### MISCELLANEOUS

Guides trained by the Bureau made many tours of the building with guests

The Bureau continued to compile information about attacks on and defense of medical research and to distribute it in

response to requests A representative was sent to the "school" operated by the antivivisectionists in Philadelphia

The Bureau continued to furnish questions and answers to HYGEIA for publication and to check all galley proofs and page proofs for medical accuracy

The Bureau continued its cooperation with the Woman's Auxiliary

Postgraduate students from the United States Public Health Service were unable to come to the Association because of travel difficulties Instead, the Director spent a day in conference at each of the three principal universities where these students are working, namely the University of North Carolina, Yale University and the University of Michigan

APPRECIATION

Appreciation is expressed to the Board of Trustees, the General Manager, the Editor and the heads of other departments in making possible the work of the Bureau This bureau is a transmitting rather than an originating department and therefore relies heavily on the friendly cooperation of others

## Bureau of Investigation

In December 1945 Dr Paul C Barton, resigned as Director of the Bureau of Investigation after a three year leave of absence when he was connected with the office of the Procurement and Assignment Service in Washington. The Bureau meantime carried on its part of the Association's educational activities by continuing to collect information on "patent medicines" and quackery in general and to distribute such material to the medical profession, government agencies, federal, state and municipal authorities, scientific societies, civic and welfare organizations Better Business Bureaus Red Cross home nursing classes, clubs radio stations, newspapers and magazines, research workers teachers students and the public in general Mr Bliss O Halling assistant in the Bureau of Investigation for many years, was made Acting Director on the resignation of Dr Barton

INQUIRIES

The inquiries from various sources again showed an increase over the previous year Particularly numerous were those coming from Better Business Bureaus federal agencies newspapers, magazines, trade journals, church, lodge and farm publications and especially student nurses and students of high school and college classes who had been assigned projects in consumer problems The latter inquiries gave evidence that the Bureau is increasingly helping the student generation to understand the "patent medicine' situation All these inquirers have sought light on a wide variety of nostrums quacks and medical fads and schemes This information has included statistical data and bibliographies.

The leading Chicago newspapers, as well as general magazines and farm journals elsewhere, have frequently consulted the Bureau regarding the numerous medical advertisements submitted to them and detailed information on these has been furnished

Constant service has been given to the Better Business Bureaus over the country which seek light on the many nostrums and medical schemes that come to their attention

County and state medical societies and health and licensing boards have continued to call on the Bureau for information about its investigations of medical irregularities that constitute problems in their sections These societies, as well as the Better Business Bureaus, also have supplied the Bureau with data valuable in conducting investigations

Though there was a lessening of inquiries during the early years of the war, it is noted that the years 1944 and 1945 showed an increase. The number of letters answered in 1945 was 3,071, representing 4,525 subjects This means that many inquiries included more than one subject, particularly in the case of letters from students, who learn of the Bureau's services through their textbooks

Inquiries about the Kaadt Diabetes Cure, advertised by an 'institute near Fort Wayne, Ind, led the list in 1945 and 1944 whereas it was third in 1943 The general subject of 'patent medicines' again was second in 1945 as in the previous year

THE JOURNAL

In 1945 the Bureau contributed eighteen and one half columns to THE JOURNAL, representing fifteen articles These included presentations of abstracts of thirty six Notices of Judgment issued by the Food and Drug Administration, one Cease and Desist Order from the Federal Trade Commission, and twelve fraud orders from the Post Office Department. The Bureau prepared much more material for THE JOURNAL which has not yet been published

PUBLICATIONS

In 1945, 650 pamphlets issued by the Bureau and 152 copies of the book "Nostrums and Quackery and Pseudo-Medicine' were distributed, both of these figures representing an increase of about 50 per cent over 1944

OTHER SERVICES

The Bureau's lantern slides and film strip dealing with the nostrum evil and quackery were lent to physicians and educators over the country

Considerable discussion time, correspondence and other forms of assistance were given by the Bureau in 1945 to the Post Office Department, the Federal Bureau of Investigation, the Food and Drug Administration and the Federal Trade Commission The Bureau has evidence that its activity in bringing violations of law to the attention of federal agencies has resulted in debarring certain medical schemes from the mails by the Post Office Department, in prosecutions brought by the Food and Drug Administration against violators of the Food, Drug and Cosmetic Act of 1938 and in actions by the Federal Trade Commission against persons and concerns who made unwarranted claims in medical advertising

## Bureau of Legal Medicine and Legislation

Mr George E. Hall Jr, after serving twenty-six months in the military service, has returned to his position with the Bureau

SYMPOSIUM ON MEDICOLEGAL PROBLEMS

In reports for previous years the Bureau has commented on the development of discussions on medicolegal subjects jointly sponsored by physicians and lawyers as affording an excellent medium for the exploration of problems of mutual interest and concern to members of these two professions During the fall of 1945 the Institute of Medicine of Chicago and the Chicago Bar Association jointly arranged a Symposium on Medicolegal Problems consisting of six programs at weekly intervals The meetings were held at the headquarters of the bar association on Tuesday evenings During the course of the meetings the medical and legal aspects of the following subjects were discussed (1) The Medical Witness in Court Expert Testimony (the Chicago Medical Society collaborating) (2) Artificial Insemination Medicolegal Implications (3) The Practice of Pathology and Its Medicolegal Problems (the Chicago Pathological Society collaborating), (4) Operations to Produce Sterility Medicolegal Implications, (5) Trauma and Tumors in Industrial Medicine, and (6) Scientific Tests in Evidence Blood Grouping Tests in Disputed Paternity Cases, Chemical Tests for Intoxication

The Director of the Bureau, who is a member of the Committee on Local Medicolegal Problems of the institute collaborated in arranging these discussions, which were well attended by physicians and lawyers To repeat a comment contained in the report of the Bureau submitted to the House of Delegates in 1944 "Periodic programs of this type, attended by members of the bar and by physicians, will result in a much needed diffusion of information in this important field'

FEDERAL LEGISLATION

The first session of the Seventy-Ninth Congress adjourned Dec 21, 1945 The second session convened on Jan 14, 1946 and is in progress at the time this report is being prepared Since the report submitted to the House of Delegates in December of last year there has been a noticeable increase

in the activities in Congress in relation to proposals of medical interest, and reference to some of these activities follows

*The G I Bill of Rights*—The Servicemen's Readjustment Act of 1944, commonly referred to as the G I Bill of Rights, was enacted to expedite the reintegration of veterans of World War II into civilian life Following its enactment a number of questions arose concerning the application of the provisions of title II of the act relating to education, to medical officers Some of these questions were given consideration by the Committee on Postwar Medical Service, and when amendatory legislation was introduced in Congress to effect other changes in the law a statement was filed with the Senate Committee on Finance suggesting amendments to title II to clarify the uncertainties that obtained Some of these amendments were incorporated in the legislation that was approved by the President on Dec 28 1945 as Public Law 268 The Committee on Postwar Medical Service recommended

1 The removal of the requirement, in case of a veteran over 25 years old at the time of entry into service, that he show that his education was interrupted by service in order to qualify for educational benefits beyond the one year period Public Law 268 eliminates this requirement. The interruption of education by service is no longer an element that enters into the picture.

2 That the government pay, in the case of short refresher courses, the tuition charged by the institution, subject to the $500 limitation, and not prorate the tuition fee as had been considered necessary under the original law For example, if a returned medical officer pursued such a course for eight weeks at a cost of $250, under the original law the government would pay not the $250 but the proportion of $500 that eight weeks bore to an ordinary school year, say of thirty-two weeks, or would pay one fourth of $500, and the medical officer was required to pay the remainder Public Law 268 provides that, in the example used, the government will pay the entire $250 and there will be charged against the medical officer's period of eligibility the proportion of an ordinary school year which the cost of the short course bears to $500

3 That the educational benefits be made available to veterans during the terminal leave Public Law 268 provides that the benefits of titles II and III, relating to education and to loans, are available to veterans on terminal leave or while hospitalized pending final discharge, except that subsistence allowances are not payable during such period This particular amendment was made effective as of June 22, 1944

4 That accredited hospitals be specifically recognized in the law as being within the definition of an educational institution and as such entitled to tuition payments on behalf of former medical officers serving internships or residencies and that the interns or residents be declared to be students and as such entitled to subsistence allowances These particular recommendations were not enacted into law by the Congress, primarily because the questions involved were settled administratively Under the administrative ruling, hospitals are considered educational institutions and will be entitled to tuition fees, former medical officers serving residencies and internships will be entitled to subsistence allowances of $65 a month if without dependents and $90 a month if they have dependents

Another change in the law not specifically recommended by the Committee on Postwar Medical Service permits the veteran to elect to foreshorten his period of eligibility by having paid for him the cost of an educational course in excess of $500 for an ordinary school year If he does so there will be charged against his period of eligibility the proportion of an ordinary school year which such excess bears to $500

*Department of Medicine and Surgery in Veterans Administration*—On Jan 3, 1946 the President approved, as Public Law 293, a bill establishing a Department of Medicine and Surgery in the Veterans Administration The provisions of this law were analyzed by the Bureau and that analysis published in THE JOURNAL for January 5 The objective of this law is to provide a better quality of medical care for veterans by the offering of greater financial inducements to physicians to associate themselves with the Veterans Administration, by providing for the selection and retention of medical officers without regard to civil service requirements, by affording opportunities for medical officers to qualify as specialists with added compensation, by affording opportunities for postgraduate education and by establishing residencies in veterans' hospitals The new law contains one paradoxical provision in that it authorizes the employment of osteopaths in the Medical Service of the Veterans Administration.

*Industrial Health Under Jurisdiction of Labor Department*—The House of Delegates, at its Chicago 1945 meeting, adopted resolutions in opposition to S 1271 and H R 525, companion bills to provide for cooperation with the state agencies administering labor laws in establishing and maintaining safe and proper working conditions in industry and in the preparation, promulgation and enforcement of regulations to control industrial health hazards The basis of the opposition was that the legislation would permit labor departments "to undertake industrial hygiene activities now being done by federal and state public health agencies" The House expressed the view that any expansion of tax supported industrial hygiene services should be developed in a manner to provide immediate or ultimate responsibility for direction of the program by the state departments of health in cooperation with the United States Public Health Service In compliance with the directive of the House, copies of these resolutions were forwarded to each member of the House Committee on Labor and the Senate Committee on Education and Labor and in addition to each physician member of Congress

The House bill, H R 525, is still pending before the House with a favorable committee report S 1271, in a revised form, has been favorably reported by the Senate Committee on Education and Labor

*Federal Hospital Building Program*—The Hill-Burton hospital construction bill, S 191, was passed by the Senate, December 11, in substantially the same form in which it was reported by the Senate Committee on Education and Labor, despite the efforts of Senators Wagner and Murray to induce the Senate to amend the bill The amendments proposed by these two Senators would have stripped the National Hospital Council of all powers other than solely advisory, would have conferred on the Surgeon General jurisdiction over the maintenance and operation of hospitals to be constructed under the legislation and would have in other ways increased the federal regulatory powers over hospitals

In the House of Representatives S 191 was referred to the Committee on Interstate and Foreign Commerce and hearings were scheduled by a subcommittee, of which Representative Priest of Tennessee is chairman Representatives of the Association appeared before the subcommittee on March 7 in support of the bill At the time this report is being prepared the House Committee has taken no further action on the legislation

Following the passage of S 191 by the Senate, Representative Priest introduced a revised version of the bill, H R. 5628, which follows closely the provisions of S 191 with the exception that it embodies the amendments that Senator Murray and Senator Wagner sponsored in the Senate. This bill is pending in the House Committee on Interstate and Foreign Commerce

Another bill has been introduced in the House, H R 5014, sponsored by Representative Lyndon B Johnson, Texas, which suggests a somewhat different approach to the problem of providing needed hospital facilities It is pending in the House Committee on Banking and Currency and proposes to make available through the Reconstruction Finance Corporation an amount not in excess of $500,000 000 to aid municipalities and nonprofit organizations to provide adequate hospitals and public health centers Grants would be made for the cost of planning, constructing, improving or enlarging any hospital or public health center in an amount not to exceed 40 per cent of the cost thereof Loans would be made for a term not to exceed forty years and at a rate of interest not to exceed 2 per cent per annum for so much of the amount necessary for carrying out a project as is in excess of the amount made available as a grant or the amount made available from nonfederal sources

An applicant for a loan or grant under this bill would be required to submit proof satisfactory to the Reconstruction Finance Corporation that, among other things, the project has been approved by the highest public health agency of the state and that the services to be furnished by the hospital or health center will be of a satisfactory quality in accordance with standards prescribed by the state. Proof also will be required that the hospital or public health center is necessary to supply adequate hospital and health services in the particular region. A provision in the bill would make available not more than 40 per cent of the capacity of the facilities of the hospital or public health center, at a reasonable cost, for the supplying of medical and hospital treatment for veterans, if requested by the Administrator of Veterans' Affairs.

No provision is contained in the bill for an overall state survey to determine the need for additional facilities or to set up a pattern for the proper distribution of facilities that are determined to be needed.

*Aid to the Physically Handicapped*.—A special committee of the House Committee on Labor, created to make a study of the extent and character of aid given to the physically handicapped—the Kelley Subcommittee on Aid to Physically Handicapped—has published the results of its hearings so far in twenty parts. In addition to the parts mentioned in the last report of the Bureau, separate parts have been published dealing with monopolies and advertising affecting the welfare of the physically handicapped, epilepsy, accident prevention, cancer, tuberculosis, amputees, international activities relating to the physically handicapped, aid rendered by the Library of Congress to the physically handicapped, narcotics, employment of the physically handicapped and spastics. Currently the subcommittee is holding hearings on the physically handicapped in rural areas.

Under date of Jan. 22, 1946 Representative Sparkman, Alabama, introduced H. R. 5206, a bill to establish a Federal Commission for the Physically Handicapped, to define its duties and for other purposes. This bill has been referred to the Kelley subcommittee for further consideration and hearings by the subcommittee began on the bill April 30. It proposes a Federal Commission for the Physically Handicapped as an agency of the United States Department of Labor and would transfer to that commission the Office of Vocational Rehabilitation from the Federal Security Agency. A similar transfer would be effected of all Special Units for Handicapped Persons now operating in the War Manpower Commission, United States Employment Service.

The commission will be authorized (1) to provide for medical, surgical and therapeutic treatments the application of prosthetic or orthopedic appliances, hearing aids, eyeglasses and such other devices as may, by their use, enable physically handicapped persons to earn their living wholly or in part, (2) to provide for the education and training of physically handicapped citizens, and (3) to provide, whenever possible, for their suitable employment through proper placement.

Separate divisions will be established in the commission for special work with the deaf, the hard of hearing, cardiac patients, the tuberculous, the poliomyelitic, the epileptic, amputees and other large or distinct groups of the physically handicapped. The commission will be charged with the duty of collecting and publicizing statistics pertaining to the physically handicapped, of ascertaining fields of employment available to the physically handicapped, of acquainting employers in private industry with the special capabilities of the physically handicapped and encouraging their employment, and of cooperating with public and private agencies, organizations and individuals in the medical and vocational rehabilitation and placement of physically handicapped citizens.

The bill would authorize the commission to establish a register of qualified disabled persons who, on account of congenital deformity or of injury or disease are substantially handicapped in obtaining or retaining employment and would impose a duty on every employer, in filling vacancies to take into employment registrants to the number ascertained to be his quota.

A revolving fund of $5 000,000 would be established from which the commission would make personal catastrophe loans to individuals to aid their return to useful and gainful employment. Other sections would provide a pension of $30 a month to persons who are not feasible for rehabilitation and who are totally and permanently disabled and without means of livelihood or support and would authorize an appropriation of $10,000 000 for the first year and $5 000,000 for each of the succeeding five years to establish and maintain special industries for physically handicapped citizens.

An appropriation of $2 000 000 for the first year and $1,000,000 annually thereafter would be authorized for grants to local, nonprofit groups organized with the objective of providing a means of teaching and training physically handicapped persons who are confined to their homes or beds. The utilization of ten war plants as training schools for physically handicapped citizens and for teacher training is contemplated. An appropriation of $2,000 000 is to be authorized for use by the Public Health Service in research with respect to the cause and cure of deafness, and the bill indicates that other titles will be added covering grants to the Public Health Service for clinics for the treatment of poliomyelitis and epilepsy.

The pendency of this legislation was brought to the attention of the Association by Representative Kelley, who asked for comments on the bill. This communication was given preliminary consideration by the Executive Committee of the Board of Trustees, which decided to defer comments on it until hearings on the legislation appeared imminent. It was thought desirable too that the reactions of the Council on Industrial Health be obtained to aid the Board of Trustees in reaching a determination as to what position should be taken by the Association with respect to the bill. The Council did discuss the provisions of this legislation at its March meeting following which a statement was formulated by the Council, reading as follows:

> It is the conviction of the Council on Industrial Health that physical restoration is the fundamental principle in the rehabilitation of the crippled and disabled. This is a principle well recognized not only by the medical profession but by industry and other agencies. State rehabilitation agencies have also acknowledged this principle. During the past two years the federal government through its Office of Vocational Rehabilitation has acknowledged it by establishing physical restoration services as part of the federal state plan for the rehabilitation of the physically handicapped persons in this country.
>
> Physical restoration services can be adequately carried out only under medical direction and supervision. The correction of surgical defects, the provision of prosthetic appliances and the administration of other medical, surgical and physical measures require the professional control by competent and trained physicians in order to secure the maximum benefit of these services to the handicapped. The Office of Vocational Rehabilitation by virtue of the Barden-LaFollette amendment is now carrying out such a program with medical participation of the U. S. Public Health Service. It is too soon to evaluate the effectiveness of this program but an opportunity to study its results should be fostered in order to determine its effectiveness and necessity for modification if indicated.
>
> For these reasons the Council on Industrial Health is opposed to the provisions of H. R. 5206 transferring the control and operation of this service to a new commission.

Following receipt of a copy of the foregoing statement authorization was obtained from the Board of Trustees to proceed with arrangements for representation on behalf of the Association at the hearings on the bill. That representation was made on May 3.

*Wagner-Murray-Dingell Bill—Social Security Legislation*.—Hearings on S. 1606 before the Senate Committee on Education and Labor began on April 2 and are continuing at the present time. Arrangements have been made to secure a daily transcript of the testimony, which will be abstracted and printed in THE JOURNAL. In this manner the profession will be fully and promptly informed of developments in connection with the progress of this bill.

Senator Pepper, in testifying in support of S. 1606 on April 2, referred to a bill that he has introduced, together with nine other members of the Senate Committee on Education and Labor, S. 1318 proposing to enact "The Maternal and Child Welfare Act of 1945." He expressed the view that S. 1606 should be amended to incorporate some of the provisions contained in S. 1318 and submitted eighteen amendments to S. 1606 to accomplish the objective he had in mind as follows:

1. Page 13, line 24. Insert after the word "children" the words "(under 18 years of age)."

2 Page 14, line 1 Insert after the word "services' the following 'in the community, by providing supplementary personal health services needed by maternity cases or children entitled to personal health service benefits under title II of this act, and any personal health services needed by maternity cases or children not entitled to such benefits"

3 Page 14, line 3 Insert after the word "demonstrations" the following "research"

4 Page 14, delete lines 5 and 6 and substitute the following to be appropriated for the fiscal year ending June 30, 1947, the sum of $50,000,000, and for each fiscal year thereafter a sum sufficient to carry"

5 Page 17, delete lines 3 and 4 and substitute the following 'authorized to be appropriated for the fiscal year ending June 30, 1947, the sum of $25,000,000, and for each fiscal year thereafter a sum sufficient"

6 Page 14, line 18 Insert at end of line "Provided that, to the extent feasible, the plan shall be submitted by the same state health agency as that utilized by the Surgeon General in furnishing services under title II, sec 203(e)"

7 Page 14, line 17 Delete the word "the" before the word 'state' and substitute the word "a"

8 Page 38, line 4 Change period to comma and insert provided that, the Surgeon General shall, to the extent feasible, utilize the same state health agency as that submitting, and having approved, plans under title I, part B, sec 121"

9 Page 16, line 1 Insert the word "community" before the word "services"

10 Page 16, line 4 Delete the word "and" at the end of the line and add subsection (9), as follows "(9) provide that as personal health services are furnished under the plan they shall be available to all maternity cases and to all children in the state or locality who are not entitled to such services as benefits under title II of this act and who elect to receive such services under the plan."

11 Page 16 After new subsection (9) insert new subsection (10) to read as follows "(10) provide for granting to any mother or person acting in behalf of a child whose claim with respect to care or services under the plan is denied, or to any physician or other person, organization or institution participating or desiring to participate in furnishing services or facilities under the plan an opportunity for a fair hearing before the state health agency"

12 Page 16 line 5 Change the numbering of old subsection (9) to subsection (11)

13 Page 24, line 3 Insert after the word "members" the following "and, as necessary, technical advisory committees"

14 Page 25, after line 2, insert the following "(d) Under a state plan approved by the chief of the Children's Bureau with respect to sec. 121, personal health services may be provided through (1) payments to the persons or institutions furnishing such care, or (2) direct provision of such care, or (3) through arrangements by the state agency with the Surgeon General of the Public Health Service for services furnished under title II of this act, on the basis of equitable payments to the Personal Health Services Account established under title II of this act, or through any combination or modification thereof"

15 Page 25, line 3, change "(d)" to "(e)"

16 Page 37, line 3, insert the following at the end of the line "including payments to state agencies for personal health services given in accordance with arrangements made by the Surgeon General with such state agencies under plans approved under title I"

17 Page 78, line 7, insert new sec. 301 as follows "Sec 301 Whenever funds are paid to a single state agency under two or more parts of title I, or under one or more of such parts and also under title II, the state agency may commingle such funds and account therefor by such accounting, statistical, sampling or other methods as may be found by the federal administrative officer or officers authorizing such payments to the state agency to afford reasonable assurance that such funds are expended for the purposes of the respective parts or titles of this act"

18 Page 78, line 7 Change numbering of "sec. 301" to "sec 302"

In explaining these proposed amendments, Senator Pepper stated that they would provide (1) that the Children's Bureau and the state health agencies, through the provisions of title I, part B, will be responsible for providing and maintaining services and facilities to promote the health of mothers and children under 18 years of age, including adequate maternal and child health services in the community, (2) that the cost of personal health services benefits for insured persons and their dependents, including maternity care and medical care of dependent children, will be met through the provisions of title II (within the limitations of those benefits) administered by the Surgeon General of the United States Public Health Service (3) that the cost of maternity care and medical care of children under 18 years of age in noninsured families that elect to participate, and also the cost of supplementary personal health services for insured maternity patients and children, will be met through title I, part B, administered by the Children's Bureau and state health agencies (4) that, to the extent feasible, the Surgeon General will utilize, and the chief of the Children's Bureau will make grants to, the same state health agency, (5) that the state health agency may provide personal health services under its approved maternal and child health plan through payments to persons or institutions furnishing care, through direct provision of such care, or through arrangements with the Surgeon General to utilize the insurance system, and reciprocally, the Surgeon General may utilize the state agencies and make payments to them for personal health services provided by such agencies for insured persons, (6) specific sums for the initial year of the maternal and child health services beginning July 1, 1946 in the amount of $50,000,000, for crippled and otherwise physically handicapped children, $25,000,000 and thereafter the authorizations are for sums sufficient to carry out the purposes of the programs, (7) for the appointment of technical advisory committees to advise the Children's Bureau in its administration of the program, (8) opportunity for fair hearing to any mother or person acting in behalf of a child or to any physician or agency participating or desiring to participate under a state plan, and (9) that a state agency receiving funds under two or more parts or titles of this act may pool such funds, provided the state accounts for the funds to the federal administrative agencies in a way that affords reasonable assurance that the funds are expended for the purposes of the respective parts or titles of the act

Senator Pepper indicated that if action on S 1606 could not be obtained he would press for committee consideration of S 1318

Senator Murray has requested representatives of the Association to appear to testify on S 1606 on April 17 and plans have been completed to make that presentation

Under date of March 18 Senator Murray communicated with professional organizations in the field of health and medical care requesting that they join in a cooperative attempt to stake out specific health goals for the coming five years In connection with this communication he submitted a number of questions on Health Goals for America's Future and asked the organizations with which he corresponded to submit answers to these questions Such a communication was sent to the American Medical Association and is receiving attention Here are the questions that Senator Murray submitted

I Over the next five years, what should be our goals on the nation's health?

What should our aims be with respect to increasing the average expectation of life?

What should be our aims in reducing (a) the infant mortality rate? (b) the maternal mortality rate? (c) the death rate at various ages?

What should our aims be in preventing or controlling (a) heart disease, (b) cerebral paralysis, (c) cancer, (d) tuberculosis, (e) diabetes, (f) pneumonia, (g) poliomyelitis, (h) rheumatism and arthritis, (i) rheumatic fever, (j) venereal disease, (k) malaria, (l) dental defects, (m) defects of vision, (n) defects of hearing and (o) mental ill health?

II Over the next five years, what should be our goals on health personnel, facilities and education?

What should be our aims with respect to the number and distribution of qualified (*a*) doctors, (*b*) dentists and (*c*) nurses?

What should be our aims with respect to the number and distribution of adequate (*a*) hospitals and hospital beds, (*b*) health clinics and health centers and (*c*) sanitation facilities?

What should our aims be with respect to (*a*) medical research, (*b*) professional medical education and (*c*) health education for the public?

Numerous bills are still pending proposing to extend the coverage of the Social Security Act. The House Committee on Ways and Means has scheduled a series of hearings in an effort to determine what changes are necessary and early in 1945 appointed a Social Security Technical Staff which has been working on the subject for many months. On January 17 this Technical Staff submitted a 742 page report to the committee entitled "Issues in Social Security." The report seems to be an objective presentation of the more important aspects of (1) old age and survivors' insurance, including extended disability (2) old age assistance, aid to dependent children, aid to the blind and general assistance, and (3) unemployment compensation. It suggests that social security in its broader sense includes provisions for programs outside the area covered by the study of the Technical Staff, such as public health, vocational rehabilitation, maternal and child health services and programs of general medical care, hospitalization, cash sickness benefits and cash maternity benefits. These aspects of social security are not explored in this initial report, but recognition is given to their importance.

Whether or not the House Committee on Ways and Means will give any serious consideration to the initial version of the 1945 edition of the Wagner-Murray-Dingell bill, H. R. 3293, which is still pending before the committee, is problematic.

*The Taft-Smith-Ball National Health Bill.*—On May 3 of this year Senator Taft, Ohio, for himself and Senator Smith, New Jersey, and Senator Ball, Minnesota, introduced S. 2143, a bill to "coordinate the health functions of the Federal Government in a single agency, to amend the Public Health Service Act for the following purposes: To expand the activities of the Public Health Service, to promote and encourage medical and dental research in the National Institute of Health and through grants-in-aid to the States, to construct in the National Institute of Health a dental research institute and a neuropsychiatric institute and for other purposes." The bill was referred to the Senate Committee on Education and Labor, before which is pending the current version of the Wagner-Murray-Dingell bill, S. 1606.

The Taft-Smith-Ball bill contains three titles. Title I would create a National Health Agency to which would be transferred designated health activities now carried on by the federal government. Title II proposes amendments to the Public Health Service Act to authorize appropriations for allotments to the states to enable them to provide for general medical service for families and individuals with low income and for dental health services for school children and families and individuals with low income. Additional appropriations would be made available for general medical health research for neuropsychiatric research and for dental research. The third title proposes amendments to existing laws that would be necessary if the bill is enacted and also would authorize payroll deductions from the salaries of government employees to facilitate their participation in nonprofit medical, hospital and dental care plans.

To enable the states to provide general health, hospital and medical services for families and individuals with low income, an appropriation of $200 000 000 for each of five fiscal years would be authorized for making payments to the states that have submitted and had approved by the Surgeon General plans for providing these services. The bill specifies certain requirements that a state plan must meet in order to be approved but specifically denies to the Surgeon General any right to disapprove a plan because he may disapprove of the *methods* suggested by the state to accomplish the objective of the legislation, namely, to assure within a five year period hospital, surgical and medical services in hospitals, clinics or medical or similar institutions for all persons having insufficient income to pay the whole cost of such services. A similar but smaller appropriation will be authorized to enable the states to provide dental services for the needy.

Both Senator Taft and Senator Smith, on the day the bill was introduced, emphasized their view that the philosophy back of the bill was entirely foreign to the philosophy inherent in the Wagner-Murray-Dingell bill in that S. 2143 puts the responsibility directly up to the states to determine their own health programs with aid from the federal government and limits application of the program to persons in the low income groups.

A detailed analysis of this bill is being prepared by the Bureau and will be published in THE JOURNAL.

*Prevention of Disease.*—Companion bills have been introduced to request the President to undertake to mobilize at some convenient place in the United States an adequate number of the world's outstanding experts and coordinate and utilize their services in a "supreme endeavor to discover means of curing and preventing cancer," S. 1875, introduced by Senator Pepper, Florida, and pending in the Senate Committee on Foreign Relations, and H. R. 4502, introduced by Representative Neely, West Virginia, and pending in the House Committee on Foreign Affairs. This legislation would authorize an appropriation of $100,000,000 to enable the President to carry out its provisions.

Senator Langer, North Dakota, has introduced S. 1883, S. 1888 and S. 1891, proposing, respectively, to authorize an appropriation of $3,750 000,000 for each of the following purposes: (1) to enable the Surgeon General of the Public Health Service to carry out programs for the prevention, diagnosis and treatment of cancer, (2) to become available for disbursement to Sister Elizabeth Kenny for use in establishing and maintaining facilities for the hospitalization and treatment of persons suffering from infantile paralysis and for investigation and research with respect to the origin and means of control of that disease, and (3) to enable the Surgeon General of the Public Health Service to provide the means for securing a specimen of urine of each person in the United States and the examination and analysis of such specimen, the findings to be made available to the person furnishing such specimen and if the examination and analysis disclose the existence of a disease, a report to be made to the health authorities of the municipality or county wherein the person resides. All these bills are pending in the Senate Committee on Education and Labor.

A House Joint Resolution, H. J. Res. 324, introduced by Representative Norrell, Arkansas, proposes to request the President to issue a proclamation designating the 28th day of October of each year as National Arthritis Day. It is pending in the House Committee on the Judiciary.

Another bill, H. R. 4279, introduced by Representative Lane, Massachusetts, would authorize an appropriation of $50 000 for use by the United States Public Health Service in conducting research with respect to the cause and cure of hay fever. The bill is pending in the House Committee on Interstate and Foreign Commerce.

H. R. 5715, introduced by Representative Stevenson, Wisconsin, proposes to establish a National Medical Research Foundation to initiate, conduct and support scientific research with respect to the cause and cure of cancer, poliomyelitis, rheumatic fever, Bright's disease, hay fever, asthma, arthritis, leukemia, encephalitis, arteriosclerosis, aplastic anemia and rheumatic heart disease. The powers of the foundation will be exercised by a governing board of three members, consisting of the Surgeon General of the United States Public Health Service, the President of the American Medical Association and the president of the American Cancer Society. To enable the foundation to carry out its powers there will be authorized to be appropriated if the legislation passes, the sum of $100 000 000 to remain available until expended.

*Optometry and Podiatry Corps in the Medical Department of the United States Army.*—The House of Representatives on Sept. 18, 1945 passed H. R. 3755, a bill to establish an Optometry Corps in the Medical Department of the United States Army. The Senate Committee on Military Affairs on

Feb. 21, 1946 reported this bill to the Senate with the recommendation that it pass. It is now pending before the Senate.

Representative Traynor, Delaware, proposes by H. R. 5761 to establish a Chiropody Corps in the Medical Department of the Army. It is pending in the House Committee on Military Affairs.

*National Mental Health Act.*—A bill introduced by Representative Priest, Tennessee, H. R. 4512, to enact a National Mental Health Act, was passed by the House of Representatives March 15, 1946. It proposes an appropriation of $4,500,000 for the erection and equipment, for the use of the Public Health Service in carrying out the provisions of the legislation, of suitable and adequate hospital buildings and facilities, to be known as the National Institute of Mental Health. It is contemplated that these facilities will be constructed in or near the District of Columbia. The bill would provide for the admission and treatment at the National Institue of Mental Health, for purposes of study, of voluntary patients and patients of St. Elizabeths Hospital transferred from the hospital pursuant to arrangements made between the Surgeon General and the superintendent of the hospital, subject to approval of the administrator of the Federal Security Agency.

An annual appropriation of $10,000,000 would be made available for use by the Public Health Service in carrying out the purposes of the legislation including the making of grants-in-aid to universities, hospitals, laboratories and other public or private institutions, and to individuals for such research projects as are recommended by the National Advisory Mental Health Council.

A bill with a similar objective is pending in the Senate Committee on Education and Labor, S. 1160, introduced by Senator Pepper, Florida, for himself and Senator Thomas, Utah, Senator Tunnell, Delaware, Senator Hill, Alabama, Senator Murray, Montana, Senator La Follette, Wisconsin, and Senator Aiken, Vermont. Senate hearings have been concluded on this legislation, and it is anticipated that committee action will be forthcoming in the near future.

*Health of Children.*—Senator Morse, Oregon, has introduced S. J. Res. 137 to authorize the Secretary of Labor to make certain studies of the health of school children. It is pending in the Senate Committee on Education and Labor. This bill would authorize the Secretary of Labor, acting through the Children's Bureau and in cooperation with federal, state and local agencies and qualified institutions of higher education, (1) to make studies of the health and physical status of children of school ages, (2) to make studies of the facilities and services offered by schools for the correction of physical defects of children of school ages and (3) to recommend the use of, and to demonstrate in representative urban and rural areas methods of conducting school health examinations and providing school health services. This legislation suggests a three year program and contemplates an appropriation of $100,000 for the first year and $450,000 for each of the succeeding fiscal years.

A bill introduced by Representative Luce, Connecticut, H. R. 5960, proposes to establish a Department of Children's Welfare. It is pending in the House Committee on Expenditures in the Executive Departments. The new department will have jurisdiction, it is proposed, over the activities of the government relating to the health, educational opportunity and welfare of children in the United States. The functions, powers and duties heretofore exercised by the Secretary of Labor and the chief of the Children's Bureau in these fields would be transferred to the secretary of the department. Certain other functions now exercised by the Social Security Board in relation to grants to states for aid to dependent children would also be transferred to the new department. The Children's Bureau in the Department of Labor would be abolished and all officers and employees of that bureau transferred to the department.

*Dangerous Drugs.*—On March 8, 1946 the President approved, as Public Law 320, a new law to provide for the coverage of opiates under the federal narcotic laws. The word "opiate" is defined to mean any drug (as defined in the Federal Food, Drug and Cosmetic Act) found by the Secretary of Treasury after due notice and opportunity for public hearing, to have an addiction-forming or addiction-sustaining liability similar to morphine or cocaine, and proclaimed by the President to have been so found by the secretary.

Representative Rogers, Massachusetts, has submitted H. Res. 440, calling on the Secretary of the Treasury to furnish to the House of Representatives, for its information, (1) such facts as may be in his possession regarding the use by the public of the barbiturates and (2) the facts with respect to the best method or methods of protecting the consuming public from the improper use of barbiturates resulting from the indiscriminate distribution and sale of such drugs. The purpose of this resolution would seem to be to obtain factual data on which to base federal legislation. Representative Rogers has caused to be inserted in the *Congressional Record* on several occasions material reflecting abuses in the use of the barbiturates and stated on the floor of the House, when the conference report on the law referred to in the preceding paragraph was discussed, that if the barbiturates were not covered by that law she would submit additional legislation. Other members of the House indicated that they would support such legislation when introduced.

As forecast in the preceding paragraph, Representative Rogers did on April 17 introduce H. R. 6178, a bill to provide for the coverage of barbiturates under the federal narcotic laws. While the objectives of this legislation are undoubtedly meritorious, its enactment would represent a continuation of a trend to confer more and more jurisdiction on the federal government over intrastate matters in the field of medicine. The federal narcotics laws were amended several years ago to bring within their purview a new drug marketed under the trade name of Demerol but referred to in the amendatory legislation as isonipecaine. More recently, as indicated previously, "opiates" have been brought under the federal narcotic laws. If this trend continues, the time may come when no drug that may be of harm to a patient if used unwisely can be prescribed by a physician without the consent of the federal government.

A bill introduced by Senator Bilbo, Mississippi, S. 1986, has been favorably reported by the Senate Committee on the District of Columbia, proposing to bring the barbiturates within the purview of the laws of the District of Columbia relating to the manufacture, sale, distribution and use of narcotics.

There is a growing concern over the extent of the misuse of the barbiturates. In October 1945 the Committee on Legislation of the American Pharmaceutical Association called a conference in Washington to discuss the regulation of the use and distribution of barbiturates and that conference was participated in by representatives of numerous organizations, including two representatives from the Association. The consensus of the members of the conference was that there is a definite need for a more effective legislative program. It was pointed out that at that time over-the-counter sale of the barbiturates was permissible in fourteen states and the District of Columbia, namely:

| | |
|---|---|
| Arizona | Massachusetts |
| Idaho | Missouri |
| Illinois | New Mexico |
| Indiana | Ohio |
| Iowa | Texas |
| Kansas | Wisconsin |
| Kentucky | Wyoming |

It was further pointed out that, even in those states in which legislation had been enacted, enforcement left much to be desired. A recent communication from the American Pharmaceutical Association in connection with this matter was referred to the Council on Pharmacy and Chemistry and will no doubt be brought to the attention of the House of Delegates.

The Bureau has from time to time in its annual reports called the attention of the House to legislation relating to the barbiturates. In 1941 the Reference Committee on Reports of

Board of Trustees and Secretary, in commenting on the report of the Bureau of Legal Medicine and Legislation, had this to say

> It is noted that twenty five states have now adopted legal measures to control the dispensing of barbiturates only in medical prescriptions Your reference committee recommends to the House of Delegates that efforts be put forth to stimulate the remaining states to adopt similar legislation

This recommendation of the reference committee was adopted by the House The Bureau has attempted to stimulate the enactment of legislation of this type and has met with some degree of success Since the action taken by the House, however, many physicians have been in war service, and state medical associations have reduced their legislative efforts to a minimum Now that hostilities have ceased, it will be helpful if the House reemphasizes the view it expressed in 1941

*Medical Care for Veterans*—A bill introduced by Representative Rogers, New York, H R 5685 proposes to provide for the national health and productive power of the people of the United States by clarifying the laws pertaining to hospital treatment, medical care, domiciliary care and related services for veterans It is pending in the House Committee on World War Veterans Legislation and would provide, among other things that any center, hospital, home or clinic now or later under contract, control and jurisdiction of the Veterans Administration, War Department, Navy Department or the Public Health Service shall be available for the admission of any veteran of any war since 1897, not dishonorably discharged without regard to the nature of his or her disease or disability Prior to the construction of adequate facilities to take care of all veterans requiring hospitalization, the bill proposes that any veteran excluded from a governmental facility because of lack of beds will be permitted to enter a private hospital of his own choice, and the Veterans Administration will be authorized to pay the expenses of such hospitalization.

This bill also would authorize an appropriation of $550,000,000 for the construction of 57,000 additional hospital beds It would also authorize the President to establish six Diagnostic, Research and Proving Centers to be made available for use by any person for the exploration and testing of his or her medicine, drug science or treatment The administrator of such a center will be authorized to require the submission of case histories of not more than 10 patients who subscribe under oath that their disease, condition or 'frustration" has been improved by the method of treatment to be tested in the center

S 1817, introduced by Senator Langer, North Dakota, provides that, in any case in which a person entitled to medical care and treatment and hospitalization under the laws administered by the Veterans Administration cannot be treated or hospitalized at a government facility within a reasonable distance from the place of his residence, the administrator will be authorized to provide for such medical care and treatment by private physicians and for hospitalization in nongovernmental hospitals This bill is pending in the Senate Committee on Finance.

*National Science Foundation*—In the report of the Bureau for last year, extended reference was made to proposals pending in the Congress to formulate a federal program in support of scientific research. At that time two particular bills occupied prominent positions, the Magnuson bill, S 1285, pending in the Senate Committee on Commerce, and the Kilgore bill, S 1297, pending in the Senate Committee on Military Affairs Subsequently subcommittees of the two Senate committees held joint hearings in an effort to adjust the differences in the two measures, and as a result a compromise bill was introduced as S 1720 This measure was given additional consideration by the two subcommittees and on February 21 Senator Kilgore, West Virginia, for himself and Senator Magnuson, Washington, Senator Johnson, Colorado, Senator Pepper, Florida, Senator Fulbright, Arkansas, Senator Saltonstall, Massachusetts, Senator Thomas, Utah, and Senator Ferguson, Michigan, introduced a new bill, S 1850, which has the joint support of the two Senate subcommittees It has been reported by the Senate Committee on Military Affairs with recommendation that it pass

This bill would create an independent agency of the federal government to be known as the National Science Foundation, administered by an administrator appointed by the President, by and with the advice and consent of the Senate and after consultation with the National Science Board to be created by the legislation Within the foundation will be a Division of Mathematical and Physical Sciences, a Division of Biological Sciences, a Division of Social Sciences, a Division of Health and Medical Sciences, a Division of National Defense, a Division of Engineering and Technology, a Division of Scientific Personnel and Education, a Division of Publications and Information, and such additional divisions, not to exceed three in number, as the administrator may from time to time establish after receiving the advice of the board

The administrator will be required to consult and advise with the National Science Board and with divisional scientific committees on all matters of major policy, program or budget. The board will consist of nine members appointed by the President from among persons who are especially qualified to promote the broad objectives of the legislation, plus the chairmen of the several divisional scientific committees These committees, except the committee for the Division of National Defense, will consist of not less than five nor more than fifteen members appointed by the administrator with the advice and approval of the board

The board will be required continuously to survey the activities of the foundation, and each divisional scientific committee will likewise be required to survey the scientific field which it encompasses The board and each committee will be required, on its own initiative or on request by the administrator, to make appropriate recommendations and reports relating to its duties and findings

Both the administrator and the board will be required to make annual reports to the President and to the Congress which will include such independent recommendations concerning the budget, organization and management of the foundation and such other recommendations as the board and the divisional scientific committees may deem necessary

The administrator will be authorized to enter into contracts or other arrangements pursuant to which he will finance, in whole or in part, or otherwise support, research and development activities to be carried on by other government agencies or by other organizations Of the funds appropriated for research and development activities, not less than 15 per cent will be made available for expenditure for research and development in each of the following fields (1) national defense and (2) health and medical sciences Not less than 25 per cent of the funds appropriated for research and development activities will be apportioned among the states to be expended for carrying on research and development activities in the facilities of tax-supported colleges and universities Provision is made for the award of scholarships and fellowships to persons for scientific study or scientific work, and the administrator is required to maintain a register of scientific and technical personnel

The bill provides for the use and dissemination of scientific findings, for reciprocal agreements with foreign governments or agencies relating to the interchange of scientific and technological information and for the establishment of an interdepartmental committee on science to assist the administrator in gathering and correlating data relating to the scientific research and development activities of the federal government The Office of Scientific Research and Development and its constituent committees will be transferred to the foundation.

*Health Programs for Government Employees*—A bill providing for health programs for government employees, H R 2716, introduced by Representative Randolph, West Virginia, was passed by the House of Representatives Sept. 24, 1945 and in the Senate was referred to the Committee on Civil Service. By that committee it was reported, with amendment, on November 15 but was recommitted to the committee December 7 and again reported with amendments, February 1 It is now pending before the Senate.

As finally reported it authorizes the heads of departments and agencies including government owned and controlled corporations to establish by contract or otherwise health programs which will provide health services for employees under their respective jurisdictions These services will be established only

on recommendation of the Civil Service Commission, after consultation with the Public Health Service and only in localities where there are a sufficient number of federal employees to warrant the provision of such services The services to be provided will be limited to (1) treatments on the job of illnesses and dental conditions requiring emergency attention, (2) preemployment and other examinations, (3) the referral of employees to private physicians and dentists and (4) preventive programs relating to health. *An amendment recommended by* the Senate Committee on Civil Service will authorize the utilization of osteopathic services in connection with programs that are formulated

It has been suggested in connection with this legislation, that government employees be given the right to authorize payroll deductions from wages to permit them to participate in prepayment plans, hospitalization and medical care With the exception of two departments, the Department of Agriculture and the Department of Commerce, specific statutory authorization will be required to permit government employees to assign their wages for any purpose With respect to the two departments named, laws have already been enacted under which, subject to certain limitations, employees may authorize payroll deductions

*Miscellaneous*—H R. 491 and H R 5572, both introduced by Representative Lemke, North Dakota, and proposing to prohibit experimentation on living dogs in the District of Columbia, are still pending in the House Committee on the District of Columbia. Hearings have been concluded on this legislation, but no further committee action has been taken

A bill introduced by Representative Fellows, Maine, proposes that the provisions of all laws administered by the Veterans Administration which extend benefits to any woman who served honorably as a nurse, chief nurse or superintendent of the Nurse Corps under contract with the United States for ninety days or more between April 21, 1898 and Feb 2, 1901 be extended to any man who served honorably in any such capacity under contract with the United States for ninety days or more between such dates

A bill introduced by Representative Luce, Connecticut, H R 5296, provides that, commencing with the taxable year 1946, physicians, surgeons and dentists shall be allowed an additional credit as a deduction on their income tax equal in terms of percentages "to that portion of their time each year which is devoted to charity, free clinic work and/or public research work" It is pending in the House Committee on Ways and Means

S J Res 89, proposing the formation of an international health organization and commented on briefly in the report of the Bureau submitted to the House of Delegates in 1945, has been passed by the Senate

Representative Hebert Louisiana has introduced, by request, H R. 5406, a bill to amend the District of Columbia Traffic Act of 1925 to provide for tests of blood, urine and breath of persons arrested in the District of Columbia for certain offenses including the offense of operating a vehicle while under the influence of intoxicating liquor

Companion bills would authorize the Federal Security Administrator to assist the states in matters relating to social protection S 1779, introduced by Senator Pepper, Florida for himself and Senator George, Georgia, Senator La Follette, Wisconsin, and Senator Taft Ohio, and *H R. 5234*, introduced by Representative Bolton, Ohio These bills are pending respectively in the Senate Committee on Education and Labor and in the House Committee on the Judiciary They would authorize the Federal Security Administrator, by means of technical and professional advisory services and by the collection and publication of information, to assist the several states and, through or at the request of appropriate state officials of the respective states, their political subdivisions, and to assist nongovernmental organizations (*a*) to develop and carry out, particularly in areas where such measures are of importance to military or naval personnel, measures designed to prevent prostitution, eliminate conditions contributing to sex delinquency and provide services for the rehabilitation of sex delinquents, and (*b*) to foster cooperation in communities between law enforcement, welfare and other public and private activities for the purpose of preventing prostitution, eliminating conditions contributing to sex delinquency and providing services for the rehabilitation of sex delinquents

## Bureau of Medical Economics

The staff of the Bureau of Medical Economics has devoted *the major portion of its time to assisting the Council on* Medical Service and Public Relations in compiling and analyzing data concerning the voluntary prepayment medical care plans The Bureau staff has also cooperated with the Council staff in other activities, since the subject matter is identical in most cases The Bureau's publications, source files and library provide valuable historical as well as some of the current information and data on most of the subjects considered by the Council on Medical Service and Public Relations

Collaboration has been carried on between the two staffs in preparing a digest of the policy of the American Medical Association regarding sickness insurance and in providing information on the cost of medical care, hospitalization insurance, group practice and vital statistics In replying to inquiries for material on these subjects, the previous publications of the Bureau have been used, as well as reprints of more current articles that have been prepared by both the Bureau of Legal Medicine and Legislation and the Council on Medical Service and Public Relations

During the period Dec. 1, 1945 to May 1, 1946 approximately 600 copies of Bureau publications have been distributed and 400 letters written The majority of letters have been replies to requests for material and data on sickness insurance, hospitalization insurance, mortality statistics and the cost of medical care. There also have been a number of requests from physicians for information on group medical practice.

### GROUP MEDICAL PRACTICE

The interest in group practice appears to be primarily among the younger physicians returning from military service. The advantage of associating with an established group or forming a group, which provides joint use of office facilities and equipment, is apparent in such cases The Bureau's report on group practice published in 1940 is still being used to provide information on the experiences of group practice arrangements More recent reports published by state or county medical societies are also referred to in answering inquiries on this subject.

### MORTALITY STUDY

Considerable time has been devoted to the study of deaths of physicians, which was begun in 1942 in cooperation with Dr Louis I Dublin, chief statistician of the Metropolitan Life Insurance Company The purpose of this study is to obtain data on the causes and rate of deaths among physicians as compared with the general population The basic data are collected by the Bureau of Medical Economics and submitted to the Metropolitan Life Insurance Company for final compilation

### REVISION OF THE BOOKLET 'FACTUAL DATA ON MEDICAL ECONOMICS'

The booklet "Factual Data on Medical Economics' first *published in 1939 and* revised in 1940, contains statistical and graphic presentations of the number of physicians and hospitals, and of vital statistics—general mortality and mortality for specific causes, including tables and charts showing comparative data on mortality rates in various countries Some of the preliminary work of collecting, tabulating and classifying the data needed to bring this report up to date has been done. It is expected that the revision will be completed during the summer

Vital statistics for this country are obtained from government agency reports, which were curtailed during the war years but are now being brought up to date fairly rapidly Similar data from foreign countries may not be available for some time, so that the comparative tables cannot be brought up to date very soon

INCOME OF PHYSICIANS

The average income of physicians as well as of other professional groups, has been compiled by the Bureau of Foreign and Domestic Commerce, United States Department of Commerce. From these reports tables have been prepared showing the average income of physicians for the years 1929 through 1941

CONSUMPTION EXPENDITURES

The United States Department of Commerce also collects and publishes data on consumers' expenditures for goods and services These figures provide a means for comparing average annual expenditures for medical care with average expenditures for other goods and services Tables derived from these reports have been prepared showing average expenditures per capita, and the ratio of expenditures under each major heading to total expenditures In 1942 expenditures for medical care, including physicians' services, hospital and nursing services, drugs, medicines, eye glasses and appliances, amounted to 3 4 per cent of the total expenditures for all goods and services, while expenditures for such items as recreation and entertainment were 5.2 per cent, alcoholic beverages 5 9 per cent, and tobacco 2 7 per cent of the total

## Bureau of Exhibits

The report of the Bureau of Exhibits includes the Scientific Exhibit at the annual session, Association exhibits and motion pictures Graduate medical instruction is the primary purpose of the Bureau, but health education of the public is also included as opportunity permits

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit is administered under the direction of the Committee on Scientific Exhibit of the Board of Trustees

Preliminary arrangements for the Scientific Exhibit at the 1945 session in Philadelphia were well under way when the meeting was canceled because of wartime restrictions The cessation of hostilities during the year made it possible to start work on the Scientific Exhibit for the 1946 session at San Francisco and, in spite of the numerous difficulties of reconversion from war to peace considerable work was completed during the fall months of the year

ASSOCIATION EXHIBITS

The Association exhibits for medical societies and for fairs and expositions have been maintained and revised. Continual labor is necessary in checking these exhibits to keep them in repair and up to date. Several of the old exhibits were discarded since they were no longer serviceable, while others were rebuilt and new features added. Three new subjects were added "Food Poisoning" "The Menace of the Rat" and "How Disease Bacteria are Spread" All of these have proved to be popular Other subjects which have been in demand, in keeping with the times, include malaria, tropical diseases and the newer aspects of chemotherapy Lack of personnel in the various councils at headquarters made it impossible to develop contemplated exhibits dealing with physical medicine, industrial health and nutrition, but the new year will see progress in these fields

The larger fairs and expositions were canceled during the war, but there were numerous local meetings at which exhibits from the American Medical Association were displayed. In Milwaukee the Woman's Auxiliary held a successful Health Day with active participation by members of the Bureau In Akron a large department store had different health exhibits on continuous display for several months for the benefit of the employees These and other similar affairs resulted in the utilization of seventy-two health exhibits on fifty-six different occasions Exhibits were kept on display for periods varying from one day to several weeks

Medical meetings, few of which were held during the war, were resumed after V-J day, resulting in a sudden demand for medical exhibits Personnel from the Bureau attended seven such meetings with fourteen exhibits Attention is called to the amount of time and labor incident to exhibits at medical meetings The attendant must arrive the day before the meeting opens and remain until it is closed Extra care is necessary in preparation and installation, because exhibits from the American Medical Association are often taken as models in display methods

Exhibits are of value in both health education and graduate medical instruction That the visual impression is lasting and that the effort expended in exhibit work is worth the cost is evidenced by letters received concerning details of displays shown months or years previously

The Bureau has forty five exhibits for loan purposes described in the two pamphlets "Medical Exhibits for Medical Societies and Scientific Organizations" and "Health Exhibits for Fairs and Expositions"

MOTION PICTURES

The Bureau of Exhibits maintains a small library of medical motion pictures which have been in great demand by medical schools, medical societies hospitals and government agencies During the year seven hundred and thirty films were sent to three hundred and ninety-four meetings

Information about medical motion pictures in general has been kept on file, making it possible to answer hundreds of letters concerning the availability of medical films other than those distributed by the Bureau

A large collection of material on health films has been assembled which is useful in dealing with matters concerned with health education. No attempt has been made, however, to assemble a large number of health films at headquarters, since there are numerous distributors over the country

Active coooperation has been maintained with the National Film Board of Canada It has been impossible, however, to comply with the requests for films from other countries, including Mexico, Spain, Sweden, the Netherlands, France and Czechoslovakia. The need for good medical films in those countries is great, but the program for supplying them should be undertaken with the cooperation of all agencies concerned in the production of motion pictures

COMMITTEE ON MEDICAL MOTION PICTURES

The Board of Trustees appointed a Committee on Medical Motion Pictures to study the problems connected with motion pictures and to submit a report. The following recommendations were made by the committee

1 That information should be obtained concerning the facilities of medical schools and medical societies for using motion pictures and the extent to which those pictures are now used

2 That the American Medical Association should not produce motion pictures at the present time

3 That information should be assembled concerning the better use of motion pictures to encourage graduate medical instruction

4 That information should be assembled concerning the development of a program for the distribution of medical motion pictures

5 That medical motion pictures should be reviewed by competent authorities and critical reviews published in THE JOURNAL

The Trustees approved these recommendations and provided funds for personnel in the Bureau to carry them out Arrangements have been made for the program to go forward during 1946

MUSEUMS

The Bureau has cooperated with the various museums in the country where large audiences are found in a receptive mood for health education. At the Chicago Museum of Science and Industry and the Cleveland Health Museum a question and answer service is available which has proved successful. Exhibits on various subjects have been furnished to the Toledo Museum of Science and the Cayuga Museum of History and Art, Auburn, N Y, during the year With the return of normal times this activity will be expanded.

MISCELLANEOUS ACTIVITIES

Publications prepared in connection with the various activities of the Bureau have continued to be popular These include the fifth edition of the Primer on Fractures, the second edition of Fundamentals of Anesthesia and the revised editions of the pamphlets on Varicose Veins and Food Charts

Confe
tion as
on num
United
with oth
the Scie
mittees
the Clev
the Soci
Health I
Associatio
of the Tr
The Di
fessor of
Illinois C
Speeches
and books

The Bure
of the Ame
profession, t
the work of
of medical sc
One of the
the weekly ne
NEWS, which
of original ar
and in HYGI
which may be
mately 1,200 n
stations, industr
The A M
the Editor of T
for the dissemin
and medical prog
on medical subject
to be found in ev
newspapers All
specific, voluntary
mailing list.
During 1945 the
than 5,000 inquir
magazines, radio st
An estimated 75,
that appeared in THE
in newspapers in ev
The estimate is made
in the headquarters of
Association stories w
relaxation of wartime
The two stories whi
the press magazines an
for the extension of in
people and the announ
a countrywide system of
to be operated on a no
In both cases lengthy st
newspaper Reprints of t
JOURNAL were mailed t
republication
The gratifying response
press during the year indic
feature writers and radio
section of the country look
American Medical Associa
information regarding med
information and advice on ev
of the Association and of
through its close contact
halting the dissemination of
tion. In many instances
medical matters has been cor
tion, while in other cases

Macfarlane Women's Medical College of
of periodic pelvic and breast examination
grants 494 1938 536, 1939 and 623 1942
Margaret C and Fetterman Faith S
Examination in the Control of Cancer of
126 877 1944 Results of a Cancer Control
April 1945
Rabinovitch Jewish Hospital Brooklyn $240
Rabinovitch Jacob and Pines Bernard
Experimentally Produced Thrombosis, *Surgery*
L. Harris, New York State Psychiatric Hos
muscular disease. See grant 658 1943
Regarding a Glutamine like Substance in
Isolating a Method for Its Quantitative Deter
22 569 1943 Effect of Insulin Hypo
administration on the Level of the Glutamine-like
p 577
Friedmann, Jewish Hospital Brooklyn $750
grants 583 1940 and 666 1943
H. Harris New York State Psychiatric Insti
See grant 648 1942 Refund $2 75
Dauber Michael Reese Hospital Chicago
chick (Cardiac Research Fund) See grant
and Katz, L. N Experimental Athero-
P. 36 473 1943 Dauber Deborah V
Chickens, *ibid* **38** 46 1944 Katz L. N
Pathogenesis of Atherosclerosis, *J Mount Sinai*
Fordham University $600 vitamin B
Refund $3 21 See grant 631 1942
John R. Relationship Between Protein
in the Rat The Role of Tryptophan
3 No 1 (March) 1944 Protein Intake
Rat, *Arch Biochem* **5**: 207 1944
Friedmann Jewish Hospital of Brooklyn
grants 583 1940 and 653 1942 Friede
and Traub F Quantitative Studies on the
Agents in Tissues by Circulating Anti
of Tetanal Toxins and Their Avidities for
*J Immunol* to be published
Tarlov New York Medical College $500
See grant 634 1942 Tarlov, I M
of Nerves Its Use in Clinical Surgery,
Tarlov I M and Epstein J A. Nerve
Adequate Blood Supply *J Neurosurg*
Ulett, University of Oregon Medical School
experimental focal brain lesions Ulett
of Dogs with Experimental Space-Occupy
*Psychiat* **54**: 141 1945
Tunturi University of Oregon Medical
cortex of dog Tunturi Archie R. Audio
Acoustic Cortex of the Dog, *Am J Physiol*
Connections to the Acoustic Cortex of
Loyola University Medical School Chi
Hardt, Leo L. The Flexi Rigid Gastro-
1945
Davidson Mount Sinai Hospital Chicago
Wiener Alexander S Davidsohn I and
Rh Blood Types II Observations on the
Rh Blood Types, *J Exper Med* **81**: 63
Fetal Erythroblastosis, J A M A **127** 633
*J Clin Path* **15** 95 1945
Kepperman University of Georgia $500
Herbert S **The Two** Hour Pregnancy
*Southern Medical Journal*
Raab, University of Vermont College of
of thiouracil **against** the toxic cardio-
sympathin **Raab Wilhelm** Thiouracil
**128**: 249 **1945** Diminution
normal Human **Heart** Through Thio-
published
**Wayne University** of Medi
of alloxan in rats
and **Miller,** Alloxan
**Med.**
in

Grant 613, 1941 Robert W Virtue, University of Denver $200 formation of choleic acid. [See grant 499 1938 report for 1940] Research suspended on account of war service
Grant 616 1941 Robert S Dow University of Oregon Medical School $250 effects of clotting in cerebral veins See grant 566 1940
Grant 626 1942 Peter P H de Bruyn University of Chicago, $400 study of osteogenic substance in laying birds.
Grant 650 1942 Tuberculosis Committee Minnesota State Medical Association J A Myers chairman $1 000, tuberculosis survey of Meeker County Minn
Grant 656 1943 Warren O Nelson Wayne University $300 lipids in the adrenal cortex Refund $133 08 See grant 481 1937
Grant 661 1943 Roland K. Meyer, University of Wisconsin $500 antihormones, McShan W H Wolfe, Harold R and Meyer Roland K. Factors Affecting the Action of Antigonadotropic Sera in Immature Rats *Endocrinology* **33** 269 1943 Wolfe Harold R. Meyer Roland K, and McShan W H The Negative Phase in the Antigonadotropic and Precipitin Productive Activities in Rabbits *J Immunol* **50** 349 1945
Grant 662 1943 Katharine M Howell and Elta Knoll Michael Reese Hospital Chicago $750 amebic dysentery Howell Katharine M and Knoll Elta Studies on Dientamoeba Fragilis Its Incidence and Possible Pathogenicity *Am J Clin Path* **15** 178 1945
Grant 670 1944 Wilbur Thomas Bowman Gray School of Medicine $300 experimental cardiac rupture
Grant 671 1944 A M Lassek Medical College of State of South Carolina $1 000 effect of paralysis on human pyramidal system See grants 632 1942 and 655 1943 Lassek A M The Human Pyramidal Tract V. The Babinski Sign and Destruction of the Pyramidal Tract. *Arch Neurol & Psychiat* **52**: 484 1944 *The Human Pyramidal* Tract XI Correlation of the Babinski Sign and the Pyramidal Syndrome *ibid* **53**: 375 1945 Lassek A M and Evans J P The Human Pyramidal Tract XII The Effect of Hemispherectomies on the Fiber Components of the Pyramids *J Comp Neurol* **83** 113 1945
Grant 674 1944 David J Sandweiss and Thomas L Patterson Wayne University College of Medicine $750 relation of the endocrine glands to urogastrone Kaulbersz J Patterson T L, Sandweiss D J and Saltzstein H C The Relation of Endocrine Glands to the Gastric Secretory Depressant in Urine (Urogastrone) *Science* accepted for publication
Grant 676 1944 Frederick M Allen New York $500 studies on *refrigeration surgery and treatment* See grant 657, 1943 Allen Frederick M Spontaneous and Induced Epileptiform Attacks in Dogs in Relation to Fluid Balance and Kidney Function *Am J Psychiat* **102** 67 1945
Grant 677 1944 J LeRoy Conel Harvard Medical School $500 post natal development of the human cerebral cortex (Charles A Brant Fund)
Grant 679 1944 Theodor E Bratrud University of Minnesota Medical School $600 colored illustrations for article on congenital adrenal hyperplasia
Grant 681 1944 W E Garrey Vanderbilt University School of Medicine $500 innervation of the heart of vertebrates
Grant 682 1944 Helen Ingleby Woman's Medical College of Pennsylvania, $500 problems of cystic disease and carcinoma of the breast
Grant 683 1944 O Boyd Houchin Loyola University Medical School $350 vitamin E deficiency in relation to cardiac function
Grant 684 1944 Rachmiel Levine Michael Reese Hospital Chicago $1,000 secretion and metabolism of progesterone in threatened abortion
Grant 685 1944 Daniel J Glomset Des Moines Iowa, $500 cardiac conduction See *grant 629 1942* Glomset Daniel J and Birge Richard F A Morphologic Study of the Cardiac Conduction System IV The Anatomy of the Upper Part of the Ventricular Septum in Man *Am Heart J* **29**: 526 1945

## Committee on Therapeutic Research

The Committee on Therapeutic Research, a standing committee of the Council on Pharmacy and Chemistry, encourages scientific investigations in the field of therapeutics by providing funds for the prosecution of necessary research.

During the year 1945 the Committee issued twenty-two new grants A detailed list of these grants, together with a list of publications during 1945 and of unexpected grants made before Jan 1, 1945, will be found in the appendix to this report.

During 1945 the following grants were issued

Grant 536 C. H Werkman professor of bacteriology Iowa State of ulture and Mechanical Arts the mechanism of action

associate professor of pharmacology
Medicine the antidiuretic action of
em, $500
professor of medicine
of various

of Bacte
ano

Bacte

and

Conferences on matters pertaining to graduate medical instruction as well as health education by visual means have been held on numerous occasions with visitors from various parts of the United States as well as from other countries Collaboration with other agencies has been continued, with the Director of the Scientific Exhibit serving on various boards and committees These include the National Advisory Committee of the Cleveland Health Museum, the Committee on Exhibits of the Society of Illinois Bacteriologists, the Council of the Health Education Section of the American Public Health Association and the Advisory Committee on Health Education of the Tuberculosis Institute of Chicago and Cook County

The Director has maintained his position as assistant professor of bacteriology and public health at the University of Illinois College of Medicine

Speeches have been prepared, articles written for publication and books reviewed for THE JOURNAL and for HYGEIA.

## Bureau of Public Relations

The Bureau of Public Relations in the headquarters building of the American Medical Association extends to the medical profession, the press and the lay public information regarding the work of the American Medical Association and the progress of medical science as recorded in THE JOURNAL.

One of the Bureau's chief functions is to edit and distribute the weekly news pamphlet the AMERICAN MEDICAL ASSOCIATION NEWS, which contains official announcements and condensations of original articles and editorials appearing in THE JOURNAL and in HYGEIA This news release, containing material which may be reprinted or republished, is mailed to approximately 1,200 newspapers, press associations, magazines, radio stations, industrial house organs, medical journals and bulletins

The A M A NEWS, prepared under the supervision of the Editor of THE JOURNAL, has become a recognized medium for the dissemination of news pertaining to medical activities and medical progress That there is wide interest in articles on medical subjects is evidenced by the amount of such material to be found in even a casual perusal of a few magazines and newspapers All of those receiving the release have made specific, voluntary requests to have their names placed on the mailing list.

During 1945 the Bureau of Public Relations received more than 5,000 inquiries from newspapers, press associations, magazines, radio stations and other mediums

An estimated 75,000 individual stories, based on articles that appeared in THE JOURNAL and in HYGEIA, were published in newspapers in every state in the Union during the year The estimate is made on the basis of press clippings received in the headquarters office. The response to American Medical Association stories was much better because of the gradual relaxation of wartime restrictions on newsprint.

The two stories which received the greatest response from the press magazines and radio were the fourteen-point program for the extension of improved health and medical care to all people and the announcement by the Board of Trustees of a countrywide system of voluntary sickness insurance protection to be operated on a nonprofit basis by local medical groups In both cases lengthy stories were published in nearly every newspaper Reprints of the articles as they appeared in THE JOURNAL were mailed to every state medical journal for republication

The gratifying response which the Bureau received from the press during the year indicates strongly that editors, reporters, feature writers and radio news commentators from every section of the country look to the headquarters office of the American Medical Association as a dependable source of information regarding medical matters They have sought information and advice on every phase of the multiple activities of the Association and of the profession. The Bureau has, through its close contact with these groups, succeeded in halting the dissemination of much inaccurate medical information In many instances inaccurate information regarding medical matters has been corrected in the process of publication, while in other cases such inaccurate information has been eliminated completely through the advice and service offered by the Bureau

The Bureau has also worked closely with other bureaus and councils of the Association in matters pertaining to public relations and publicity The Bureau personnel on many occasions has served as consultants to medical groups seeking advice on publicity problems

All these activities have played a vital role in educating the American people as to the advancements of medical science and the services that physicians render for the benefit of mankind

## Bureau of Information

Establishment of the Bureau of Information in September 1944 had a twofold purpose. First, the Bureau was to survey through the state and county medical societies the medical personnel, medical facilities and medical needs of every county in the United States Secondly, with this information in hand the Bureau was to be of service to the returning medical officer in giving him pertinent facts which would help him in choosing an area in which he might establish his medical practice In that way the Bureau of Information hoped to be of service not only to the returning doctor but also to the country as a whole by bringing to needy areas more adequate medical care through a better distribution of physicians

During the year previous to V-J day a permanent card file for the 3,072 counties in the United States was prepared, giving important information concerning the medical, hospital, economic, financial, climatic, social and other conditions of the county Although over a year has elapsed since this survey was begun there are still more than 500 counties that have not responded to the request for information concerning their areas However, through the cooperation of most of the state medical societies and from the responses from individuals and communities, an extensive file has been built up of openings in specialties and general practice

Since several agencies of the Association, including the Committee on Postwar Medical Service, the Bureau of Information, the Council on Medical Education and Hospitals and the Bureau of Legal Medicine and Legislation, have taken part in the gathering of information, a bulletin was designed to combine and abstract that information which it was thought would be most desired by medical officers and to point out exactly how more specific and detailed data could be obtained This Information Bulletin for Medical Officers was published by the American Medical Association and sent to every physician in the armed services

Since V-J day the Bureau of Information has received about 565 letters a week from medical officers, and a weekly average of 110 physicians have come to the office for specific information regarding medical education, licensure and relocation One of the important objectives of the Bureau has been to assist the returning doctor to make a wise selection of a community in which to establish his practice Medical officers contacting the Bureau for information regarding opportunities in certain states are furnished with complete listings of the areas in the states where there is a need for a physician, together with county summary sheets for specific areas in which the physicians may be interested For further information regarding the establishment of a practice in certain areas they are referred to the secretaries of the county and state medical societies

Of the several thousand medical officers who have been interested in relocating, few are inclined to establish themselves in areas where there are inadequate hospital facilities or where the community may be financially unable to support a doctor Realizing that the needs of these areas must be carefully evaluated, the House of Delegates during its meeting in December 1945 suggested that each state medical society should be urged to establish an information service This state information office should at all times be in a position to furnish information concerning areas in need of physicians and a complete picture of the medical facilities and the physical and economic aspects of any community within the state. At the same time the Bureau of Information was established at the

American Medical Association on a permanent basis, and the Bureau was urged to provide advice or service to such state information offices relating to methods of organization and procedure In order to activate this program a committee composed of several state medical society secretaries was formed to act as an advisory council to the Bureau of Information and to help in drawing up directives to the state medical societies suggesting a course to follow in establishing these state information offices so that there would be a uniform system throughout the states

The Bureau of Information is working closely with the Council on Medical Service and Public Relations and the Committee on Rural Medical Service of the American Medical Association toward extending to all people in all communities the best possible medical care The Farm Bureau, the Farm Foundation and other farm groups are cooperating in every way with the Bureau in helping to attract physicians into areas where they are most needed In order to stimulate this activity in the states and to coordinate the work of the various groups working for better rural medical service, the Bureau assisted the Council on Medical Service and Public Relations and the Committee on Rural Medical Service in arranging a National Conference on Rural Health, which had its first meeting on March 30, 1946 in Chicago

### Committee on American Health Resorts

The Committee on American Health Resorts respectfully submits the following report for the year 1945

The Committee continued as in 1944 with only four members instead of five, Lieut Col Euclid M Smith was occupied with military duties but has now been returned to civilian life.

During the year the Committee continued to seek completion of the series of papers on spas and spa therapy Seven papers in this series were published in 1943 and seven in 1944 and are listed in the annual reports for those years One paper was published in 1945, entitled "Spa Therapy in Cardiovascular Conditions," by Carl R. Comstock. Two additional papers are to be published in 1946, entitled "Health Resort Therapy in Gastrointestinal Disorders," by Samuel Weiss, and "The Place of Health Resort Therapy in the Treatment of Dermatologic Conditions," by Anthony C Cipollaro Two papers in the series remain to be written, but the Committee has thus far been unsuccessful in finding an author for either one. They are entitled "The Value of Health Resort Treatment for Convalescence" and "The Place of Health Resort Therapy in the Treatment of Rheumatic Conditions" The publication of papers in this series in book form has been delayed because of paper shortages and lack of evidence of interest on the part of the medical profession.

The Committee met in January 1945 at the headquarters of the American Medical Association

The health resorts now listed by the Committee in compliance with its rules are the Torbett Clinic and Hospital, Marlin, Texas, and the Baker Hotel, Mineral Wells, Texas

A number of other resorts appear almost ready for listing, some of the difficulties having been ironed out, the principal one being the promotion and sale of bottled mineral waters with therapeutic claims

### Conclusion

All matters that have been referred to the Board of Trustees have received official consideration. The Board at this time reports progress in dealing with some and will continue to give them official attention until such time as final results can be submitted. It is probable that a supplementary report will be presented to the House of Delegates at San Francisco

Respectfully submitted,

R. L SENSENICH, Chairman
ERNEST E. IRONS, Secretary
CHARLES W ROBERTS
DWIGHT H MURRAY
WILLIAM F BRAASCH
LOUIS H BAUER
ELMER L HENDERSON
JOHN H FITZGIBBON
JAMES R. MILLER.

## ADDENDA TO REPORT OF BOARD OF TRUSTEES

### Report of the Committee on Scientific Research for 1945

During the year six applications were received and five new grants were made, amounting in all to $2,750 Seventeen grants were closed Work under twenty six earlier grants is in progress In several cases work has been delayed or suspended on account of the war

From an anonymous donor $500 has been received for the Brant Fund, which now contains $1,000 to be expended in support of medical research under the auspices of the committee.

The committee begs leave to recommend that annual provisions be made for the activities of the committee on about the same scale as before the war, that is, $12 550 for grants in aid of medical research and $1,200 for the expenses of the committee

The financial statement for 1945 is presented, also lists of grants pending and closed

Respectfully submitted

COMMITTEE ON SCIENTIFIC RESEARCH OF THE AMERICAN MEDICAL ASSOCIATION
MARTIN H FISCHER Cincinnati
Term expires, 1950
N W JONES, Portland, Ore
Term expires, 1949
JOHN J MORTON, Rochester, N Y
Term expires, 1948
E W GOODPASTURE Nashville, Tenn
Term expires, 1947
LUDVIG HEKTOEN, Chicago
Term expires, 1946

FINANCIAL STATEMENT FOR 1945

| | | |
|---|---|---|
| Balance Jan 1 1945 | $24 146 16 | |
| Donation to Brant Fund | 500 00 | |
| Gift for scientific research in the field of cancer | 117 90 | |
| Refund grant 609 C E Cahn Bronner | 79 62 | |
| Refund grant 654 Reginald Fitz | 31 83 | |
| Refund grant 658 Meyer M Harris | 2 75 | |
| Refund grant 663 L. R Cerecedo | 3 21 | |
| Refund grant 686 H M Weaver | 2 60 | |
| | | $24 884 07 |

GRANTS AND EXPENSES PAID IN 1945

| | | |
|---|---|---|
| Grant 683 O Boyd Houchin | $ 350 00 | |
| Grant 687 Barnett Sure | 600 00 | |
| Grant 688 A R. Tunturi | 300 00 | |
| Grant 689 Israel S Kleiner and Arnold H Schein | 400 00 | |
| Grant 690 Leo L. Hardt | 250 00 | |
| Grant 691 D J Sandweiss T L. Patterson and H C Saltzstein | 1 200 00 | |
| Clerical expense | 615 04 | |
| | | $ 3 715 04 |
| Balance Dec. 31 1945 | | $21 169 03 |

### GRANTS OF COMMITTEE ON SCIENTIFIC RESEARCH

NEW GRANTS—1945

Grant 687 Barnett Sure Arkansas Agricultural Experiment Station Fayetteville $600 effect of sulfonamides on thiamine and riboflavin metabolism.

Grant 688 A. R Tunturi University of Oregon Medical School $300 effects of masking tones on the responses in the cerebral cortex to pulses of pure tones

Grant 689 Israel S Kleiner and Arnold H Schein New York Medical College $400 nutritive value of intact protein compared with the products of its enzymatic and acid hydrolysis

Grant 690 Leo L. Hardt Loyola University School of Medicine Chicago $250 improvements of flexi rigid gastroscope

Grant 691 David J Sandweiss Thomas L Patterson and Harry C Saltzstein $1,200 relation of the endocrine glands to gastric secretion

### STATE OF GRANT AIDED WORK

1 GRANTS CLOSED DURING THE YEAR

Grant 567 1940 Armand J Quick Marquette University $275 conversion of prothrombin to thrombin Quick A J Calcium in the Coagulation of Blood *Am J Physiol* **132**: 239 1941 The Prothrombin Concentration of Blood of Various Species *ibid* **132** 239 1941 Prothrombin Level of Blood After the Intramuscular Injection of Sodium Citrate *Proc Soc Exper Biol & Med* **47** 1 1941 Effect of Air Currents on Plasma Prothrombin *ibid* **50** 317 1942 On the Constitution of Prothrombin *Am J Physiol* **140** 212 1943 Experimentally Induced Changes in the Prothrombin Level of the Blood I. Quantitative Studies of Dogs Given Dicumarol II The Effect of Methylxanthines on Prothrombin Per Se and When Administered with Dicumarol *J Biol Chem* **161**: 33 1945

Grant 623 1942 Catharine Macfarlane Women s Medical College of Pennsylvania $2 500 value of periodic pelvic and breast examination in detecting cancer See grants 494 1938 536 1939 and 623 1942 Macfarlane Catharine Sturgis Margaret C and Fetterman Faith S The Value of Periodic Pelvic Examination in the Control of Cancer of the Uterus J A M A **126**: 877 1944 Results of a Cancer Control Research *M Woman s J* April 1945

Grant 644 1942 Jacob Rabinovitch Jewish Hospital Brooklyn $240 effect of heparin on thrombosis Rabinovitch Jacob and Pines Bernard The Effect of Heparin on Experimentally Produced Thrombosis *Surgery* **14** 669 1943

Grant 648 1942 Meyer M Harris New York State Psychiatric Hospital $250 further research on muscular disease See grant 658 1943 Harris Meyer M Studies Regarding a Glutamine like Substance in Blood and Spinal Fluid Including a Method for Its Quantitative Determination *J Clin Investigation* **22** 569 1943 Effect of Insulin Hypoglycemia and Glucose Administration on the Level of the Glutamine-like Substance in Blood Serum *ibid* p 577

Grant 653 1942 Ulrich Friedmann Jewish Hospital Brooklyn, $750 types of tetanus toxin See grants 583 1940 and 666 1943

Grant 658 1943 Meyer M Harris New York State Psychiatric Institute $250 muscular disease See grant 648 1942 Refund $2 75

Grant 659, 1943 Deborah V Dauber Michael Reese Hospital Chicago $446 57 atherosclerosis in the chick (Cardiac Research Fund) See grant 642, 1942 Dauber Deborah V, and Katz L N Experimental Atherosclerosis in the Chick *Arch Path* **36** 473 1943 Dauber Deborah V Spontaneous Arteriosclerosis in Chickens *ibid* **38** 46 1944 Katz, L N and Dauber D V The Pathogenesis of Atherosclerosis *J Mount Sinai Hosp* **12**: 382 1945

Grant 663 1943 L R Cerecedo Fordham University, $600 vitamin B deficiencies in rats and mice Refund $3 21 See grant 631, 1942 Cerecedo Leopold R and Foy John R Relationship Between Protein Intake and Pyridoxine Deficiency in the Rat The Role of Tryptophan and Cystine *Federation Proc* **3**, No 1 (March) 1944 Protein Intake and Pyridoxine Deficiency in the Rat *Arch Biochem* 5 207 1944

Grant 666 1943 Ulrich Friedmann Jewish Hospital of Brooklyn $1 500 tetanus toxins See grants 583 1940 and 653 1942 Friedemann U Hollander A. and Traub F Quantitative Studies on the Neutralization of Pathogenic Agents in Tissues by Circulating Antibodies VI The Ar Values of Tetanal Toxins and Their Avidities for Nerve Tissue and Antitoxin *J Immunol* to be published

Grant 667 1943 I M Tarlov New York Medical College $500 regeneration of cauda equina See grant 634 1942 Tarlov I M Autologous Plasma Clot Suture of Nerves Its Use in Clinical Surgery J A M A **126** 741 1944 Tarlov I M and Epstein J A Nerve Grafts The Importance of an Adequate Blood Supply *J Neurosurg* **2** 49 1945

Grant 668 1944 George Ulett University of Oregon Medical School $250 electroencephalograms in experimental focal brain lesions Ulett George Electroencephalogram of Dogs with Experimental Space Occupying Intracranial Lesions *Arch Neurol & Psychiat* **54**: 141 1945

Grant 672 1944 Archie R Tunturi University of Oregon Medical School $200 acoustic area in cortex of dog Tunturi Archie R Audio Frequency Localization in the Acoustic Cortex of the Dog *Am J Physiol* **141** 397 1944 Further Afferent Connections to the Acoustic Cortex of the Dog *ibid* **144** 389 1945

Grant 673, 1944 Leo Hardt Loyola University Medical School Chicago $300 new gastroscope. Hardt Leo L The Flexi Rigid Gastroscope *Gastroenterology* **3**: 508 1945

Grant 675 1944 Israel Davidsohn Mount Sinai Hospital Chicago $500 problems of Rh factor Wiener Alexander S Davidsohn I and Potter E L. Heredity of the Rh Blood Types II Observations on the Relation of Factor Rh to the Rh Blood Types *J Exper Med* **81** 63 1945 Davidsohn Israel Fetal Erythroblastosis J A M A **127**: 633 1945 Rh Antibodies *Am J Clin Path* **15** 95 1945

Grant 678 1944 Herbert S Kupperman University of Georgia $500 pregnancy test Kupperman Herbert S The Two Hour Pregnancy Test, submitted for publication in *Southern Medical Journal*

Grant 680 1944 Wilhelm Raab University of Vermont College of Medicine $500 protective effect of thiouracil against the toxic cardiovascular action of epinephrine and sympathin Raab Wilhelm Thiouracil Treatment of Angina Pectoris J A M A **128** 249 1945 Diminution of Epinephrine Sensitivity of the Normal Human Heart Through Thiouracil *J Lab & Clin Med* to be published

Grant 686 1944 H M Weaver Wayne University College of Medicine $280 production and treatment of alloxan diabetic coma in rats Refund $2 60 Friedgood Charles E. and Miller Arthur A Alloxan in Pregnant Rats *Proc Soc Exper Biol & Med* **59** 61 1945 Kaplan Nathan O Franks Maurice and Friedgood Charles E Metabolism in Diabetic Coma Produced by Alloxan *Science* **102** 447, 1945

2 WORK IN PROGRESS 1945

Grant 479 1937 Tracy J Putnam Boston City Hospital $200 injuries to the cervical portion of the cord. This research has been suspended for the duration

Grant 504 1938 Wallace M Yater Georgetown University Medical School $500 histopathology of bundle branch block.

Grants 518 1938 and 559 1939 Harold D West Meharry Medical College $150 synthesis of *dl* threonine

Grant 570 1940 William H Sweet University of Chicago, $300 course of nerve fiber tracts of the temporal lobe

Grant 582 1940 Charles W Greene Stanford University $500 physiology of the coronary system in monkeys Refund $160 48

Grant 584, 1940 Oscar V Batson University of Pennsylvania $200 nystagmus.

Grant 605 1941 Harry G Day Indiana University $400 physiologic significance of zinc. Active research suspended on account of war

Grant 607 1941 Fritz Levy Davis Memorial Hospital Elkins W Va, $250 study of marrow cells Levy Fritz Megakaryocytes and Blood Platelets, *Am J Clin Path* **15** 154, 1945

Grant 613 1941 Robert W Virtue University of Denver $200 formation of choleic acid [See grant 499 1938 report for 1940] Research suspended on account of war service

Grant 616 1941 Robert S Dow University of Oregon Medical School $250 effects of clotting in cerebral veins See grant 566 1940

Grant 626 1942 Peter P H de Bruyn University of Chicago $400 study of osteogenic substance in laying birds

Grant 650 1942 Tuberculosis Committee Minnesota State Medical Association J A. Myers chairman, $1,000 tuberculosis survey of Meeker County Minn

Grant 656 1943 Warren O Nelson Wayne University $300, lipids in the adrenal cortex Refund $133 08 See grant 481 1937

Grant 661, 1943 Roland K Meyer University of Wisconsin $500 antihormones McShan W H Wolfe Harold R and Meyer Roland K. Factors Affecting the Action of Antigonadotropic Sera in Immature Rats *Endocrinology* **33** 269 1943 Wolfe Harold R. Meyer Roland K and McShan W H The Negative Phase in the Antigonadotropic and Precipitin Productive Activities in Rabbits *J Immunol* **50** 349 1945

Grant 662 1943 Katharine M Howell and Elta Knoll Michael Reese Hospital Chicago $750 amebic dysentery Howell Katharine M and Knoll Elta Studies on Dientameba Fragilis Its Incidence and Possible Pathogenicity *Am J Clin Path* **15** 178 1945

Grant 670 1944 Wilbur Thomas Bowman Gray School of Medicine $300 experimental cardiac rupture

Grant 671 1944 A M Lassek Medical College of State of South Carolina $1 000 effect of paralysis on human pyramidal system See grants 632, 1942 and 655 1943 Lassek A M The Human Pyramidal Tract X The Babinski Sign and Destruction of the Pyramidal Tract *Arch Neurol & Psychiat* **52** 484 1944 The Human Pyramidal Tract XI Correlation of the Babinski Sign and the Pyramidal Syndrome *ibid* **53** 375 1945 Lassek A M and Evans J P The Human Pyramidal Tract XII The Effect of Hemispherectomies on the Fiber Components of the Pyramids *J Comp Neurol* **83**: 113 1945

Grant 674 1944 David J Sandweiss and Thomas L Patterson Wayne University College of Medicine $750 relation of the endocrine glands to urogastrone. Kaulbersz, J Patterson T L Sandweiss D J and Saltzstein H C The Relation of Endocrine Glands to the Gastric Secretory Depressant in Urine (Urogastrone) *Science*, accepted for publication

Grant 676 1944 Frederick M Allen New York $500 studies on refrigeration surgery and treatment See grant 657, 1943 Allen Frederick M Spontaneous and Induced Epileptiform Attacks in Dogs in Relation to Fluid Balance and Kidney Function *Am J Psychiat* **102** 67 1945

Grant 677, 1944 J LeRoy Conel Harvard Medical School $500 post natal development of the human cerebral cortex (Charles A Brant Fund)

Grant 679 1944 Theodor E Bratrud University of Minnesota Medical School $600 colored illustrations for article on congenital adrenal hyperplasia

Grant 681 1944 W E Garrey Vanderbilt University School of Medicine $500 innervation of the heart of vertebrates

Grant 682 1944 Helen Ingleby Woman s Medical College of Penn sylvania $500 problems of cystic disease and carcinoma of the breast

Grant 683 1944 O Boyd Houchin Loyola University Medical School $350 vitamin E deficiency in relation to cardiac function

Grant 684 1944 Rachmiel Levine Michael Reese Hospital Chicago $1,000 secretion and metabolism of progesterone in threatened abortion

Grant 685 1944 Daniel J Glomset Des Moines Iowa $500 cardiac conduction See grant 629 1942 Glomset Daniel J and Birge Richard F A Morphologic Study of the Cardiac Conduction System IV The Anatomy of the Upper Part of the Ventricular Septum in Man *Am Heart J* **29** 526 1945

---

## Committee on Therapeutic Research

The Committee on Therapeutic Research, a standing committee of the Council on Pharmacy and Chemistry, encourages scientific investigations in the field of therapeutics by providing funds for the prosecution of necessary research

During the year 1945 the Committee issued twenty two new grants A detailed list of these grants, together with a list of publications during 1945 and of unexpected grants made before Jan 1, 1945, will be found in the appendix to this report

During 1945 the following grants were issued

Grant 536 C H Werkman professor of bacteriology Iowa State College of Agriculture and Mechanical Arts the mechanism of action of penicillin $1 000

Grant 537 Richard C deBodo associate professor of pharmacology New York University College of Medicine the antidiuretic action of some depressants of the central nervous system $500

Grant 538 Thomas H McGavack a sociate professor of medicine New York Medical College water balance under the influence of various hormones $200

Grant 539 Ward J MacNeal director of the Laboratories of Bacteriology New York Post Graduate Medical School and Hospital bacteriophage phenomena $1 000

Grant 540 Ward J MacNeal director of the Laboratories of Bacteriology New York Post-Graduate Medical School and Hospital experimental and clinical endocarditis $1 000

Grant 541 G L Cantoni assistant professor of physiology and pharmacology Long Island College of Medicine epinephrine $300

Grant 542 Woman s Medical College of Pennsylvania the use of penicillin therapy in intrinsic (bacterial) allergy with chronic infection of the sinuses $500

Grant 543 Harold D Green professor of physiology and pharmacology Wake Forest College Bowman Gray School of Medicine the influence of environmental temperature on ischemic compression shock $400

Grant 544 C H Werkman professor of bacteriology, Iowa State College of Agriculture and Mechanical Arts the mechanism of streptomycin action $1 000

Grant 545 Robert Chambers research professor of biology New York University College of Medicine, blood capillary fragility $500

Grant 546 Stuart Mudd, professor of bacteriology University of Pennsylvania School of Medicine the mode of action of the sulfonamides $1 000

Grant 547 L M N Bach Department of Physiology Tulane University of Louisiana School of Medicine the effect of certain hormones on the kidney tubules $150

Grant 548 Fred W Ellis assistant professor of pharmacology University of North Carolina Medical School the effect of some new synthetic spasmolytic agents $250

Grant 549 W F Hamilton professor of pharmacology and physiology University of Georgia School of Medicine significant blood pressure changes in unanesthetized animals $125

Grant 550 C A Handley and S A Peoples Department of Pharmacology and Physiology Baylor University College of Medicine water distribution of the body following the administration of digitalis $150

Grant 551 Victor Ross Department of Biochemistry Columbia University College of Physicians and Surgeons the preparation of a Schick toxin and a protamine precipitated tetanus toxoid $350

Grant 552 Leland C Wyman associate professor of physiology Boston University School of Medicine the factors controlling the growth and functional efficiency of transplanted adrenal cortical tissue $285

Grant 553 Adrian C Kuyper assistant professor of physiologic chemistry Wayne University College of Medicine a procedure for the detection and determination of unidentified plasma constituents $375

Grant 554 Thomas G Morrione assistant professor of bacteriology University of Vermont College of Medicine alterations in collagen content in experimental cirrhosis $350

Grant 555 Gladys Bucher associate in physiology Woman's Medical College of Pennsylvania pepsin in the urine $500

Grant 556 Robert L Jackson Department of Pediatrics State University of Iowa statistical evaluation and reporting of clinical research of immediate therapeutic value in the treatment of juvenile diabetes and of rheumatic fever $3 000

Grant 557 Lloyd D Seager professor of pharmacology Woman's Medical College of Pennsylvania the acute and chronic effects of the diamidines $500

The following is a list of the investigations conducted with the assistance of grants made by the Committee on Therapeutic Research reports of which were published during 1945

The Antidiuretic Action of Barbiturates (Phenobarbital Amytal and Pentobarbital) and the Mechanism Involved in This Action Richard C. de Bodo and K F Prescott *J Pharmacol & Exper Therap* **85**: 222 (Nov) 1945

Acute Toxicity of Choline Chloride Administered Orally to Rats Margaret W Neuman and Harold C Hodge *Proc Soc Exper Biol & Med* **58** 87 1945

Chronic Oral Toxicity of Choline Chloride in Rats Harold C Hodge *Proc Soc Exper Biol & Med* **58** 212 1945

On the Influence of Several Anesthetics on the Fatal Dose of Digitalis in Cats and Frogs Harold G O Holck Edwin L Smith and Robert H Shuler *J Am Pharm A* (Scientific Edition) **34** 90 (March) 1945

Blood Potassium and Histamine Intoxication in Relation to Adrenocortical Function in Rats Caroline Tum Suden Leland C Wyman and Matthew A. Derow *Am J Physiol* **144**: 102 (June) 1945

Stimulation and Depression of the Central Nervous System by Derivatives of Barbituric and Thiobarbituric Acids, P K Knoefel *J Pharmacol & Exper Therap* **84** 26 (May) 1945

Arrest and Repair in Experimental Endocarditis Lenta Ward J MacNeal Anne Blevins Marcello R Pacis and Alice E Slavkin *Am J Path* **21** 255 (March) 1945

Apparent Arrest of Staphylococcal Endocarditis Ward J MacNeal Charles A Poindexter and Frederick N Marty *Am Heart J* **29** 403 (March) 1945

Experimental Verrucous Endocarditis Ward J MacNeal *Science* **101**: 415 (April 20) 1945

Bacteriologic Studies in Endocarditis Ward J MacNeal and Anne Blevins *J Bact* **49**: 603 (June) 1945

Progress in the Study of Experimental Endocarditis Ward J MacNeal Anne Blevins Alice E Slavkin and Helen Scanlon *New York State J Med* **45**: 1440 (July 1) 1945

Experimental Carditis Ward J MacNeal Anne Blevins Alice E Slavkin and Helen Scanlon Proc *J Bact* **50**: 238 (Aug) 1945

Experimental Nephropathies IX A Summary of Experiments on Dogs James P Simonds and Opal E Hepler *Quart Bull Northwestern University M School* **19** 278 (winter quarter) 1945

Experimental Nephropathies I. A Method of Producing Controlled Selective Injury of Renal Units by Means of Chemical Agents James P Simonds and Opal E Hepler *Arch Path* **39**: 103 (Feb) 1945

Experimental Nephropathies II Renal Phosphatase After Poisoning with Mercury Bichloride Uranyl Nitrate and Potassium Dichromate Opal E Hepler Helen Gurley and James P Simonds *Arch Path* **39** 133 (March) 1945

Wound Healing An Experimental Study of Water Soluble Chlorophyll Derivatives in Conjunction with Various Antibacterial Agents Lawrence W Smith and Alfred E Livingston *Am J Surg* **47**: 30 (Jan) 1945

Some Difficulties Involved in the Prediction of the Stroke Volume from the Pulse Wave Velocity John W Remington W F Hamilton and Philip Dow *Am J Physiol* **144**: 536 (Sept) 1945

The Construction of a Theoretical Cardiac Ejection Curve from the Contour of the Aortic Pressure Pulse, John W Remington and W F Hamilton *Am J Physiol* **141**: 546 (Sept) 1945

The Relationship Between the Cardiac Ejection Curve and the Ballisto cardiographic Forces W F Hamilton Philip Dow and John W Remington *Am J Physiol* **144**: 557 (Sept) 1945

The Determination of the Propagation Velocity of the Arterial Pulse Wave W F Hamilton John W Remington and Philip Dow *Am J Physiol* **144**: 521 (Sept) 1945

Preparation of Pituitary Thyrotropic Hormone, Leon S Siereszko *J Biol Chem* **160** 585 (Oct) 1945

The War and Dermatophytosis with Special Reference to Treatment and Fungicide Testing Fred D Weidman Chester W Emmons Joseph G Hopkins and George M Lewis J A M A **128** 805 (July 14) 1945

The Effect of Ultraviolet Irradiation on the Toxicity and Chemotherapeutic Action of Stilbamadine Lloyd D Seager G R Wells and Gina Castelnuovo *Am J M Sc* **210** 134 (July) 1945

The Effects of Various Sulfonamide Drugs on the Electrocardiogram of the Dog Roberta Hafkesbring and Grace E Wertenberger *Fed Proc* March 1945

Assay of Pepsin in Human Urine Gladys R Bucher *Fed Proc* March 1945

The Isolation and Chemistry of Anterior Pituitary Hormones Influencing Growth and Metabolism Abraham White Monograph A A A S Science Press 1945

The Functional Pathology of Experimental Frostbite and the Prevention of Subsequent Gangrene K. Lange and L J Boyd *Surg Gynec & Obst* **80** 346 (April) 1945

The Functional Pathology of Frostbite and the Prevention of Gangrene in Experimental Animals and Humans Kurt Lange L G Boyd and L Loewe *Science* **102** 151 (Aug 10) 1945

The Functional Pathology of Experimental Frostbite and the Prevention of Subsequent Gangrene K Lange and L J Boyd *Bull New York Acad Med* **21** 441 (Aug) 1945

The following grants were issued before Jan 1 1945 In some cases the grant has expired and an unexpended balance remains, or the work is not yet completed or not yet published

Grant 232 George R Cowgill associate professor of physiologic chemistry Yale University School of Medicine the heart in vitamin B deficiency $250

Grant 297 Melvin Dresbach Harvard University School of Medicine the emetic effect of some of the digitalis bodies $250

Grant 306 Edwards A Park professor of pediatrics Johns Hopkins University School of Medicine rickets in the rat and the effect of solution of parathyroid on the circulation of the bone $75

Grant 408 Ephraim Shorr associate professor of medicine Cornell University Medical College the effect of progesterone on the vaginal smear $300

Grant 443 A. B Baker associate professor of neuropsychiatry and neuropathology and Raymond N Bieter professor of pharmacology University of Minnesota Medical School toxic effects of sulfanilamide and derivatives on nervous system and effect of vitamin B complex in prevention of such injuries $500

Grant 445 Paul L Day professor of physiologic chemistry and John R Trotter instructor in physiologic chemistry University of Arkansas School of Medicine ocular manifestations of tryptophan deficiency $300

Grant 449 Alrick B Hertzman professor of physiology St Louis University School of Medicine peripheral circulation $500

Grant 454 W L. Mendenhall professor of pharmacology and Albert J Plummer assistant professor of pharmacology Boston University School of Medicine the quantitative determination of theophylline $50

Grant 455 Frederick H Pratt professor of physiology and Marion A Reid instructor in physiology Boston University School of Medicine the effect of cardiac drugs on the denervated lymphatic hearts $100

Grant 458 George Fahr professor of internal medicine University of Minnesota School of Medicine the effects of lanatoside C on certain types of heart disease $100

Grant 459 Mary E O Sullivan Bellevue Hospital New York City the therapeutic effect of estradiol in muscular dystrophy $100

Grant 472 Robert V Brown professor of physiology and pharmacology University of North Dakota action of pilocarpine on bile secretion $150

Grant 474 Arthur C. DeGraff professor of therapeutics New York University College of Medicine the effectiveness of sodium thiosulfate and sodium formaldehyde sulfoxalate in treatment of cardiac arrhythmias induced experimentally by mercurial diuretics $400

Grant 478 Stacy R Mettier associate professor of medicine University of California Medical School the Rh factor in blood transfusion and other immunologic aspects of blood grouping $400

Grant 479 Mayo H Soley associate professor of medicine University of California Medical School treatment of patients with toxic diffuse goiter by means of radioactive iodine $350

Grant 483 Donald Slaughter professor of pharmacology and physiology Southwestern College of Medicine, the effects of sulfonamides on the regeneration of visual purple

Grant 484 Alfred Goerner associate professor of biologic chemistry Long Island College of Medicine and M Margaret Goerner pathologist, Brooklyn Thoracic Hospital the toxic action of carcinogenic compounds on liver tissue $400

Grant 488 L R Kaufman director of surgery New York Medical College circulatory competence of the intestine in cases of intestinal obstruction $125

Grant 489 L R. Kaufman director of surgery New York Medical College the use of enzyme mixture for dissolving slough $100

Grant 494 Amedeo S Marrazzi professor of pharmacology Wayne University College of Medicine to investigate sympathomimetic amines $500

Grant 498 Linn J Boyd, director of medicine and Kurt Lange clinical instructor in medicine New York Medical College the effect of cold in the treatment of shock, $300

Grant 499 Joseph Litwins clinical instructor in medicine New York Medical College the chemistry and hematology of blood donors $200

Grant 502 Julian P Maes Department of Pharmacology Dartmouth College the part played by the red blood corpuscle concentration of the systemic circulation in the maintenance of blood pressure at different levels of vasoconstrictor tone $150

Grant 505 James Orten assistant professor of physiologic chemistry Wayne University College of Medicine the relationship of dietary protein to porphyrin metabolism in the rat $250

Grant 506 *Andrew F Burton assistant professor of pharmacology* Howard University (1) the distribution of sulfanilamide in maternal and fetal tissues at various stages of pregnancy, (2) the toxic effects of quinine on the fetus in utero $600

Grant 512 Essie White Cohn associate professor of chemistry University of Denver the effect of sulfonamide drugs on the glycogen content of the liver of rabbits and rats $200

Grant 513 Ruth E Miller professor of bacteriology Woman's Medical College of Pennsylvania the relationship between immune mechanisms and bacterial respiration $412 50

Grant 514 Morton McCutcheon professor of pathology University of Pennsylvania School of Medicine the toxicity of sulfonamides and penicillin and the mechanism of chemotaxis in leukocytes $150

Grant 515 Harald G O Holck associate professor of pharmacology University of Nebraska School of Medicine the relationship of sex to drug action $200

Grant 516 Nellie Perry Watts Department of Pharmacology Woman's Medical College of Pennsylvania, methods to prolong the action of local anesthetic drugs $250

Grant 517 Harry Beckman professor of pharmacology Marquette University School of Medicine, avian malaria $250

Grant 524 Harry E Morton associate professor of bacteriology University of Pennsylvania School of Medicine necessity of bacteriostasis or bactericidal action to prevent infection in an animal body $100

Grant 525 Herbert Silvette assistant professor of pharmacology, University of Virginia Medical School the effect of low barometric pressures on kidneys previously damaged either surgically or by drugs $250

Grant 526 Walter G Crump Jr assistant professor of surgery New York Medical College and Herbert E Hollander assistant clinical professor of surgery City Hospital the enzyme factors in the transplantation of fetal or infantile pancreatic tissue in the adult recipient $200

Grant 527 Ralph G Janes assistant professor of anatomy Wayne University College of Medicine diabetes mellitus produced by alloxan and its modification by various experimental procedures $200

Grant 528 Linn J Boyd director of medicine and Kurt Lange clinical instructor in medicine New York Medical College capillary permeability of the meninges in meningitis and meningismus $350

Grant 529 Linn J Boyd director of medicine and Kurt Lange clinical instructor in medicine New York Medical College the effectiveness of physical therapeutic measures in peripheral vascular diseases $350

Grant 530 *Louis M Palermo assistant professor of surgery* and Boris Pollock clinical assistant in surgery New York Medical College omental grafts $200

Grant 531 Thomas H McGavick associate professor of medicine New York Medical College the absorption of compressed pellets of the steroid hormones $400

Grant 532 Thomas H McGavack associate professor of medicine New York Medical College and Herbert Elias New York Medical College inulin and diodrast clearances in endocrine diseases $250

Grant 533 Robert S Teague associate professor of physiology and pharmacology University of Alabama School of Medicine the metabolism of diethylstilbestrol and its derivatives with emphasis on the ratio of absorption distribution fate and excretion of these drugs $500

Grant 534 Stephen P Jewett New York Medical College the use of ammonium chloride in psychiatric disorders, $350

## TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the Year Ended December 31, 1945

| | | |
|---|---|---|
| Investments (At Cost) as at January 1 1945 | $4 596 850 47 | |
| Bonds Purchased (At Cost) | 2 304 955 36 | |
| | $6 901 805 83 | |
| Less | | |
| Bonds Called Matured or Sold | 1 312 537 36 | |
| Investments as at December 31 1945 | | $5 589 268 47 |
| Balance for Investment January 1 1945 | 67 065 86 | |
| Interest Received on Investments Year 1945 | 123 125 90 | |
| | $ 190 191 76 | |
| Transferred to General Fund | 63 367 40 | |
| Uninvested Funds December 31 1945 | | 126 824 36 |
| Invested and Uninvested Funds as at December 31 1945 | | $5,716 092 83 |

### DAVIS MEMORIAL FUND

| | |
|---|---|
| Balance in Fund January 1 1945 | $7,806 15 |
| Interest Earned on Bank Balance Year 1945 | 97.86 |
| Funds on Deposit as at December 31 1945 | $7 904 01 |

JOSIAH J MOORE Treasurer

## AUDITOR'S REPORT

January 29, 1946.

*To the Board of Trustees*
*American Medical Association*
*Chicago, Illinois*

*Dear Sirs*

We have examined the balance sheet of the American Medical Association, Chicago, Illinois as of December 31, 1945, and the statement of income for the year ended on that date, have reviewed the system of internal control and the accounting procedures of the Association and without making a detailed audit of the transactions, have examined or tested accounting records and other supporting evidence, by methods and to the extent we deemed appropriate except as hereinafter stated regarding confirmation of receivables and observation of the inventory taking

The cash and bank balances have been confirmed by count or by certificates from the depositaries The United States Government and other marketable securities were confirmed by an acknowledgment from the Continental Illinois National Bank and Trust Company of Chicago where the securities are held for safekeeping

We did not independently confirm the accounts receivable by communication with the debtors The accounts receivable were reviewed as to age and collectibility and, in our opinion the balances are fully realizable We reviewed the plan and system of control adopted for inventory taking but we did not observe the taking of the inventories nor did we make tests of the physical existence of the quantities recorded

Expenditures charged to property and equipment accounts during the year, in our opinion were properly capitalized as representing additions or improvements The provision for depreciation for the year appears to be adequate

We have received a letter from Messrs Loesch, Scofield, and Burke, attorneys for the Association, stating that the Supreme Court of Illinois has affirmed, in January 1946, the judgment of the Circuit Court that the Association is required to make contributions under the provisions of the Illinois Unemployment Contributions Act. The amount of the contributions payable by the Association for the period involved (1937 to date) is approximately $260,000 00, of which $37,000 00 is applicable to 1945, plus whatever interest and penalties may be imposed. The liability referred to has not been included in the accounts payable at December 31, 1945, and no charge in respect thereto has been made against the income of the period involved The management considers that the accounts reflect ample provision for the liability, in the Association Reserve and its related fund The attorneys state that no other litigation is pending against the Association

In our opinion, subject to the exceptions set forth in the preceding paragraphs, the accompanying balance sheet and related statement of income present fairly the position of the American Medical Association at December 31, 1945 and the results of the operations for the year based on the accounting procedures employed by the Association regarding which the following observations are submitted

(a) In accordance with the established practice of the Association the accounts as stated do not include (a) unrecorded assets in respect of accrued interest on bond investments, and membership dues unpaid, and (b) provision for accrued property taxes for the year 1945, and sundry unpaid bills and wages

(b) Subscriptions paid in advance are stated at an estimated amount which is based on cash received in December 1945, on account of 1946 subscriptions This procedure conforms to the method used in prior years

(c) Advance payments on publications include an estimated amount ($186 552 42) for prepaid subscriptions to Hygeia, and the amount ($118,933 83) received in advance for January 1946, advertising, directory information sales and service.

Fidelity insurance is carried against the undermentioned officers and employees in the amounts stated

| | |
|---|---|
| Dr Olin West, Secretary and General Manager | $10 000 00 |
| Dr Josiah J Moore, Treasurer | 10 000 00 |
| E A. Hoffman Cashier | 10 000 00 |
| J E Hartigan Assistant Cashier | 2 000 00 |
| Joseph T O Connor Accountant | 2 000 00 |
| Sundry employees (fifteen $1 000 00 each) | 15 000 00 |
| Total Fidelity Insurance | $49 000 00 |

We have pleasure in reporting that the books are well maintained and that every facility was afforded us for the proper conduct of the examination

Yours truly,

PEAT, MARWICK, MITCHELL & Co

## INDEX TO STATEMENTS


| | Exhibit |
|---|---|
| Balance Sheet as of December 31, 1945 | "A" |
| Income Account for the year ended December 31, 1945 | "B" |
| | *Schedule* |
| Publications (Periodicals)—Costs and Expenses for the year ended December 31 1945 | "1 |
| Expenses of Councils Bureaus and Committees for the year ended December 31 1945 | "2 |


Exhibit "A

### BALANCE SHEET

AS OF DECEMBER 31, 1945

| | | |
|---|---|---|
| **ASSETS** | | |
| Property and Equipment—at cost | | |
| Land | | $ 328 773 98 |
| Buildings | $1 375 349 31 | |
| Machinery and printing equipment | 518 343 32 | |
| Office and laboratory equipment | 203 611 71 | |
| | 2 097 304 34 | |
| Less—Reserve for depreciation | 1 086 313 33 | 1 010 991 01 |
| Type metal (book inventory)—at average cost | | *23 003 53* |
| Total Property and Equipment | | 1 362 768.52 |
| Marketable Securities—at cost (valuation based on market quotations $5 725,958 77) | | |
| United States Government securities | 3,986 419 11 | |
| Railroad, municipal public utility and industrial bonds | 1 602 849 36 | 5 589,268 47 |
| Representing investments of | | |
| General fund | 2 414 268 47 | |
| Depreciation reserve fund | 1 100 000 00 | |
| Association reserve fund | 350 000 00 | |
| Building reserve fund | 450 000 00 | |
| Retirement reserve fund | 675 000 00 | |
| Equipment modernization reserve fund | 600,000 00 | |
| Cash Held by Treasurer for Investment | | 126 824 36 |
| Cash in Banks and on Hand | | *232 930 93* |
| Accounts Receivable | | |
| Advertising | 222 145 33 | |
| Reprints | 2 546 20 | |
| Directory Report Service 18th Edition | 2 153 13 | |
| Miscellaneous accounts receivable | 3,390 76 | 230 235 42 |
| Inventories of Materials Supplies Work in Progress and Publications | | 86 412 03 |
| Expenditures on Publications in Progress | | 157 959 85 |
| Prepaid Expenses, Deposits and Advances | | |
| Insurance etc. | 2 756 81 | |
| Deposits and advances | 8 997 15 | 11 753 96 |
| Total | | $7,798,153 54 |
| **LIABILITIES** | | |
| Accounts Payable | | |
| Co-operative Medical Advertising Bureau | | $ 42 874 55 |
| Miscellaneous | | 72 834 66 |
| Total Accounts Payable | | $ 115,709 21 |
| Subscriptions Paid in Advance | | 23 068 85 |
| Advance Payments on Publications | | 305,486.25 |
| Net Worth | | |
| Association reserve | $ 350 000 00 | |
| Building reserve | 450 000 00 | |
| Retirement reserve | 675,000 00 | |
| Equipment modernization reserve | 600,000 00 | |
| Capital account | | |
| Balance at December 31, 1944 | $4 738 180 42 | |
| Add—Net income for the year ended December 31 1945 | 990 708 81 | |
| | 5,728 889 23 | |
| Deduct—Amounts transferred during year to retirement reserve ($150,000 00) and to equipment modernization reserve ($300 000 00) | 450 000 00 | 5,278 889 23 |
| Net Worth December 31 1945 | | 7 353 889 23 |
| Total | | $7,798 153 54 |

Exhibit "B

### INCOME ACCOUNT

FOR THE YEAR ENDED DECEMBER 31, 1945

| | | |
|---|---|---|
| Income | | |
| Fellowship dues | | $ 62,617 00 |
| Income from investments | | 116 840 21 |
| Miscellaneous receipts and other income | | 20 535 71 |
| | | 199 992 92 |
| Publications—Periodicals | | |
| Subscriptions | $1 332 631 22 | |
| Advertising | 1 920 465 58 | |
| | 3 253 096 80 | |
| Costs and expenses—Schedule 1" | 1 808,381 36 | 1,444 715 44 |
| Books, Pamphlets and Reprints Sold | 107 440.99 | |
| Less—Printing and other costs | 64 696 56 | 42,744 43 |
| Total Income | | $1,687,452 79 |
| Expenses | | |
| Conducting Councils Bureaus and Committees —Schedule 2 | 537 611 66 | |
| Legal and investigating | 20 230 55 | |
| Employees' group annuities | 133 492 16 | |
| Miscellaneous | 5 409 61 | 696 743 98 |
| Income in Excess of Expenses | | $ 990 708 81 |

Schedule "1"

### PUBLICATIONS (PERIODICALS) COSTS AND EXPENSES

FOR THE YEAR ENDED DECEMBER 31 1945

| | |
|---|---|
| Wages and salaries | $ 872 540 79 |
| Paper stock | 298 666 07 |
| Engravings and illustrations | 45 326 28 |
| Ink | 20,994 52 |
| Factory and mailing supplies | 19,647 60 |
| Repairs and renewals—machinery | 2,886 99 |
| Express and cartage | 11,851 48 |
| Power and light | 14 713 79 |
| Building expense | 45 993 07 |

| | | |
|---|---|---|
| Fuel | | 6 255 89 |
| Insurance and taxes | | 34 626 68 |
| Editorials, news and reporting | | 16 034 43 |
| Postage—first class | | 48 022 07 |
| Postage—second class | | 60 479 69 |
| Commissions—subscriptions and advertising | | 109 195 49 |
| Discounts | | 75 623 54 |
| Exchange | | 1 649 24 |
| Subscription promotion expense | | 12 278 74 |
| Office supplies | | 7 439 96 |
| Telephone and telegrams | | 4 763 80 |
| Office printing | | 22 317 54 |
| Binding | | 4 053 80 |
| Miscellaneous operating expenses | | 25 446 43 |
| Group hospital and life insurance | | 11 001 53 |
| Estimated cost to complete November December 1945, issue of special journal publications | | 15 418 22 |
| Bad debts and recoveries—net | | (168 28) |
| Loss on metal dross sales | | 515 83 |
| | | 1 787,575 19 |
| Depreciation (based on estimated remaining life) | | |
| Buildings | $23 133 80 | |
| Machinery | 14 862 45 | |
| Type and factory equipment | 1,579 81 | |
| Furniture and equipment | 7 552 32 | 47,128 38 |
| | | 1,834 703 57 |
| *Deduct—Proportion of overhead expense charged to other* publications and departments | | 26 322.21 |
| Total Publications (Periodicals)—Costs and Expenses | | $1 808 381 36 |

NOTE Total wages and salaries for year 1945 amounted to $1,342 149 45 Of this amount $872 540 79 is included above $328 699 82 is shown in Schedule "2 ' (expenses of Councils Bureaus, and Committees) and the remainder $120 908 84 was disbursed on the maintenance of records which will be used in connection with the next edition of the American Medical Directory, and with the printing of books reprints and pamphlets, and printing in process at the close of the year

Schedule '2

### EXPENSES OF COUNCILS BUREAUS AND COMMITTEES

FOR THE YEAR ENDED DECEMBER 31 1945

| | |
|---|---|
| Salaries and wages | $328,699 82 |
| Office printing | 16 286 22 |
| Office supplies and repairs | 7 161 18 |
| Express telephone and telegraph | 6 679 66 |
| Postage | 13 796 41 |
| Binding | 463 75 |
| Books and periodical subscriptions | 1 378 18 |
| Legislative services | 2,971 91 |
| Educational material distributed | 6 854 20 |
| Travel | 21 044 05 |
| Radio broadcasting | 23 985 84 |
| Inspection of hospitals and medical schools | 3 706 93 |
| Association exhibits | 7 188 27 |
| Trustees meeting expenses | 9 206 83 |
| Consultations, investigations tests and honorariums | 19,672 62 |
| Section secretaries' conference and honorariums | 2,688 51 |
| Council and bureau conferences | 23 082 00 |
| Committee on scientific research | 2,977 13 |
| Other committee expenses | 15,223 84 |
| Miscellaneous | 24 544 31 |
| Total Expenses of Councils Bureaus and Committees | $537 611 66 |

NOTE The above expenses are spread over the following Councils Bureaus and Committees as indicated Association Account $141 413 86 Bureau of Health Education $56 241 70 Council on Pharmacy and Chemistry $49 547 06 Chemical Laboratory $21 102 14 Council on Physical Medicine $24 261 78 Council on Foods $16 583 50 Committee on Therapeutic Research, $13 358 97 Council on Medical Education and Hospitals $60,948 84, Bureau of Legal Medicine and Legislation $33 145 67 Bureau of Investigation $9,164 90 Bureau of Medical Economics $6 309 26 Council on Industrial Health, $21 152.22, Association and Bureau of Exhibits $22 795 12 Council on Medical Service and Public Relations $50 342 97 Committee on Medical Preparedness $11 243 67

## REPORT OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

*To the Members of the House of Delegates of the American Medical Association*

The major concerns of the Council on Medical Education and Hospitals during the past year have been with the future supply of premedical and medical students and with meeting the needs of returning medical officers desiring residencies

### THE SUPPLY OF PREMEDICAL AND MEDICAL STUDENTS

Since the cessation of deferment of premedical students in June 1944, the Council has bent every effort toward a modification of this policy Efforts in this direction were continued during the past year with the Army, Navy, Selective Service System and Congress In addition, the Secretary with others representing interested groups held a conference with President Truman on this subject. Throughout efforts to provide for the deferment of premedical students, the Council has had the cooperation of the Procurement and Assignment Service and the War Manpower Commisison No change in policy has resulted from these attempts to correct the situation. There still is no deferment of premedical students

As a result of these policies, the medical school classes entering in the year 1946 must be derived from veterans, physically disqualified males, women, and men under 18, besides the few medical students who are carried on other Selective Service deferments Undoubtedly the enrolment of women will increase and the returning veteran will supply considerable numbers of qualified premedical students However, the consensus is that the 1946 entering classes will be deficient either in numbers or in quality It is a little too early to predict exactly how the 1946 entering class will be affected, since most schools will not commence their next session until September or October 1946

### RESIDENCIES FOR RETURNING MEDICAL OFFICERS

The Council on Medical Education and Hospitals has received hundreds of letters a month from physician veterans and medical officers on active duty Most of the officers seek information on residencies in specialties, short term refresher courses, basic science instruction and other matters relating to the education of physician veterans under the G I Bill of Rights Numerous requests are received also with reference to specialty certification, requirements of the individual boards, educational credit for military service, opportunities for training in army, navy and veterans' hospitals, preceptorships and assistantships, affiliated hospital assignments, hospital quota allocations and deferment of residents and assistant residents under the 9-9-9 program of medical education Many seek information on hospital administration, medical licensure requirements, opportunities for staff appointments, organization of clinics, office plans, surplus equipment and supplies, financial aids in training and practice, suitable appointments for handicapped veterans and various other questions

These inquiries receive careful attention, and every effort is made to supply complete information to all medical officers In relation to educational opportunities, the Council provides lists of postgraduate continuation courses for veteran and civilian physicians, hospitals approved for internships, residencies and fellowships, and lists of vacancies reported in relation to individual specialties Since Oct. 18, 1945 the Council has conducted surveys to ascertain the number of vacancies available in approved hospitals for returning medical officers The Council is also continuing its efforts to establish additional high grade residency programs in hospitals that have not yet developed their educational service to full capacity Through these activities many new services are now in process of organization and may soon be added to the approved lists

As many as 200 medical officers have visited the Council's office each month, seeking in general the same type of information as requested in the letters already mentioned Among these men there is great interest in certification and specialty practice, although the older group, 35 to 40 or over, hesitate as a rule to undertake a long term residency program of three years to qualify for board certification. Many of these, however, are

hoping to obtain assistantships or preceptorships that combine both practice and education Some officers are undecided as to future training and practice and appreciate the assistance given through personal counseling Many of the officers are critical of their army service, and some are disappointed that educational appointments are not immediately available for residency or postgraduate training It is observed, however, that the great majority are applying at university hospitals or medical centers, where requests for training are already in excess of available facilities

The personal interviews have been exceedingly helpful in relation to these problems The medical officers appreciate the opportunity to express their views, and it is also possible in these contacts to explain more fully the work of the American Medical Association in connection with graduate and postgraduate medical education The value of these contacts is clearly evident, and every effort will be made to continue our assistance and personal service to the returning medical officer

The Council's efforts at stimulating hospitals to expand their residencies consistent with their educational resources and the maintenance of high standards has done much to meet the greatly increased demands for such training In the annual Hospital Number of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION published April 20, 1946 there is listed a total of 8,043 approved residency places in all fields This number is to be compared with that of 1941, when there were 5,256 places The total expansion is thus more than 50 per cent This still falls short of the estimated 100 per cent expansion required, but that goal is still being approached Some 2,000 residency places formerly occupied by assistant residents and residents are now being made available to physician veterans because of the discontinuing of the 9 9-9 program Efforts at increasing the residency offerings of approved hospitals are continuing, although there has been some evidence since March 1946 that the immediate acute demand is probably decreasing This evidence is based on the number of inquiries received by the Council from medical officers

### TEMPORARY APPROVAL OF RESIDENCIES

With the increased demand for residency training in recent months, large numbers of applications have been submitted by hospitals seeking Council approval of newly organized educational programs To make these facilities available to physician veterans without undue delay, the Council has instituted a plan for the temporary approval of such residencies as give satisfactory indication that training can be maintained in accordance with present standards The plan has been developed in collaboration with the Advisory Board for Medical Specialties and has been approved by nearly all the specialty boards

It should be noted that temporary approval is not automatic, each application will be carefully evaluated on the basis of information supplied as well as previous knowledge of the hospital service. Only if the representatives of the Council and of the Board are reasonably satisfied that the educational program fulfils the requirements for residency training will temporary approval be extended. The following procedure has been adopted

1 *The Council on Medical Education and Hospitals of the American Medical Association* has temporarily delegated to its Secretary the authority to grant temporary residency approval on behalf of the Council subject to concurrence by the appropriate American board as described in No 2

2 *Each participating American board has appointed representatives* (usually one individual for each board) to consider new residencies for temporary approval with authority to act on behalf of the board

3 Temporary approval will be based on information from the hospital concerning the personnel, facilities and educational program of the hospital service involved *without immediate inspection* Such approval will be granted only if the representatives of the Council and of the board are reasonably satisfied that the educational program fulfils the standards of both bodies

4 Subsequently employing the usual procedures an inspection of the hospital will be carried out by *the Council's staff On the basis* of inspection report the Council will consider the temporarily approved hospital for transfer to the regularly approved list in the usual manner The inspection report and the recommendations of the Council will be submitted to the appropriate board and the board will return its concurrence or disagreement with the Council The result of this procedure would be either (*a*) transfer of the temporarily approved residency to a fully approved status or (*b*) withdrawal of the temporary approval

5 In the event of withdrawal of temporary approval and failure to grant regular approval credit toward board certification will be given to physicians for that part of their training received while the residency was on a temporary approval status After such withdrawal of approval residents seeking board certification will be given a reasonable time to obtain another acceptable residency without loss of time credit This means that no resident would be penalized so far as board credit is concerned for time spent in a temporarily approved residency

In seeking approval by the Council on Medical Education and Hospitals, those hospitals which organize new residencies should initially make no distinction between regular versus temporary approval Applications should be transmitted to the Council in the regular manner In the immediate future most, if not all, applications will be considered at once for temporary approval The Council's staff will proceed with regular inspections as rapidly as possible, so that transfer of acceptable hospital residencies from the temporarily approved to the regular approved list will take place as rapidly as possible if the inspection report seems to warrant such transfer in the opinion of the representatives of the Council and of the American board concerned

The program of temporary approval of residencies has been approved by virtually all of the American boards in the various specialties and is operating smoothly and effectively Within two months of the proposal of this plan to the Advisory Board for Medical Specialties, in February 1946, there were 162 separate residency programs approved on this basis, besides over 200 individual residency places

### HOSPITAL RESIDENCIES UNDER THE G. I BILL OF RIGHTS

In collaboration with the Committee on Postwar Medical Service, the Council has been seeking and finally received a clarification from the Veterans Administration of the status of residency hospitals and of physician veterans receiving such residency training under the educational provisions of the G I Bill of Rights Important questions repeatedly raised have been *Is a hospital offering* an acceptable residency program eligible to participate? Are physician veterans eligible for subsistence benefits while pursuing such a course of study? May a veteran commence his residency training while on terminal leave? These questions have been answered in the affirmative with certain qualifications The details of such arrangements were published in THE JOURNAL Jan 26, 1946 Reprints of these regulations were sent to residency hospitals and to the state agencies appointed by the various governors for approving educational institutions desiring to participate under the G I Bill of Rights Reprints of this statement were also sent to each regional Veterans Office throughout the United States The dissemination of this information was carried out with the full endorsement of the central office of the Veterans Administration in Washington

A modification of the original G I Bill of Rights was passed in amendments which became law in December 1945 Certain of the changes had been advocated by the Council It is now not necessary for a physician veteran of any age to prove that his education was interrupted to become eligible, more satisfactory arrangements for tuition payments for short courses are provided tuition and subsistence benefits will not be charged against the veteran's bonus should one later be voted by Congress, and the subsistence benefits were increased

### GRADUATE CONTINUATION COURSES FOR VETERAN AND CIVILIAN PHYSICIANS

The Council has periodically published in THE JOURNAL lists of continuation courses of a review and refresher nature offered by educational institutions throughout the country to graduate physicians Recently such lists have been published semiannually In the listing published Dec. 8, 1945, courses offered Jan. 1 to July 16, 1946 were described. The listing was some 30 per cent longer than for the preceding six months period as a result of increasing facilities which were developed primarily for returning medical officers More important than mere numbers of courses is the fact that more of these courses are of longer duration, more are being offered by universities and medical schools and the geographic distribution is more extensive Such courses are being developed so rapidly and in such numbers that supplementary listings have had to be published by the

Council in the interim between regular publications. Such supplements were published in THE JOURNAL March 2, 1946 and March 23, 1946. The response of medical schools, hospitals, medical societies and other educational institutions throughout the country to the great demand for these educational opportunities has been most gratifying. On every hand there is a maximal attempt to provide the needed facilities.

### RECONVERSION OF THE 9-9-9 INTERNSHIP AND RESIDENCY PROGRAMS

The withdrawal of intern and residency quotas from all hospitals on April 1, 1946 as announced by the Procurement and Assignment Service marks the return of hospital educational services to a peacetime status. With this change as well as the return of medical officers to former staff positions, it may be anticipated that many hospitals will reorganize their educational programs for interns and residents, institute new residencies in various departments and reestablish those which remained inactive during the war because of quota limitations or reduction in teaching staff. When adequate clinical and teaching facilities are available such expansion will be of direct benefit to physician veterans, as it will lead to further opportunities for residency training.

In November 1945 the Procurement and Assignment Service announced its plan for the reconversion of the 9-9-9 program. Under this plan the commissioned officers scheduled to complete their nine months' internship on April 1 would be permitted to continue their training until July 1, 1946. It was stated, however, that if hospitals were unable to accommodate these men as well as the new interns appointed for April 1 the commissioned officers who completed their nine months of intern training would be called to active duty. A subsequent directive specified also that requests for extension of individual internships through the additional three months period would need to be submitted by February 1. Since one of the main purposes of the reconversion program was to reestablish the peacetime status of twelve months' internships beginning each July, the new interns appointed April 1, 1946 will be permitted to continue until July 1, 1947.

It was also the purpose of the reconversion plan to provide more residency positions for returning medical officers, and hospitals were urged to begin at once to appoint veterans to the house staff so that every military resident and assistant resident could be called to active duty on or before April 1, 1946. The discontinuance of deferments beyond the intern level has made available to veterans many additional places, and as time goes on an increasing number of positions will be filled by returned medical officers, who now constitute the primary source of supply for the future residency appointments.

### APPOINTMENT OF INTERNS

The following plan for the appointment of interns whose services will begin July 1, 1947 has been approved by a Joint Committee of the American Hospital Association, Association of American Medical Colleges, Council on Medical Education and Hospitals of the American Medical Association, American Protestant Hospital Association and Catholic Hospital Association of the United States and Canada. The plan applies only to July 1, 1947 appointments and will be modified for later internships. It provides that applications for internships should be submitted in accordance with the following principles:

1. Applications and credentials for internships to begin July 1, 1947 should not be released by the medical schools or received by the hospitals before June 1, 1946. Credentials include letters of recommendation, summaries of scholastic records from the dean's office, transcripts of records and recommendations of college faculties.
2. Hospitals should not issue appointments to interns either written or verbal before July 1, 1946.
3. The prospective intern's acceptance or rejection of such appointment shall reach the hospital on or before July 8, 1946.
4. Medical school teaching staffs will very carefully refrain from conversations with their clinical clerks which may be interpreted as promises of internship appointment.

It is strongly urged that all medical schools and hospitals act on the basis of the principles just described. The plan can be successful only if there is complete cooperation by all concerned.

The successful operation of this program should materially improve the manner of internship appointments providing intern applicants with the maximal opportunity for obtaining the most desirable internships and preventing unfair competition among hospitals in securing interns.

### HOSPITAL SERVICE IN THE UNITED STATES

The annual hospital report of the Council on Medical Education and Hospitals published in the April 20, 1946 issue of THE JOURNAL shows a continued increase of hospital service in 1945. The number of patients admitted was 16,257,402, or 220,544 more than reported in 1944. In addition there were 1,969,667 hospital births, a total unequaled in any previous year. The tremendous volume of hospital service in the United States is likewise reflected in the average census, or daily patient load, which reached a new high of 1,405,247. This average, measured over a period of one year, represents the unprecedented total of 512,915,155 treatment days. Included in the survey of 1945 are 6,511 registered hospitals, which have a combined capacity of 1,738,994 beds exclusive of 81,131 bassinets. While the number of beds represents a gain of 8,999 in the last year, the increase is small when compared with the rapid wartime expansion of 265,427 beds in 1943 and 80,691 in 1944.

The present report reflects only the early phase of peacetime readjustments in the hospital field. Changes are noted particularly in the federal hospitals, which show a reduction in number, in bed capacity and in total patients admitted. The latter were reduced by 239,322 in 1945, whereas an increase of 254,664 was reported in the previous year. Longer periods of hospitalization are now evident in the federal classification as well as an increased census, or daily patient load. The percentage bed occupancy increased sharply in 1945, as did also the average length of stay in the federal general hospital group. As in the previous war years, the statistical data on federal hospitals have been compiled as a unit report. It is not now possible, therefore, to supply separate information on federal groups except so far as individual hospital data are included in the registered list.

The general hospitals supply the greatest volume of hospital service, as evidenced by their report of 15,228,270 admissions, or 93.6 per cent of all patients admitted in 1945. They likewise gave care to 1,907,772 newborn infants, 96.8 per cent of the total live births in hospitals registered by the American Medical Association. Increases in general hospital admissions occurred in all governmental and nongovernmental groups except in the federal classification and in the hospitals listed as corporations unrestricted as to profit. The governmental general hospitals received 36 per cent of the total admissions, the nongovernmental general hospitals 57.6 per cent. In 1945 the average length of stay in general hospitals increased by two days, while the bed occupancy rate advanced from 61.6 to 72 per cent. These changes are largely the result of corresponding developments in the federal hospital group. In previous years the average census of the mental institutions exceeded the daily patient load reported by general hospitals. For the first time this trend has now been reversed, with a reported average of 665,105 in the general hospitals as compared with 624,349 in the mental hospital group. Considering the supply and utilization of hospital beds, it is of interest to note that the nonfederal general hospitals in relation to the estimated civilian population (U. S. Census Bureau, July 1, 1945) show a ratio of 3.5 beds per thousand, with an actual daily utilization of 2.6.

The governmental hospital group, which includes federal, state, county, municipal and city-county hospitals, has 78 per cent of the total hospital beds. They however received only 39 per cent of the admissions in 1945, whereas the nongovernmental hospitals, with 22 per cent of the beds, admitted nearly ten million patients, or 61 per cent.

### THE ACCELERATED PROGRAM IN MEDICAL SCHOOLS

Most if not all of the medical schools of this country will decelerate their educational programs in part or in toto commencing in 1946. All but four medical schools have returned to annual admissions. The plans for deceleration vary from institution to institution, with one or more of the upper classes continuing the accelerated program until graduation in some

instances To enable those schools desiring to do so to decelerate commencing in 1946 it was necessary that appropriate adjustments be made by the Army, the Navy and the Selective Service System, particularly in the case of those schools whose academic year ended in March 1946 and who desire to commence the next academic year six months later in the autumn of 1946 In the case of the Selective Service System it was necessary to obtain their permission, since certain medical students are still carrying occupational deferments Conferences with the Selective Service System resulted in its agreeing to a program involving a three months vacation and a three months special study period which students might carry out either in school or elsewhere. Consent for this was sought by the Council to enable those schools which wished to do so to free their educational facilities during the spring and summer in order to provide added educational opportunities for medical officers, particularly in clinical fields where the limitations of staff and material make it difficult for medical schools to provide training both to medical students and to graduate physicians

TERMINATION OF THE A. S. T AND V 12 PROGRAMS

By the close of the academic year in the medical schools in 1946 the Army Specialized Training and Navy V-12 programs were liquidated in our medical schools Most students have been discharged and are continuing in school as veterans, although the time spent by a student in one of these programs does not grant him credit for benefits under the educational provisions of the G I Bill of Rights

COLLABORATION OF MEDICAL SCHOOLS WITH VETERANS' HOSPITALS

The Veterans Administration has sought the collaboration of medical schools in the operation of various veterans' hospitals In this arrangement the medical schools will provide consultation service and assistance in formulating and carrying out educational programs at the residency level in veterans' hospitals A considerable number of medical schools are participating in this program Although this is a promising development, it is too early to assess the success which this project will enjoy

RESIDENCIES IN ARMY AND NAVY HOSPITALS

The Council has been collaborating with the office of the Surgeons General of the Army and Navy in the establishment of acceptable residency programs in army and navy hospitals The aim in setting up these programs has been to seek to improve the quality of medical care in these hospitals, to provide an incentive to medical officers to remain in the service and to supplement the work of civilian hospitals in providing educational opportunities for medical officers

HILL-BURTON HOSPITAL SURVEY AND CONSTRUCTION BILL (S. 191)

The Council on Medical Education and Hospitals has followed the direction of the Board of Trustees and the House of Delegates of the American Medical Association in its support of the Hill-Burton hospital survey and construction bill The Secretary of the Council appeared in support of the bill before the Senate Subcommittee on Education and Labor in February 1945 and before the House Subcommittee on Public Health of the Committee on Interstate and Foreign Commerce in March 1946 This measure has passed the senate with certain changes strengthening the authority of the Federal Hospital Council as recommended by the Secretary and another representative of the American Medical Association in the Senate hearings

NATIONAL SOCIETY FOR MEDICAL RESEARCH

At its meeting in December 1945 the House of Delegates endorsed support by the American Medical Association for measures to combat antivivisection propaganda and campaigns Subsequently there has been organized the National Society for Medical Research, with which the Council on Medical Education and Hospitals is collaborating The Secretary of the Council is a member of the executive committee of the board of directors of this national society Support for this organization is being sought from all interested organizations and institutions, including state and county medical societies A permanent office and secretariat is being organized. There is promise that this organization may accomplish much in the education of the public regarding the necessity and humane character of animal experimentation. The organization deserves wide support and will continue to have the full cooperation of the Council on Medical Education and Hospitals

ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE 1946

In 1945 the forty-first Annual Congress on Medical Education and Licensure had to be canceled because of government restrictions on railroad travel and hotel reservations, although most of the papers prepared for presentation at this congress have been published in reprint form The forty-second Annual Congress on Medical Education and Licensure was held in Chicago in February 1946 under the auspices of the Council on Medical Education and Hospitals and the Federation of State Medical Boards, with which body the Council works in close collaboration Despite travel and hotel difficulties the attendance at this congress was approximately 300 Besides the formal meetings and presentation of papers, this session serves as the occasion for various joint meetings of organizations with common interests For example, the Council confers with the Federation of State Medical Boards, the National Board of Medical Examiners, the Association of American Medical Colleges and the Advisory Board for Medical Specialties The Council has met regularly in joint sessions with the latter organization to discuss the acute problems concerned with providing residencies for returning medical officers

LIAISON COMMITTEE OF THE COUNCIL AND THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Some years ago the Board of Trustees of the American Medical Association authorized the establishment of a liaison committee of the Council on Medical Education and Hospitals and the Executive Council of the Association of American Medical Colleges Three or more meetings of this committee are held annually, enabling the Council and the Association of American Medical Colleges to advise on problems of mutual interest and to act jointly in matters pertaining to medical education Each body has been considerably strengthened by this arrangement. Inspections of medical schools are carried out jointly by the two organizations joint reports on inspections are issued and identical action is taken by the two groups in cases involving the status of a medical school

FOREIGN CREDENTIALS OF MEDICAL STUDENTS AND PHYSICIANS

The Council on Medical Education and Hospitals has always limited its consideration of medical schools for inclusion on its lists of approved institutions to the schools in Canada and the United States, so that foreign credentials otherwise must be evaluated by institutions and licensing authorities themselves as the occasion arises In connection with the Association of American Medical Colleges the Council has adopted the following recommendations to medical schools regarding foreign applicants desiring admission to schools in this country either with or without advanced standing

When an approved medical school wishes to consider an application from a student presenting credentials from a foreign university for admission with or without advanced standing the following uniform procedures are recommended

1 That only credentials sent directly from the foreign school to the American school be considered

2 That the applicant meet the admission requirements of the school to which he is applying and that his credentials be evaluated preferably by examination by the faculty of the arts college who appraise transcripts of records or by the usual agency of the medical school

3 That medical school subjects be evaluated preferably by examination, by professors who teach those subjects in the medical school to determine the competence of the applicant in those fields

4 That not more than two years of medical credit be allowed for work done in a foreign school

5 That the candidate be advised that meeting these requirements and graduation be no assurance that he will be eligible for licensure in the United States

6 That applicants from a foreign university for the freshman class be requested to take one year of premedical work in an approved American college of liberal arts before being given consideration for the study of medicine.

Efforts have been begun by the Council, the Advisory Board for Medical Specialties and the National Board of Medical Examiners to explore the possibilities for establishing some kind of approved listing of foreign medical schools

### JOINT MEETINGS WITH THE COUNCIL ON INDUSTRIAL HEALTH

The Council on Medical Education and Hospitals has met on several occasions with the Council on Industrial Health to discuss ways and means of developing and improving educational facilities for training in industrial health

### NEW MEDICAL SCHOOLS

The University of Washington, which has an appropriation of $450,000 for the medical and dental schools until March 31, 1947 and $3,750,000 for construction of the plant, including a hospital, has secured the services of Dr Edward Turner as full time dean Dr Turner was formerly president of Meharry Medical College

In California the regents of the University of California have authorized the establishment of a medical school at the University of California at Los Angeles The state legislature has appropriated seven million dollars for building and equipment Dr Verne O Knudsen, dean of the Graduate Division, has been appointed chairman of a committee, one of whose duties is to determine the location of the institution The question at issue is whether the medical school should be located on the present campus, which is in Westwood Hills about 12 miles west of the center of Los Angeles, or near the hospitals in Hollywood or Los Angeles

Every basic science school now operating under state auspices (Mississippi, Missouri, North Carolina, North Dakota, South Dakota and West Virginia) is contemplating expansion to the four year status All of them have at least authorized surveys of the problem, some of which have been completed

The state of Connecticut is also seriously considering the establishment of a four year medical school

Unfortunately, some of the current proposals for establishing new medical schools are ill conceived and rest on a failure to understand certain well recognized principles which must guide the thinking about such projects Some of these considerations, which would seem to be axiomatic, but too often disregarded, are as follows

1 There is no justification for the establishment of a medical school to meet such an acute temporary emergency as the absence of physicians on military duty

2 Any overall increased present or postwar need for additional physicians occasioned by the war can be provided by existing approved schools There is no justification for establishing new medical schools for this purpose Furthermore, the normal annual number of graduates from existing schools is adequate for the peacetime needs of the country, granted distribution is equitable.

3 The maldistribution of physicians as between the states or between urban centers and rural areas is a problem to be attacked primarily by other means than the production of more doctors in a given state, the rate of production and the distribution of doctors in this country are independent

4 Medical education is by far the most expensive form of professional training, requiring an initial outlay and subsequent annual budgets in the early years totaling millions of dollars and not tens or hundreds of thousands A school whose resources include annual budgets of less than $350,000, independent of the cost of maintenance of the hospital and outpatient departments, is unlikely to conduct a satisfactory program

5 The operation of an acceptable four year medical school is far more expensive than the conduct of a basic science medical program.

6 The trend toward more full time clinical instructors is so general that any new school commencing with all or nearly all of its staff on a part time basis is already obsolete

7 The possession of the M D degree and the successful practice of medicine do not, in themselves, indicate that a physician is qualified to teach medical students satisfactorily, even in clinical subjects Volunteer and part time teachers require special training and experience.

8 A hospital well equipped to provide medical care to the people or even satisfactory for internship or residency training is not thereby necessarily satisfactory as a medical school hospital

9 Medical schools must be so located that there is an ample supply of patients of all kinds, on the one hand, and competent instructors, including specialists, on the other hand

10 No medical school is worthy of the name which does not carry out some significant research, even though the primary aim of the school is the training of general practitioners

A failure to observe these generalizations might lead to costly ventures without prospects of accomplishing the ends sought, however desirable those ends may be.

### MEDICAL SCHOOLS VISITED DURING THE CALENDAR YEAR 1945

During the calendar year 1945 the following medical schools were visited for consultation, survey or other purposes

Wayne University College of Medicine
University of Minnesota Medical School
University of Buffalo School of Medicine
Hahnemann Medical College and Hospital
Meharry Medical College
University of North Carolina School of Medicine
University of Montreal Faculty of Medicine
Washington University School of Medicine
Essex College of Medicine and Surgery

On the basis of survey findings at the Hahnemann Medical College, that institution was placed on probation by the Council in June 1945 The official status of other schools has remained unchanged during the year 1945

At the request of the Insular Government and the University of Puerto Rico, the Secretary of the Council on Medical Education and Hospitals conducted a three week survey of medical care in Puerto Rico During this survey special consideration was given to the problem of the feasibility and advisability of establishing a four year medical school in Puerto Rico under the direction of the University of Puerto Rico

### INSPECTION OF HOSPITALS AND TECHNICAL SCHOOLS

Table 1 summarizes the inspection of hospitals and technical schools made by the Council during the calendar year 1945

TABLE 1.—*Inspection of Hospitals and Technical Schools During 1945*

| | |
|---|---|
| Hospitals | |
| Intern training | 11 |
| Residencies and fellowships | 109 |
| Intern training and residencies | 1 |
| Registration | 14 |
| Total | 135 |
| Individual Residencies and Fellowships Investigated | 337 |
| Technical Schools | |
| Clinical laboratory schools | 3 |
| Physical therapy schools | 7 |
| Occupational therapy schools | 1 |
| Total | 11 |

### SUMMARY OF REGISTERED HOSPITALS AND TECHNICAL SCHOOLS

In Table 2 are summarized the figures for approved hospitals and technical schools with changes occurring during the calendar year 1945

TABLE 2.—*Registered Hospitals and Technical Schools*

| | |
|---|---|
| Registration of Hospitals | |
| Hospitals registered Jan 1 1945 | 6 705 |
| New institutions registered during 1945 | 113 |
| Closed or transferred to unclassified file | 260 |
| Hospitals registered Dec 31 1945 | 6,558 |
| Internship Approval | |
| Hospitals approved for intern training Jan 1, 1945 | 777 |
| Approved during year | 19 |
| Removed from approved list | 2 |
| Hospitals approved for intern training Dec 31 1945 | 794 |
| Residency Approval | |
| Hospitals approved for residency training Jan 1 1945 | 776 |
| Approved during year | 61 |
| Removed from approved list | 54 |
| Hospitals approved for residency training Dec. 31, 1945 | 783 |

| | |
|---|---|
| Clinical Laboratory Schools | |
| Approved schools Jan 1 1945 | 253 |
| Approved during year | 16 |
| Removed from approved list | 3 |
| Approved schools Dec. 31, 1945 | 266 |
| Physical Therapy Schools | |
| Approved schools Jan 1 1945 | 31 |
| Approved during year | 2 |
| Removed from approved list | 10 |
| Approved schools Dec 31, 1945 | 23 |
| Occupational Therapy Schools | |
| Approved schools Jan 1 1945 | 17 |
| Approved during year | 1 |
| Removed from approved list | None |
| Approved schools, Dec 31 1945 | 18 |
| Medical Record Librarian Schools | |
| Approved schools, Jan 1 1945 | 10 |
| Approved during year | None |
| Removed from approved list | None |
| Approved schools, Dec. 31 1945 | 10 |
| X Ray Schools | |
| Approved schools, Jan 1, 1945 | 112 |
| Approved during year | 17 |
| Removed from approved list | None |
| Approved schools, Dec 31 1945 | 129 |

### COUNCIL PUBLICATIONS

Regular publications of the Council during the year 1945 include the following

Hospital Service in the United States
State Board Number of THE JOURNAL
Medical Education in the United States
Compilation of special reprint edition of papers prepared for the 1945 Annual Congress on Medical Education and Licensure
Postgraduate Continuation Courses for Veteran and Civilian Physicians
Approved Internships
Approved Residencies and Fellowships in the Specialties
Hospital Residencies and the G I Bill of Rights
Postwar Graduate Medical Education
Choice of A Medical School
Approved Colleges of Arts and Sciences
Schools for Clinical Laboratory Technicians
Schools for Physical Therapy Technicians
Schools for Occupational Therapy
Schools for Medical Record Librarians
Schools for X Ray Technicians

In addition, the Council publishes statements in THE JOURNAL from time to time concerning problems which arise. These may be considerable in number For example, in the first four months of 1946 there were twenty-seven separate statements or articles from Council sources in THE JOURNAL

### APPOINTMENT OF DR FRODE JENSEN

Dr Frode Jensen has now joined the staff of the Council, working primarily in the hospital division in connection with surveys of internship and residency hospitals. Dr Jensen received his M D degree from Columbia University College of Physicians and Surgeons in 1933 After a two year internship at Presbyterian Hospital, New York, he was a Fellow in Pathology at Syracuse University College of Medicine for one year and became extramural resident and instructor in medicine at the University Hospital in Syracuse. Studies carried out in the latter capacity were published jointly with Dr Herman G Weiskotten in the book entitled "Medical Care of the Discharged Hospital Patient." Dr Jensen has just completed three years of army service mainly in hospitals on the European continent and in England.

### ASPHYXIAL ACCIDENTS

In December 1945 the House of Delegates passed a resolution concerning asphyxial accidents and recommended that the Council on Medical Education and Hospitals send reprints of the survey report by the Council on Physical Medicine published in THE JOURNAL, Oct 6, 1945 to the heads of physiology, surgery and obstetric departments of approved medical schools as well as to hospitals approved for internship and residency training These instructions by the House of Delegates have been carried out by the Council

### COLLABORATION WITH OTHER AGENCIES

In the course of the year 1945 the Council has continued to collaborate with numerous other agencies in the field of health and education as well as with various governmental agencies These organizations and agencies are as follows

Association of American Medical Colleges
American Boards in the Specialties
Advisory Board for Medical Specialties
American Council on Education
American College of Surgeons
American Hospital Association
Committee on Postwar Medical Service
Federation of State Medical Boards
Farm Foundation
United States Office of Education
New York State Education Department
Procurement and Assignment Service
National Foundation for Infantile Paralysis
Institute of International Education
Office of Inter American Affairs
State Department
Pan American Sanitary Bureau
American Dental Association
National Nursing Council
National League of Nursing Education
National Organization of Public Health Nursing
National Association of Practical Nurse Education
Joint Orthopedic Nursing Advisory Service
North Carolina Medical Care Commission
North Central Medical Conference
Veterans Administration
Selective Service System
National Board of Medical Examiners
War Department
Bureau of Medicine and Surgery (Navy)
Puerto Rico Medical Association
United States Public Health Service
Citizens Federal Committee on Education
Regional Meetings Council on Medical Service and Public Relations
Tri State Hospital Assembly
Catholic Hospital Association
American Farm Bureau Federation
Office of Vocational Rehabilitation
American College of Hospital Administrators
American Trudeau Society
American Public Health Association
American Red Cross
American Physiotherapy Association
American Registry of Physical Therapy Technicians
American Congress of Physical Medicine
American Occupational Therapy Association
American Society of Clinical Pathologists
American Association of Medical Record Librarians
American College of Radiology
American Registry of X Ray Technicians
Board of Registry of Medical Technologists

These conjoint activities have been varied in nature and have involved the Secretary, the other members of the staff of the Council as well as members of the Council itself In most instances these cooperative enterprizes have involved participation in conferences, advisory committees and joint sessions.

### THE RETIREMENT OF DR. OLIN WEST

The Council learned with regret of the retirement of Dr Olin West as the Secretary and General Manager of the American Medical Association In fulfilling the many duties of these offices through the years Dr West has always lent his strongest support to the Council in its work. He has sought at every turn to strengthen the Council, particularly through improvements in the Council's staff and office personnel The Council hopes that Dr West's interest in medical education will continue and that the benefits of his wise counsel will be made as freely available as has been the case in the past

With the retirement of Dr West and the appointment of Dr George F Lull, the Council wishes to express its desire to cooperate fully with the new executive officer of the American Medical Association.

### APPRECIATION

In carrying out its work, the Council and its staff have enjoyed the fullest cooperation of every one concerned in efforts to maintain and improve adequate educational standards in all fields pertaining to medicine. This has involved not only the agencies mentioned in the report but officers and officials of medical schools, hospitals, licensing boards and technical schools The readiness of these bodies in supplying information and data for the special numbers of THE JOURNAL is greatly appreciated by the Council Such information is widely used by government bodies, hospitals, medical schools, medical students and physicians The Council is especially grateful to the officers,

trustees and members of the House of Delegates of the American Medical Association for the support and cooperation given to the Council in its every activity throughout the past year

Respectfully submitted,

RAY LYMAN WILBUR, Chairman,
J. H. MUSSER,
HARVEY B. STONE,
REGINALD FITZ,
RUSSELL L. HADEN,
CHARLES GORDON HEYD,
H. G. WEISKOTTEN,
VICTOR JOHNSON, Secretary

## REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

*To the Members of the House of Delegates of the American Medical Association*

During the past year the Council on Scientific Assembly had one meeting. This was held on Dec. 1, 1945 in conjunction with the Annual Conference of Section Secretaries.

Section Meetings. The following schedule for section meetings for the 1946 session of the Scientific Assembly was approved:

MORNING SECTION MEETINGS

Pediatrics
Surgery: General and Abdominal
Ophthalmology
Experimental Medicine and Therapeutics
Nervous and Mental Diseases
Dermatology and Syphilology
Gastro-Enterology and Proctology
Radiology
General Practice of Medicine

AFTERNOON SECTION MEETINGS

Internal Medicine
Obstetrics and Gynecology
Laryngology, Otology and Rhinology
Pathology and Physiology
Orthopedic Surgery
Urology
Preventive and Industrial Medicine and Public Health
Anesthesiology

The Council considered a proposal that a Session on Aviation Medicine be held in the Section on Miscellaneous Topics in 1946 but was of the opinion that it is not necessary to have such a session in view of the fact that the Section on Pathology and Physiology is planning to devote one of its meetings to that subject.

General Scientific Meetings. A number of significant topics for possible discussion on the General Scientific Meetings program were studied by the Council. The Chairman was instructed to prepare a tentative program and submit it to each member of the Council for approval. Eighteen topics were deemed of sufficient importance to warrant a place on the program. Nationally known authorities have been invited to present papers on these selected topics.

Section on General Practice of Medicine. The recommendation of the Council that a new section for general practitioners be established was approved by the House of Delegates. A Chairman and a Secretary for the Section on General Practice of Medicine were appointed by the Council, and these officers have arranged a program for the San Francisco Session.

New Member of Council. Dr. Henry Viets of Boston was nominated for membership on the Council on Scientific Assembly, and the nomination was confirmed by the House of Delegates at its meeting in December 1945.

Respectfully submitted,

EDWARD L. BORTZ, Chairman
FREDERICK A. COLLER.
CLYDE L. CUMMER
CHARLES H. PHIFER
HENRY R. VIETS

H. H. SHOULDERS, President-Elect
MORRIS FISHBEIN, Editor, THE JOURNAL.
GEORGE F. LULL, Secretary
} Ex officio

## REPORT OF COUNCIL ON MEDICAL SERVICE AND PUBLIC RELATIONS

*To the Members of the House of Delegates of the American Medical Association*

During the months following the meeting of the House of Delegates held Dec. 3 to 5, 1945 the Council on Medical Service and Public Relations has made progress on the projects referred to it by the House of Delegates and has continued with its original functions as set forth at prior meetings of the House.

PREPAYMENT MEDICAL CARE PROGRAM

One of the principal demands at the 1945 meeting of the House of Delegates was the institution of a plan for the prepayment of medical care. Resolutions submitted in a supplementary report of the Council on Medical Service and Public Relations were as follows:

*Resolved* That the House of Delegates take immediate steps to encourage the development of a national voluntary prepayment medical care plan for the purpose of covering areas not now served by plans for the purpose of assisting in the enrolment in local plans of national enrolment groups and to serve until such time as all states have their own plans and be it further

*Resolved* That the American Medical Association's Council on Medical Service and Public Relations be instructed by the House of Delegates to take immediate steps to

1. Coordinate the activities of all prepayment medical care plans now in operation
2. Foster the development of such plans where there are none
3. Educate physicians and the public as to the functions of voluntary prepayment plans and the need for supporting them and be it further

*Resolved* That the officers and committees of every state medical society be urged by the House of Delegates to secure prompt action by their state societies in inaugurating new or increasing the benefits of existing prepayment medical care programs in every state

*The Reference Committee on Legislation and Public Relations, to* which these resolutions were referred, reported back the following to the House and the report of the reference committee was adopted:

Your reference committee has reviewed several resolutions calling for the adoption of voluntary prepayment medical care plans. All of these plans show a uniformity of desire for the immediate setting up of a national plan on a voluntary basis. In all of them the urgency of this being done is stressed. Accordingly your reference committee recommends that the House of Delegates of the American Medical Association instruct the Board of Trustees and the Council on Medical Service and Public Relations to proceed as promptly as possible with the development of a specific national health program with emphasis on the nationwide organization of locally administered prepayment medical plans sponsored by medical societies.

In accordance with these instructions the Council proceeded with the formulation of a specific program on prepayment medical care plans. In proceeding with this the Council first called together its Advisory Committee on Prepayment Medical Care Plans with a request that an overall program be suggested. The suggestions of the Advisory Committee, considered by the executive committee and discussed with the Executive Committee of the Board of Trustees, follow:

*Part I*

To activate this program it is recommended that steps be taken by the Council on Medical Service and Public Relations to obtain the cooperation of all the existing prepayment medical care plans for the purpose of coordinating their activities and to obtain information, data and statistics and to make the Council on Medical Service and Public Relations a central source of information and the spokesman regarding the prepayment medical plan movement.

We recommend that the following steps be taken:

(*a*) A letter to the plans now in operation explaining the program of the Council and asking for specific information and data as a preliminary report, and requesting suggestions as to future regular reports.

(*b*) Release of a monthly news letter on prepayment plans activities to which all plans be invited to submit news items and articles. The establishment of a page or more as necessary in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION to set forth pertinent and interesting information of the prepayment medical plans.

(*c*) The establishment of a public relations and press division of the Council on Medical Service and Public Relations to supply the national press with specific items and stories concerning the various plans for prepayment care both on national and on local levels to prepare literature speeches etc. for representatives on the Council.

(*d*) Publication of an official roster of medical society sponsored and approved plans including pertinent information on each.

(*e*) The adoption of a common symbol or trade mark for the use of the medical societies sponsored and approved plans.

(*f*) The establishment of an Advisory Service within the Council on Medical Service and Public Relations to provide speakers and technical advisers in relation to matters of organization and administration for county and state medical societies in the formation of plans such speakers and advisers to be designated by the Council on Medical Service and Public Relations.

(*g*) To develop and recommend means for local medical care plans to cooperate with the Veterans Administration to provide care for veterans

with service connected disabilities and such other care as they may be entitled to on the basis either of prepayment or of cost plus arrangements to the end that the veteran may have free choice of physician in his home community

(*h*) To encourage and assist local plans in development of arrangements for care of indigents and others entitled to public assistance to provide adequate care of good quality for such persons with free choice of physician

*Part II The National Program*

It is recommended that the Council on Medical Service and Public Relations be authorized to proceed immediately with the organization of a nonprofit corporation under the applicable statutes of the state of Illinois.

The Holding Corporation

1 The name shall be National Voluntary Health Association

2 The purposes

(*a*) To promote through education better health for all

(*b*) To promote a greater availability of health facilities

(*c*) To provide methods of easier and more convenient payment for health services by encouraging organization of voluntary prepayment health care plans

(*d*) To raise funds for to support to invest in any and all activities organizations or efforts with similar purposes whose objectives are related to the improvement of health services or their distribution to or acquisition by the public.

Profits which may be derived from investments or funds received from any other source shall be utilized for the purpose of the National Voluntary Health Association as set forth under *a b* and *c* and no dividends shall be paid or shall redound to the benefit of any member of the Association

Membership of the Corporation

It is proposed that if statutes permit the membership of the Corporation shall consist of the persons who are members of the Board of Trustees of the American Medical Association or of the Council on Medical Service and Public Relations of the American Medical Association while serving in such capacities and such other persons as these members may elect to membership.

Board of Directors

The Board of Directors shall consist of not less than and not more than members to be elected by the membership It is recommended that membership of the Board of Directors be classified The Board of Directors shall have the authority and responsibility for directing the actions of the Corporation The Board may delegate authority and duties to such committees which they may appoint in accordance with the By laws

Finances

It is recommended that the Corporation be financed by contributions from the American Medical Association state medical societies component county medical societies prepayment medical care plans individual doctors of medicine and other acceptable sources It is further recommended that at least $500 000 be secured to activate these proposals immediately

The Service Corporation

It is further recommended that the National Voluntary Health Association proceed with the immediate organization of National Medical Insurance Inc. a casualty insurance corporation under the laws of the state of Illinois, to operate a health and accident insurance business under class II of the Illinois Insurance Statutes

It is recommended that all of the stock be held by the National Voluntary Health Association except necessary directors qualifying shares

The authorized and paid in capital shall be $200 000.

The surplus should be $300 000 and shall be not less than $200 000

(In both instances the funds to be provided by the National Voluntary Health Association No commission or organization expense will be paid on issuance of the capital stock)

Articles shall provide for a Board of Directors of not less than three nor more than twenty one of whom three must be residents of Illinois (Meetings may be held within or without the state)

It is recommended that the Corporation secure licenses to transact business in all states and territories where necessary (No effort will be made if the state medical association objects)

There is precedent to show that licenses can be secured in these states without long waiting periods It is the considered opinion of the Advisory Committee that the organization of a national medical care insurance company and its licensure in the necessary states presents no more difficult or expensive problem than would be the acquisition of any existing available charter

(It is contemplated that National Medical Insurance Inc and provisions should be set forth in its by laws to assure that it will not operate in competition with locally sponsored medical plans that in localities where plans are organized subsequent to its admission it will withdraw in favor of such local plans)

On the recommendation of the Executive Committee of the Board of Trustees, copies of the suggestions were forwarded to all members of the Board of Trustees and the Council for preliminary study prior to a full meeting of both groups It became evident that a difference of opinion existed as to the exact meaning of the House of Delegates resolutions Some were of the opinion that they allowed the formation of a national insurance company, others felt that the resolution did not give the Council or the Board of Trustees the right to form such a company

In February the Council met and heard evidence for and against the suggestions from plan directors At the same time fifty-two representatives of various medical care plans met at American Medical Association headquarters to discuss the suggestions of the Advisory Committee and reorganize the Medical Service Plans Council of America into a functioning body The plan managers present were of the opinion that part I of the Advisory Committee's suggestions should be activated immediately through close cooperation between the new organization of prepayment medical care plans, called Associated Medical Care Plans, and the Council on Medical Service and Public Relations, and that part II of the Advisory Committee's suggestions could best be accomplished through coordination of existing plans rather than the formation of an overall organization

*Recommendations to the Board of Trustees*

On the basis of the evidence heard and information available, the following statement was prepared for the joint meeting of the Council and the Board of Trustees held on April 14

The Council on Medical Service and Public Relations recommends the employment of a Director of its Division on Prepayment Medical Care Plans and the necessary staff It also is recommended that the Council appoint an advisory committee representing medical care plans and their associates

The Council has determined standards for medical care plans a copy of which is attached Plans which meet these standards shall be entitled to the use of the Council Seal during the period of their approval

The Director of the Division of Prepayment Medical Care Plans of the Council on Medical Service and Public Relations with his staff and with the assistance and cooperation of the Advisory Committee the state medical societies and Associated Medical Care Plans Inc. shall be available to assist in developing plans increasing the number of persons covered by already existing plans and facilitating reciprocity among them

The Council believes that responsibility for the development of medical care plans rests with state and county medical societies Stimulation coordination and the federation of such plans under the instructions of the House of Delegates is deemed to be the function of the Council on Medical Service and Public Relations and the Board of Trustees of the American Medical Association.

The duty of the Advisory Committee shall be to advise the Director of Prepayment Medical Care Plans and the Council on the methods of implementing the program and on approval of the Council the Director of Prepayment Medical Care Plans will undertake the functions described in paragraph 3

The Advisory Committee shall consist of five members appointed for one year For the first year it is suggested that the following comprise the committee Mr Jay Ketchum Dr F L Feierabend Dr Herbert Bauckus Mr William Bowman and Mr Charles Crownhart

A tentative cost of this program is estimated at $50 000 for the first year

The Council also brought to the attention of the Board of Trustees the proposals suggested by the Advisory Committee which had originally been made to the Executive Committee of the Board on January 11 These are included in part I of this section of the report.

With reference to part II of the Advisory Committee s suggestions, the Council recommended the following

The Council further recommended the creation of a national insurance program to supplement the activities that are at present being carried on by the individual state county and city plans but not to interfere with any of the present plans It recommended that it proceed with a national insurance company in the manner suggested by Mr Don Hawkins whereby the American Health Insurance Corporation would be used as the vehicle to carry out the activities in each state in agreement with the individual states that the members of the medical profession form a holding company as provided in Mr Hawkins suggestions such persons to be selected by the Board of Trustees and the Council on Medical Service and Public Relations It was stated that the plan can be put into effect in less than ninety days. It further recommended that in the event the Board of Trustees rejects the proposals made by the Council relative to using the American Health Corporation as a vehicle for establishing a national insurance program the Trustees should endorse and support a national insurance company sponsored and in cooperation with outside groups by contributions from various medical societies and the American Medical Association

In view of the fact that the meeting of the fifty-two plan directors felt that the national coverage could best be accomplished through coordination of existing plans such as arranged in the program of the Associated Medical Care Plans and that there would be opposition on the part of various local plans to the establishment of an independent company, no action was taken to put this recommendation into effect.

The Board of Trustees on February 16 released a statement to the press outlining a national program for voluntary prepayment medical care. In brief, this consisted of the following

1 Creation of a Division of Prepayment Medical Care Plans under the Council on Medical Service and Public Relations

This division is now under the direction of Mr Jay Ketchum, Executive Vice President of Michigan Medical Service.

2 Formation of Associated Medical Care Plans, which has been incorporated under the Illinois statutes A constitution and by-laws for this organization has been prepared and adopted.

3 Creation of an Advisory Committee consisting of Mr Jay Ketchum, Detroit, executive vice president of Michigan Medical Service, Dr F L Feierabend, Kansas City, Mo., secretary, Surgical Care, Inc , Dr Herbert H Bauckus, Buffalo, N Y , Mr William Bowman, San Francisco, executive director, California Physicians' Service, and Mr Charles Crownhart, Madison Wis , secretary, State Medical Society of Wisconsin.

4 A redraft of the Fourteen Point Constructive Program for Medical Care.

5 A draft of suggested standards of acceptance prepared by the Council on Medical Service and Public Relations

*How the Program Functions*

In a national program the Council on Medical Service and Public Relations and Associated Medical Care Plans will cooperate to further the development of methods for distributing the costs of medical care On its part the Council undertakes the work of coordinating and encouraging existing plans and assists in the development of plans where they do not now exist In addition an up to date file on each plan has been completed, including information on and copies of the following

1 Enabling act.
2 Articles of incorporation
3 Constitution and by laws
4 Regulations
5 Subscribers' certificates or group contracts
6 Contract or agreement with Blue Cross.
7 Agreement with participating physicians
8 Figures on enrolment
9 Financial status

For its part Associated Medical Care Plans, an organization of administrators, assists in the detailed administrative work and assists the Council in the overall job of developing uniformity and reciprocity among the plans

The national program centers around the standards for acceptance of prepayment medical care plans as a basis on which the Council will grant an official seal to be displayed on all plan literature

RATING COMMITTEE

The committee appointed to study the relative values of various surgical procedures has not met since the December 3 meeting of the House of Delegates However, the preparatory work for this job has been continued in the Council office A comparison of the reimbursement schedules of five private insurance carriers and twenty medical society sponsored prepayment plans has been completed. This and other pertinent material will be submitted to the proper specialty groups for consideration as to relative values

NATIONAL HEALTH CONGRESS

Resolutions introduced by Dr E S Hamilton, Illinois, called for the creation of a National Health Congress to be composed of 'representatives of the medical, dental, hospital, nursing, pharmaceutical and allied professions" These resolutions were referred to the Reference Committee on Legislation and Public Relations and adopted by the House of Delegates In view of these resolutions the Council has sent a questionnaire to each state medical society secretary in order to obtain information on the activities and purposes and an evaluation of the benefits of state and local health councils now functioning The Board of Trustees has asked that the Council withhold any activity in forming a national organization until further detailed information can be obtained in regard to these local health councils, interprofessional committees and similar organizations

RURAL HEALTH

The first Annual Conference on Rural Health was held in Chicago March 30 by the Committee on Rural Medical Service of the American Medical Association in cooperation with the Farm Bureau, Farm Foundation, Grange and other farm groups The Bureau of Information and the Council on Medical Service and Public Relations were in charge of arrangements for this meeting, which was attended by more than 250 representatives of the farm groups and state medical societies

PERMANENT CONFERENCE ON MEDICAL CARE

Resolutions on Permanent Conference on Medical Care, introduced at the last session of the House of Delegates, were referred to the Board of Trustees and the Council This resolution provided that the House of Delegates "instigate the formation of a Permanent Conference on Medical Care' The Council believes that no action on this resolution should be taken at this time.

MEETINGS OF THE COUNCIL

An organization meeting was held immediately after the final session of the House of Delegates in December Dr E J McCormick was reelected chairman and Dr James R McVay reelected vice chairman The executive committee, consisting of Dr McCormick, Dr McVay, Dr A W Adson and Dr Louis H Bauer, was reappointed

A meeting of the executive committee was held on January 11 in the Council office. Immediately after this meeting a joint meeting with the Executive Committee of the Board of Trustees to discuss a prepayment medical care program was held. A second meeting of the Council was held on February 13 and 14 On February 14 a joint meeting with the Board of Trustees followed

BULLETINS NEWS LETTERS AND COUNCIL RELEASES

The NEWS LETTER of the Council is sent to about 2,700 physicians who are state medical society officers or committee members or local society officers who are interested in the activities of the Council

Along with the NEWS LETTER have been enclosed various articles and reprints on pertinent subjects Among these were Dr Louis H Bauer's article 'Medical Care for the American People," Dorothy Thompson's editorial on prepayment insurance and pamphlets from the Insurance Economics Society of America

In addition the Council has had almost weekly columns in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION under the Council heading These columns deal with pertinent information on Council activities

The Washington office has issued regular bulletins on legislative matters Dr Joseph S Lawrence, Director, will discuss this in his portion of the report

*Prepayment Medical Care Plan Brochure*—The Council, with the cooperation of the Bureau of Medical Economics, is preparing a complete and up to date brochure on voluntary prepayment medical care plans The material has been organized in such a manner as to provide a means for comparison between various plans All figures and statistics have been gathered as of the same date so that again comparisons as to enrolment and other features will be possible. The principal subjects by which each plan is described are as follows

1 Organization
2 Governing body
3 Medical society approval
4 Area covered.
5 Type of contract.
6 Income limits
7 Enrolment.
8 Benefits
9 Exclusions.
10 Waiting period
11 Monthly premiums
12 Blue Cross relationship
13 Change of employment
14 Insignia used
15 Miscellaneous

*Handbook on Compulsory Health Insurance*—The Council, again with the cooperation of the Bureau of Medical Economics, is preparing a handbook on compulsory health insurance. It is planned that this might be divided into two parts, one to be used as a debaters manual for high school and college students and the other as a source of information for physicians who wish to give talks to the lay public on the subject

REGIONAL CONFERENCES

Probably the most important feature of the program of the Council from the standpoint of the state and county medical societies has been the various regional meetings The first was held in May 1944 in Boston, the second in Cincinnati, the third in Washington, D C the fourth in Kansas City, Mo, the fifth in Atlanta Ga , and the sixth in Portland, Ore.

Since Jan 1 1946 two additional conferences have been held, and a third and fourth are planned

The seventh regional conference sponsored by the Council was held in Philadelphia on January 30 with representatives from

New York, Delaware, New Jersey, Pennsylvania, the District of Columbia, Virginia and Maryland Dr F F Borzell, Vice Speaker of the House of Delegates, was local chairman The eighth regional conference was held in Boston on February 3 with Dr James R. Miller, member of the Board of Trustees, as chairman

These two conferences pointed specifically toward three problems what prepayment plans and the medical profession can do in bettering medical care for veterans, growth in prepayment plans and local medical society public relations methods The ninth and tenth regional conferences are to be held in Denver and San Francisco The Denver conference will be under the direction of Dr. McVay, vice chairman of the Council, and the San Francisco conference under the direction of Dr E J McCormick, Council chairman.

WASHINGTON OFFICE

The Washington Office continues to grow in opportunities for service to both the physicians of the several state societies and the government bureaus Acquaintanceship with the Congressmen is rapidly extending, limited only by the ability to find time to call on them Spot calls have been made frequently when physicians visiting the capital have asked the office to assist them in locating their congressmen Acquaintances made when calling in this manner have invariably proved profitable

The office space is still deplorably inadequate, and there is no immediate prospect of relief When the building of offices can be resumed, the owners of the building in which the office is located will build an extensive addition The plans are completed for that addition, and at least twice as much space should be available

Since the last report the Washington office has distributed seventeen bulletins Most of the bulletins carried information relating to bills before Congress, but recently reports have been made on the hearings that are being held by the Senate Committee on Education and Labor on the Wagner-Murray-Dingell bill, known as the National Health bill The statements of the principal witnesses were reported almost in full because of their importance The office is now abstracting the submitted statements and reporting from notes made. The committee holds hearings at least five days a week from 10 o'clock in the morning Frequently they are extended over the whole day At first it was intended to limit the hearings by calling only witnesses who would represent national organizations, but so many requests are being made by Senators to have important persons from their states heard that the committee is planning to modify its program accordingly, and hearings may extend into June. After the termination of the hearings the statements of the witnesses, together with those which were submitted to the committee by mail, will be printed for the benefit of the members of the committee. After studying the printed reports, the committee will consider the bill in executive sessions Considerable study will be required before the committee can arrive at a decision as to whether the bill should be reported out to the floor of the Senate and to what extent it should be amended or redrafted In view of a number of limitations, such as the possibility of an early recess in July and the fact that the recess might be prolonged until after election or even until January when the new Congress will assemble, and realizing that Congress still has a number of bills of the present program to act on it does not seem probable that the health bill will reach the floor of the Senate during this session. The Committee on Interstate and Foreign Commerce of the House, which has the Dingell bill, is apparently waiting for the Senate to take action before it takes up consideration of the bill

Most of the bills that have been reported by the Washington office as introduced in the Seventy-Ninth Congress have not been acted on The following have received consideration

*Bills Acted on*

S J Res. 89 formation of an International Health Organization, was reported out of Senate Committee on Foreign Affairs on Nov 23 1945 and passed the Senate on Dec. 20, 1945 Referred to House Committee on Foreign Affairs Dec. 21 1945

H. R. 2716 to provide for health programs for government employees was reported out of committee on Feb 1 1946 (passed House on Sept. 21 1945)

H. R 4512 mental health bill passed by the House on March 15 1946 It is now with the Senate Committee on Education and Labor

*Hearings on Bills*

S 191 hospital construction bill, hearings held before the Public Health Subcommittee of the House Interstate and Foreign Commerce Committee on March 7 Senate had passed the bill on Dec 11, 1945, with amendment

S 1160, mental health bill hearings before Education and Labor sub committee of Senate on March 6, 1946 and continued through March 8

S 1606 national health insurance bill hearings began April 2 1946 before the Senate Committee on Education and Labor and are still continuing

S 1779 social protection bill Education and Labor Committee of Senate held hearings on March 9, 1946 Bill has been reported out of committee

S 1850 the national scientific foundation bill is the latest bill drafted by the Senate Military Affairs Subcommittee as a substitute for S 1285 S 1297 and S 1720 The bill had hearings in February and March and it has been reported out of committee without amendment

H. R 491 antivivisection bill, hearings were held February 28

H R. 3755 to establish an Optometry Corps in the Medical Department of the U S Army, had hearings before the Senate Military Affairs Committee Jan. 24 1946 Reported out of committee February 21

H R 4070 The House Committee on Rivers and Harbors began hearings on water pollution bills on March 26, 1946

H R 5234, social protection bill hearings were held on March 18 1946 before the House Judiciary Committee

*Social Security*

Hearings have been going on since Feb 25 1946 before the House Ways and Means Committee on the old age and survivors' insurance provisions

*Physically Handicapped*

The House Labor Subcommittee on Aid to Physically Handicapped held hearings on April 2 3 and 4 regarding federal agencies dealing with the physically handicapped.

*Bills Enacted into Law*

S 714 compensation for U S employees injured in performance of their duties, became Public Law 139 on July 6, 1945

S 715, providing more efficient dental care in U S Navy became Public Law 284 on Dec 28, 1945

H J Res. 23 establishing first week in October of each year as National Employ the Physically Handicapped Week, became Public Law 176 on Aug 11, 1945

H R 2348 providing for coverage of certain drugs under federal narcotic laws became Public Law 320 on March 8 1946

H R 3266, to amend the Federal Food, Drug and Cosmetic Act became Public Law 139 on July 6 1945

H R 4717, establishing a Department of Medicine and Surgery in the Veterans Administration, became Public Law 293 on Jan 3 1946

Bills that carry large appropriations, probably requiring special tax levies, are being held up in the interest of an effort to balance the budget. The President and congressional leaders are united in this effort. When the Seventy-Ninth, which is the present Congress, ends on Dec. 31, 1946, all the bills now pending will be dropped permanently unless they are reintroduced in the new, the Eightieth, Congress, which will convene in early January

The bulletin mailing list has been growing rapidly, not only because of the appointment of state committees but also by requests from individual physicians Mimeographing this bulletin has become quite a problem. It must be done by commercial firms, and the Washington rates are generally higher than those charged in other cities A mimeograph machine will be installed in the office as soon as space can be procured.

The following groups have been addressed by the director since the last report League of Women Voters, District of Columbia, Takoma Park Women's Club, Takoma Park, Md., New England Regional Conference, Boston, Berks County Medical Society, Pennsylvania, Philadelphia County Medical Society, Pennsylvania, the Kober Club of Physicians, District of Columbia

Respectfully submitted

E. J McCORMICK, Chairman
JAMES R. McVAY, Vice Chairman
THOMAS A McGOLDRICK.
RAYMOND L. ZECH
ALFRED W ADSON
WALTER B MARTIN
HERMAN L KRETSCHMER.
ROGER I LEE.
LOUIS H. BAUER.
GEORGE F. LULL.
MR. THOMAS A HENDRICKS, Secretary

# MEDICINE AND THE WAR

## ARMY

### DIPHTHERIA IMMUNIZATION ORDERED FOR ETO, MTO PERSONNEL

Active diphtheria immunization will be required for all military personnel under 35 years of age assigned to permanent duty in European and Mediterranean theaters. The immunization program is in furtherance of the Army's preventive medicine policy. The preventive policy is a precautionary measure enforced during the war and demobilization.

Civilians in that age group, including those in army employ and civilian dependents, will also be immunized before going overseas. Those in all categories over 35 years are advised to avail themselves of the measure. Negative Schick tests will be accepted in lieu of immunization.

Other protective inoculations required before permanent assignment in those theaters are smallpox, typhoid and typhus. Tetanus immunization is required for all military personnel.

### IMMUNIZATION AND INSPECTION OF G I PETS

Additional safeguards against importation of foreign diseases into the United States are being employed at overseas debarkation points, as soldiers must have their acquired pets examined and vaccinated by a veterinary corps officer. Monkeys, dogs, cats and any other animal a G. I. might plan to bring home will be inoculated with a Habel mouse-tested rabies vaccine. This must be done "not more than one hundred and eighty days nor less than thirty days" before entry into the United States.

### MASON GENERAL HOSPITAL CITED

The meritorious Service Unit plaque was awarded to Mason General Hospital, Brentwood, N. Y., for the period from Dec. 1, 1944 to May 1, 1945. The citation accompanying the award stated that "its accomplishments in the care and disposition of mentally ill patients are considered an outstanding contribution in the field of military hospitalization and evacuation. Only through enthusiastic and unselfish devotion to duty could such high standards of service be attained. The accomplishments of this unit reflect great credit on itself and the military service."

### ARMY AWARDS AND COMMENDATIONS

#### Colonel Warren C. Fargo

The Legion of Merit was recently awarded to Col. Warren C. Fargo, Cleveland, who for five years served as executive officer, assistant commandant and commandant of the Medical Department Enlisted Technicians School at Brooke Hospital Center, Fort Sam Houston, Texas. The citation stated that "Colonel Fargo occupied a position of great responsibility and perfected training methods which produced superior results in the training of Medical Department technicians." Dr. Fargo graduated from the University of Buffalo School of Medicine in 1913 and entered the service March 21, 1941.

#### Colonel James H. Turner

The French Legion of Honor was recently awarded to Col. James H. Turner, formerly of Sacramento, Calif., for medical services rendered with the 203d General Hospital in Paris, France, between Aug. 27, 1944 and VE day by Major Gen. Ray W. Barker, commanding general for U. S. Headquarters Berlin District, representing the chief surgeon for the European theater in the presentation. Dr. Turner graduated from the University of Nebraska College of Medicine, Omaha, in 1924 and entered the service in August 1928.

#### Colonel Mather Cleveland

Col. *Mather Cleveland*, New York, was recently awarded the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services as senior consultant in orthopedic surgery, Professional Operations, during the period of May 17, 1944 to May 8, 1945". The citation further stated that Colonel Cleveland "rendered unusually superior service in supervising the activities of the orthopedic surgeons in the theater. His direction of highly trained specialists whose talents were of vital importance in treating many battle casualties revealed exceptional professional competence. Colonel Cleveland's innovations for the treatment of injured hands did much to benefit the care of this type of injury and reflects great credit on himself and on the armed forces of the United States."

Colonel Cleveland was also awarded the French Medaille d'Honneur by Médecin Général Debenedetti, Docteur Général du Service de Santé, Ministrie de la Guerre, Paris, France, "for services performed in reestablishing Franco-American relations in medicine and surgery during the period from November 1944 to July 1945 and in assisting the medical corps of the French army in providing adequate medical care for their troops." Dr. Cleveland graduated from Columbia University College of Physicians and Surgeons, New York, in 1915 and entered the service Sept. 3, 1942.

#### Colonel Martin F. DuFrenne

Col. Martin F. DuFrenne, Washington, D. C., who was recently awarded the Legion of Merit, "served with marked distinction as surgeon, Military District of Washington, and as commanding officer, Station Hospital, Fort Myer, Virginia, from Aug. 31, 1942 to June 9, 1945. In his dual role [the citation continued] Colonel DuFrenne was confronted with many perplexing problems incident to continued changes in medical personnel, supply and administration. His successful solution of them was reflected in the superior health record established both for the military district of Washington and the personnel of his station and in the high standards of operating efficiency achieved and maintained by the station hospital. Although working under the stress of heavy responsibilities, he at all times exercised unfailing good cheer, a sympathetic attitude toward the sick and wounded and outstanding professional skill. By his splendid example Colonel DuFrenne inspired those who worked under him to greater endeavor. His devotion to duty and the service he rendered were in keeping with the highest traditions of the United States Army." Dr. DuFrenne graduated from Marquette University School of Medicine, Milwaukee, in 1916 and entered the service July 1, 1920.

#### Lieutenant Colonel John N. Robinson

Lieut. Col. *John N. Robinson*, Sharon, Conn., was recently awarded the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services as senior consultant in genitourinary surgery, Professional Services Division, Office of the Surgeon, Communications Zone, European Theater of Operations, from Oct. 5, 1943 to May 8, 1945." The citation further states that "Lieutenant Colonel Robinson, in addition to supervising the work of two hundred urologists, created a uniform system of treatment for complicated diseases of the genitourinary tract, surgery which has been of extreme importance in saving the lives of wounded American soldiers. He was instrumental in establishing contacts with both the French and the British medical institutions for the introduction of postgraduate facilities where American officers trained in urology could receive further instructions along highly specialized lines. Lieutenant Robinson, through professional skill and inspirational leadership, has materially assisted the department in discharging its responsibilities in a highly efficient manner."

Dr Robinson was also honored with the Medaille d'Honneur by Médecin General Debenedetti, Docteur Général du Service de Sante, Ministrie de la Guerre Paris, France, "for services performed in reestablishing Franco-American relations in medicine and surgery during the period from November 1944 to July 1945 and assisting the medical corps of the French army in providing adequate medical care for their troops" Dr Robinson graduated from Harvard Medical School, Boston, in 1931 and entered the service Feb 15, 1942

### Colonel Condict W Cutler Jr

Col Condict W Cutler Jr, New York, who distinguished himself in the performance of service as surgical consultant, First Service Command, from December 1943 to October 1945, was recently awarded the Legion of Merit. The citation stated that "during this period Colonel Cutler, through his professional ability, built up and maintained highly proficient surgical standards in all the hospitals within this command With a wide knowledge of the anatomy and surgery of the hand, he developed new technics in the restoration of function of hands crippled by wounds, thus giving many members of our armed forces an opportunity to follow gainful occupations without the handicap of artificial appliances His enthusiasm for his work, his readiness to share his vast clinical knowledge and his devotion to duty were an inspiration to all those with whom he worked Colonel Cutler was a great influence in the achievement of the splendid surgical treatment given the sick and wounded of World War II" Dr Cutler graduated from Columbia University College of Physicians and Surgeons, New York, in 1912 and entered the service Oct. 10, 1943

### Lieutenant Colonel James T Priestley

An Oak Leaf Cluster to the Bronze Star was recently awarded to Lieut. Col James T Priestley, Rochester, Minn., for "meritorious achievement from May 25 to Aug 15, 1945" During this time, the citation accompanying the award continued, "Colonel Priestley displayed exceptional professional ability and resourcefulness in the execution of the numerous complex duties demanded of his assignments. He maintained the highest standards of professional care for patients and gained the complete cooperation of all personnel of his command. In addition, he kept hospitalization to a minimum, thus enabling units to maintain adequate effectives for combat duty In charge of an advance party for the movement of the hospital from New Guinea to the Philippine Islands, he supervised the innumerable details with great foresight and understanding and achieved a smooth and efficient transfer of hospital facilities to Batangas Luzon Working with driving energy, he personally drew plans for the new hospital and expedited its construction so that complete medical services could be furnished patients in the shortest possible time. Displaying unusual ability to enlist the fullest cooperation of officers, nurses and enlisted men, he improved the efficiency of every function of the hospital, completely eradicating malaria in his organization and curbing other usually prevalent diseases Through superior professional ability and inspiring devotion to duty, Colonel Priestley made a notable contribution to the care of the sick and wounded in the southwest Pacific area' Dr Priestley graduated from the University of Pennsylvania School of Medicine, Philadelphia, in 1926 and entered the service Jan. 14, 1943

### Lieutenant Colonel Robert L Preston

Lieut. Col Robert L. Preston, New York, was recently awarded the Legion of Merit for "performing distinguished service in various important assignments at Nichols General Hospital, Louisville Ky, and in the Office of the Surgeon Fifth Service Command, from July 1943 to December 1945" In further praise to Colonel Preston, the citation said that he utilized his exceptional background in orthopedic surgery, developing original and effective programs of prevocational education and guidance for disabled army personnel" Dr Preston graduated from the University of Nebraska School of Medicine, Omaha, in 1928 and entered the service Jan 26 1942

### Major Franklin H Grauer

Major Franklin H Grauer, formerly of New York, was recently commended for his research work with penicillin in the treatment of syphilis The citation accompanying the award was presented by Brig Gen John M Willis, commandant, Brooke Army Medical Center, Fort Sam Houston, Texas, who said "During World War II the Medical Department carried out its mission with outstanding success This achievement was made possible only through the combined efforts of all medical department personnel Your service with the medical department has been exceptional when compared with others of the same grade of similar position and I wish to commend you for your outstanding contribution as chief of the Penicillin-Syphilis Research Project at Camp Howze, Texas, and Camp Livingston, Louisiana, under the direct supervision of the Venereal Disease Control Division, Preventive Medicine Service, Office of the Surgeon General, from March 1, 1944 to Nov 30, 1945" Dr Grauer graduated from Johns Hopkins University School of Medicine, Baltimore, in 1929 and entered the service in July 1942

### Brigadier General Edward Reynolds

The Distinguished Service Medal was recently awarded to Brig Gen. Edward Reynolds, Malden, Mass, for "exceptionally meritorious service from April 1944 to August 1945 as chief, Supply Service, Surgeon General's Office, Army Service Forces He implemented a program insuring the timely and adequate flow of medical supplies to all parts of the world and effected changes in the organization and functions of district and depot procurement agencies that resulted in increased operating efficiency and material savings in trained manpower Under his control both the procurement and distribution of supplies, many items of which were difficult to produce and yet of vital necessity to the troops, proceeded smoothly" Dr Reynolds graduated from Harvard Medical School, Boston, in 1923 and entered the service Oct. 19, 1943

### Major Paul A Newton

The Silver Star Medal was recently awarded to Major Paul A Newton, San Mateo, Calif, "for gallantry in action at Luzon, Philippine Islands Captain Newton (now Major Newton) a battalion surgeon, braved enemy mortar and small arms fire and fragments from bombs in an exploding ammunition dump in order to give medical treatment to a seriously wounded man. The casualty lay in an enemy mine field, but Captain Newton picked his way forward and successfully administered first aid. Later, during the battle for Manila on Feb 15, 1945 Captain Newton again voluntarily exposed himself to hostile fire in an effort to save the life of a mortally wounded officer" Major Newton also holds the Bronze Star with one Oak Leaf Cluster for heroism in action, the Order of the Purple Heart, and the Presidential citation for work during the Bougainville and Luzon campaigns Dr Newton graduated from the University of California Medical School, San Francisco, in 1942 and entered the service Aug 16, 1943

### Colonel Horace S Villars

Col Horace S Villars, Washington, D C, was recently presented the Legion of Merit for distinguishing himself as port surgeon at San Francisco Port of Embarkation from November 1943 to October 1945 The citation accompanying the award read, in part, "By his efficient performance, splendid cooperation, unselfish devotion to duty and thorough knowledge of medical activity requirements of the port, an exceptionally high standard of health was maintained at the port and installations under its control" Dr Villars graduated from the University of Minnesota Medical School, Minneapolis, in 1916 and entered the service Sept. 3, 1917

### Lieutenant Colonel Hyman M Hurevitz

The Bronze Star was recently awarded to Lieut Col Hyman M Hurevitz, Davenport, Iowa, for his study of diarrhea and dysentery among American troops in the Mediterranean area from May 1, 1943 to May 8, 1945 Dr Hurevitz graduated from the State University of Iowa College of Medicine, Iowa City, in 1930 and entered the service in August 1942

### Brigadier General Hugh J Morgan

The Distinguished Service Medal was recently awarded to Brig Gen Hugh J Morgan, Nashville, Tenn The citation stated that, "as chief consultant in medicine, Office of the Surgeon General, from February 1942 to August 1945, he performed exceptionally meritorious service Through his untiring efforts the best medical talent of the country was mobilized for service with the army Demonstrating marked ability, initiative and judgment in formulating professional policies in the field of medicine and in the assignment of the highest type medical personnel as consultants and chiefs of services, he contributed to the excellent type of medical care received by seriously sick enlisted men and officers He implemented the procurement of the latest and best supplies and equipment obtainable in order to further alleviate suffering" Dr Morgan graduated from Johns Hopkins University School of Medicine, Baltimore, in 1918 and entered the service Feb 11, 1942

### Brigadier General Fred W Rankin

Brig Gen Fred W Rankin, Lexington Ky, was recently awarded the Distinguished Service Medal "for exceptionally meritorious services from March 1942 to August 1945 According to the citation accompanying the award, in his capacity as chief consultant in surgery, Surgeon General's Office, he contributed in great measure to the high standards of surgical care afforded the seriously wounded of this war He was responsible for the assignment of the highest type surgical personnel and the selection of the most modern surgical supplies and equipment available He expended untiringly both time and effort in furthering the surgical program of the Army's Medical Department, thereby contributing materially to the unprecedented successes attained" Dr Rankin graduated from the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, in 1909 and entered the service March 1, 1942

### Captain Solomon Sherry

A special award was recently presented to Capt Solomon Sherry, New York, from the United States Typhus Commission The citation accompanying the award stated that Captain Solomon Sherry rendered meritorious service in connection with the work of the United States of America Typhus Commission during the period May 12, 1945 to July 12, 1945, by intensive and successful efforts in case finding and by vigorous application of control measures This service, rendered at a time when advancing American troops had liberated the victims of the concentration camps of Flossenburg and Mauthausen, safeguarded the military forces and reduced the danger of the spread of typhus" Dr Sherry graduated from the New York University College of Medicine in 1939 and entered the service Sept 18, 1942

### Colonel Midian O Bousfield

The Legion of Merit was recently awarded to Col Midian O Bousfield, Chicago, first Negro member in the Army Medical Corps and now the first Negro medical officer commissioned in the reserve as a full ranking colonel The citation accompanying the award read in part, that 'Colonel Bousfield played an important part in the excellent racial relationship" at Fort Huachuca, Arizona, "where a mixed racial population required a tolerant and understanding leader" Dr Bousfield graduated from Northwestern University Medical School, Chicago, in 1909 and entered the service June 7, 1942

### Captain Robert R Colombo

The Army Commendation ribbon was recently awarded to Capt Robert R Colombo, Brooklyn, for "meritorious work connected with the staff of the Wakeman General Hospital, Camp Atterbury, Indiana" The citation commended Captain Colombo for his unselfish devotion to the welfare of the sick and wounded and for his service rendered Dr Colombo graduated from the Long Island College of Medicine, Brooklyn, in 1933 and entered the service Feb 21 1941

### Major Edward H Truex Jr

Major Edward H Truex Jr, chief of the Aural Rehabilitation Section at the Army's Deshon General Hospital, Butler, Pa, was recently awarded the Army Commendation Ribbon from the Third Service Command for "meritorious and outstanding performance of duty" The certificate contained the following citation "Major Edward H Truex, Medical Corps, is hereby authorized to wear the Army Commendation Ribbon by direction of the Secretary of War for meritorious and outstanding performance of duty, as chief, Aural Rehabilitation Section, Deshon General Hospital, from July 27, 1944 to Dec 6, 1945 His keen foresight, organizational ability and tact have enabled him to obtain maximum effectiveness from his personnel Tremendous work loads have been met without confusion, and morale has been kept at a high level His outstanding professional ability, unfailing enthusiasm and unhesitating use of his time and talents in subordination of his personal convenience have resulted in superior medical care for defened patients at this hospital and reflect credit on himself and the service" Dr Truex graduated from Harvard Medical School, Boston, in 1936 and entered the service Sept 10, 1942

### Major Harry L Freedman

Major Harry L Freedman, Dannemora, N Y, was recently awarded the Legion of Merit The citation accompanying the award stated that "Major Harry L Freedman as director, Mental Hygiene Division, ASFTC, Camp Plauche, New Orleans 12, La, from July 20, 1944 to Jan 2, 1946, displayed exceptional skill and was eminently successful in the organization and direction of this unique staff section His unit handled more than 4,000 cases of maladjusted soldiers With the aid of this outstanding service the problem of eliminating noneffectives from this command was solved in a highly efficient manner In achieving this objective he exhibited an unusually high degree of resourcefulness and creativeness which aided immeasurably in the accomplishment of military missions which are vital to the maintenance of the mental health of military personnel Through unselfish devotion to duty, leadership and exemplary performance Major Freedman reflects credit to the service, his profession and himself" Dr Freedman graduated from Harvard Medical School, Boston, in 1928 and entered the service May 31, 1941

### Colonel Richard P Strong

Col Richard P Strong, Boston, was recently awarded the Legion of Merit for meritorious services from October 1942 to September 1945 The citation related that "as director of tropical medicine, Army Medical School, he supervised and participated in the instruction of nearly 2,000 students, including medical officers of five allied governments and staff members of American medical colleges He also wrote and frequently revised the textbook used for this instruction By his profound knowledge, extensive experience of more than forty years in tropical medicine and inspiring leadership he contributed in an outstanding degree to the diagnosis, prevention and treatment of tropical diseases in the military forces with great credit to himself and to the military service" Dr Strong graduated from Johns Hopkins University School of Medicine, Baltimore, in 1897 and entered the service Nov 30, 1942

### Major Rafael Rodriguez-Molina

Major Rafael Rodriguez Molina, San Juan, P R, was recently awarded the Army Commendation Ribbon, the citation reading "The Army Commendation Ribbon is hereby awarded for commendable service from May 22, 1942 to Feb 12, 1946 as assistant chief and chief of the medical service, 161st General Hospital A P O 851, U S Army During this period Major Rodriguez-Molina displayed outstanding efficiency and devotion to duty His professional skill coupled with exceptional tact and keen knowledge of the psychology and customs of Puerto Ricans contributed greatly to the accomplishment of the medical mission of this department His accomplishments reflect great credit on him and on the military service" Dr Rodriguez-Molina graduated from the Medical College of Virginia, Richmond in 1926 and entered the service May 22, 1942

# NAVY

## NUMBER OF NAVAL RESERVE MEDICAL OFFICERS RELEASED

The Bureau of Medicine and Surgery, Navy Department, Washington, D C, recently stated that, up to April 25, 1946, 6,272 Naval Reserve Medical Officers had been released from service.

## UNIVERSITY OF OREGON MEDICAL SCHOOL CITED

The University of Oregon Medical School, Portland was recently awarded naval citations for distinguished service and outstanding work in training doctors for the Navy and was commended for splendid cooperation in the program

## NAVY AWARDS AND COMMENDATIONS

### Lieutenant Commander Emerson J Steenrod

Lieut Comdr Emerson J Steenrod, Iowa Falls, Iowa, was recently commended "for distinguished service in the line of his profession as orthopedic surgeon and general surgeon aboard the U S S SOLACE from October 1944 to September 1945 During this period he displayed outstanding professional skill and ability in handling casualties evacuated from beachheads He exhibited a high degree of physical fortitude and endurance in his expert treatment of the wounded and was directly responsible for saving the lives of many men suffering from shock and other combat disabilities His personal attention to detail and leadership were an ever present source of inspiration His conduct and devotion to duty were at all times in keeping with the highest traditions of the United States Naval Service" Dr Steenrod graduated from the University of Pittsburgh School of Medicine in 1933 and entered the service Nov 15, 1943

### Lieutenant (junior grade) Henry L Haines

A Letter of Commendation was recently presented to Lieut. (jg) Henry L Haines, Audubon, N J, 'for meritorious conduct in the performance of his duties while attached to the Medical Research Department, Submarine Base, New London Conn from December 1943 to December 1945" According to the citation, "by reason of extensive studies and research in the field of radium therapy he achieved results of the greatest significance and value to the submarine force and was able to reclaim for this service many personnel who would otherwise have been lost to it He was a most efficient and outstanding assistant to the Submarine Medical Examiner and was a valuable liaison officer in medical research matters His performance of duty was an inspiration to all with whom he served and in keeping with the highest traditions of the United States Naval Service" Dr Haines graduated from Johns Hopkins University School of Medicine, Baltimore, in 1939 and entered the service Sept 9, 1944

# VETERANS

## APPOINTMENTS IN THE VETERANS ADMINISTRATION

Dr Thaddeus Marion Koppa Glen Ellyn, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He will assume the duties of assistant chief, Tuberculosis Division, Branch Office 10, Dallas Texas

Dr Russell H Frost, Owatonna, Minn, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He will assume the duties as assistant chief, Tuberculosis Division, Branch Office No 8 Minneapolis

An appointment was recently accepted by Dr Edgar C Harper, Richmond, Va, in the Department of Medicine and Surgery He will assume the duties of assistant chief of the Tuberculosis Division at the Veterans Administration Branch Office No 4, Richmond, Va.

Dr Harry Leon Katz, New York, recently accepted an appointment in the Department of Medicine and Surgery He will assume the duties of assistant chief, Tuberculosis Division, Branch Office No 2 New York

Dr Milton T Himalstein, Scottsbluff, Neb, recently assumed the duties of otolaryngologist at the largest tuberculosis hospital of the Veterans Administration, Oteen, N C, to which he was recently appointed

Dr Otis N Shelton Orange Va recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of chief, Reception Service, Veterans Administration Hospital Tucson, Ariz

Dr Charles S Morrow, Ventnor, N J, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration Tuberculosis Hospital, Sun mount, N Y

Dr John C Dundee, Tulsa, Okla., recently accepted an appointment with the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of chief, medical service, Veterans Administration Tuberculosis Hospital, Waukesha, Wis.

Dr Joseph N Plumer, Philadelphia, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of chief, medical service, Veterans Administration Hospital Tucson, Ariz

Dr Jacob Goldberg, Newport, R I recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of chief, tuberculosis section at the Veterans Tuberculosis Hospital, Castle Point, N Y

Dr Christopher N Parnall Jr, Rochester, N Y, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration and reported for duty at the Veterans Tuberculosis Hospital, Oteen, N C, as chief tuberculosis section

Dr James H Matthews, formerly of Greenbelt, Md, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of medical officer at the Veterans Administration Tuberculosis Hospital, Oteen, N C

Dr Willard L Quennell, Baltimore, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has been temporarily assigned for short orientation at the Veterans Hospital, Rutland Heights Mass, on the completion of which he will be transferred to one of the tuberculosis hospitals in the Eastern area as manager

Dr Benjamin L. Brock, Waverly Hills, Ky, recently resigned as medical director of the Waverly Hills Sanatorium and tuberculosis controller of the city of Louisville and Jefferson County Ky, to accept a position with the Veterans Administration as clinical director of its largest tuberculosis hospital, at Oteen N C.

Dr Nicholas D D'Esopo has resigned as associate medical director of Pinecrest Sanatorium, Powers, Mich, to accept a position as chief, medical service, Veterans Administration Tuberculosis Hospital, Sunmount, N Y

Dr John K Deegan, Newport, R I, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration. He has assumed the duties of clinical director of the Veterans Tuberculosis Hospital, Castle Point, N Y

# MISCELLANEOUS

## BETTER CARE FOR MENTAL PATIENTS

Dr Forrest M Harrison, director of the Psychiatric Personnel Placement Service, stated in a report to the National Committee for Mental Hygiene that many army and navy medical officers are entering the psychiatric field, which will result in better and more adequate care for both civilians and ex-servicemen with mental and nervous disorders As of May 1 approximately 650 medical officers have applied Some 65 per cent of these requested further psychiatric training, while the remainder want to enter positions directly

The service is sponsored jointly by the American Psychiatric Association and the National Committee for Mental Hygiene. It is open to civilian physicians as well as to those of the armed forces who seek positions and training opportunities

Applicants include doctors who became interested in psychiatry in the war, specialists who want a better understanding of emotional and psychosomatic problems of patients, physicians who had training in this special branch while in service and men who were experienced psychiatrists before entering the Army or Navy Requests for training include general neuropsychiatry, psychosomatic medicine, psychoanalysis and therapy in neuroses and psychoses

## UNRRA NEWS

### Malnutrition Present in Greek Children

A recent report from UNRRA Greek Mission indicates that a large percentage of all 6 to 14 year old children in Greece show physical evidence of dietary deficiency It is said that graphs of the height of the children examined show a pronounced diminution in height compared to 50,000 children measured in Attica-Boetica in 1942 A decrease in the average height in children is one of the most reliable indications of chronic malnutrition, he says, as loss of weight, which fluctuates easily, is not too accurate a means of measuring the effects of poor diet

Throughout Greece the picture is relatively the same. In the regions where the Swiss Red Cross provided supplementary feeding for the younger children during the war and occupation their height is almost normal compared to that of children of Athens three years ago The older children, between 10 and 16 years old, who were not eligible for the supplementary feeding have been retarded In the mountain area where the Germans did not permit the Red Cross to operate, all groups of children are stunted in growth

Chronic rickets, which indicates a lack of vitamin D, is also prevalent among the Greek children, Dr Mendeloff reports, and gingivitis, a gum inflammation which results from a deficiency of vitamin A, is prevalent among very young children

### McKesson and Robbins Contribute Tooth Powder and Aspirin

The McKesson and Robbins Drug Company, Bridgeport, Conn, recently contributed through UNRRA 98,412 containers of tooth powder to the people of Czechoslovakia and 5,400 tins of acetylsalicylic acid to the people of China Fiorella H La Guardia, director general of UNRRA, accepted the gift on behalf of the war victims The contribution was valued at $12,050 It will be shipped by UNRRA and distributed free on the basis of need in accordance with UNRRA policy

## EMERGENCY COMMITTEE FOR PHYSICIANS AND DENTISTS, INC

To aid returning veterans in finding space to resume their practice in medicine and dentistry Edwin S Lowe, president of the Hotel Ansonia, New York, recently made the second floor available, whereby eighty to one hundred physicians and dentists in New York City will find a solution to the current 'space shortage." "Thousands of hotels throughout the country," stated Mr Lowe, "could follow the example set by the Ansonia to 'make' space available to the veteran to give him that fair and well deserved chance."

With this purpose in mind Mr Lowe organized the Emergency Committee for Physicians and Dentists, Inc., a nonprofit organization, for the purpose of aiding the veteran in locating space to resume his practice.

The means used for providing space at the Ansonia and the various plans for rendering service to the veteran will be incorporated in a brochure and distributed as a "pattern" to those desiring to cooperate in furthering this movement throughout the country

## HOSPITALS NEEDING INTERNS AND RESIDENTS

The following hospitals have indicated to the Council on Medical Education and Hospitals that their house staff appointments have not been completed

FLORIDA

*St Vincent s Hospital, Jacksonville.* Capacity, *275* admissions *9 978* Sister Electa R.N Superintendent (2 interns, July 1)

ILLINOIS

*Illinois Masonic Hospital Chicago* Capacity *186* admissions, *5 280* Mr *William H Tenney,* Superintendent (resident—surgery resident—*obstetrics-gynecology)*

Moline Public Hospital Moline Capacity 246 admissions, 6 177 Miss Marguerite N Brooks R N Superintendent (2 interns, 1 resident—mixed service July 1)

NEW YORK

Our Lady of Victory Hospital Lackawanna, Capacity 180 admissions 4,499 Sister Bathilde Superintendent (interns)

Lincoln Hospital New York City Capacity *469*, admissions 9 889 Dr Alexander W Kruger, Medical Superintendent (interns resident—pathology)

PENNSYLVANIA

*Chester Hospital Chester Capacity 280 admissions, 7 071* Mr L. P Wray Superintendent (3 interns resident—mixed service)

*Woman s Hospital Philadelphia. Capacity, 185 admissions 3,443* Dr Dora Ruland Medical Director (interns)

TENNESSEE

*Protestant Hospital Nashville Capacity 128 admissions 4 150* Mrs. Lois Stow Superintendent (interns, residents—mixed service)

TEXAS

Santa Rosa Hospital *San Antonio* Capacity, *411 admissions 12,427* Sister Mary of Lourdes Superintendent (2 interns)

## MEDICAL AND SURGICAL RELIEF COMMITTEE OF AMERICA

The Medical and Surgical Relief Committee of America, Inc. (420 Lexington Avenue, New York 17), is helping many small hospitals in all parts of Europe to reestablish free medical service for the needy by donating supplies and equipment. Recently 39 mg of radium was sent to the Hospital for the Incurables in Naples and the Villa dei Gerani, also in Naples The radium is valued at $2,000

# PUBLIC HEALTH SERVICE

## RELEASE OF RESERVE OFFICERS ON ACTIVE DUTY

In a recent report by Dr Thomas Parran, Surgeon General, United States Public Health Service, Federal Security Agency, reserve officers on active duty with the Public Health Service who accumulated 38 or more points as of Sept 30, 1945 will be released from active duty by June 1, 1946 At monthly intervals thereafter, officers with totals of 34, 30 and 10 will be returned to civilian life. Points did not accumulate after Sept. 30, 1945

Any officer who previously had stated a desire for separation but who now wishes to remain in service beyond his eligible date should notify the Office of the Surgeon General

Those officers who held reserve commissions in the Army under the Army Student Training Program and were released by the Army to accept commissions in the Public Health Service will be expected to serve the same length of time in the Public Health Service as they would have served had they remained in the Army

# PHYSICIANS SEPARATED FROM SERVICE

## ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

### Alabama

| | |
|---|---|
| Deramus, William H | Selma |
| Emmert, Max W Jr | Birmingham |
| Gaskins, Charles W | Birmingham |
| Gillespie, J P | Gadsden |
| Green, Albert H | Birmingham |
| Hicks, James J | Enterprise |
| Hill, Vivian H | Mobile |
| Hutchins, Paul F | Birmingham |
| Kersey George M | Tuskegee |
| King, Tom C Jr | Anniston |
| Liebeskind, Milton M | Mobile |
| Lonnergan, Leilas R. | Gadsden |
| Kemp, Paul S | Anniston |
| Minor, Walter H Jr | Mobile |
| Thompson, Samuel B | Fairfield |
| Warrick, George W | Birmingham |

### Arizona

| | |
|---|---|
| Bank, Joseph | Phoenix |
| Goodrum, William A | Phoenix |
| Hess Delbert W | Tucson |
| Hoffmann, Sterling P Jr | Tucson |
| Hudspeth, William T | Tucson |
| Kittredge, Daniel W Jr | Flagstaff |
| McLennan, Robert M | Phoenix |
| Saba Joseph | Bisbee |
| Schultz Norman C. | Tucson |
| Van Epps, Charles E | Phoenix |

### Arkansas

| | |
|---|---|
| Blackwood, James Q | Morrilton |
| Cullen Philip T | Little Rock |
| Jennings, William E. | Morrilton |
| John, Carr M Jr | Stuttgart |
| Jones, Gus W Jr | Eldorado |
| Moseley, James H | Crossett |
| Raney, Thomas J Jr | Little Rock |
| Riggall, Cecil | Prairie Grove |
| Shrigley, Guy P Jr | Clarksville |
| Shukers, Carroll F | Little Rock |

### California

| | |
|---|---|
| Anderson, Edmund F | San Francisco |
| Baker, James D Jr | Bakersfield |
| Baumann Franz | San Jose |
| Baxter, Philip N | Oakland |
| Birnbaum, Harold | Los Angeles |
| Biskind Gerson R. | San Francisco |
| Bravo, Francisco | Los Angeles |
| Brewer, Lyman A. III | Los Angeles |
| Brown, George D | Pomona |
| Brown Otto R. | Los Angeles |
| Brownfield, Bernard | Los Angeles |
| Buck, Leonard S | Beverly Hills |
| Butt, Dale J | Los Angeles |
| Caraco, Henry H. | Los Angeles |
| Caillet, René | Los Angeles |
| Campion, Edward | San Francisco |
| Carl, Nathan E. | Los Angeles |
| Carman, Henry F | San Francisco |
| Carpenter Donald P | Glendale |
| Casper, Philip C | Los Angeles |
| Chapman Ralph | Los Angeles |
| Comroe, Leon B | San Francisco |
| Covel, Mitchel D | Los Angeles |
| Corr, William P | Riverside |
| Crede Robert H | San Fernando |
| DeLong, Everett W | Beverly Hills |
| Dempsey Thomas F | San Bernardino |
| Doan Duane I | Palo Alto |
| Dodds Donald C. | Oakland |
| Doroshow George D | Huntington Park |
| Downey, Thomas P | San Diego |
| Durm, Thomas I | Bakersfield |
| Eckhardt, Wymond W | Glendale |
| Escovitz, William | Los Angeles |
| Escudoro, Manuel M | Los Angeles |
| Evans, Leland M | Sierra Madri |
| Feder Bernard H | Los Angeles |
| Ferret Andres | Oakland |
| Fick, Robert W | Beverly Hills |
| Fleming, Gail L | San Jose |

### California—Continued

| | |
|---|---|
| Finerman, Wilmore B | Los Angeles |
| Fleming, Albert E | Sanger |
| Florea, Darwin | Los Angeles |
| Foley, William J | Larkspur |
| Friedman, Marshall H | Los Angeles |
| Frishman, Andrew J | Elsinore |
| Fuller, Milo B | San Diego |
| Furze, William E | Fresno |
| Garner, George W | Taft |
| George, Arthur R | San Bernardino |
| Gilbert, Wallace G | Los Angeles |
| Gilliland, Roy C | Huntington Park |
| Godard Clarence H | Los Angeles |
| Goldenberg Julius L | Los Angeles |
| Gordan, Gilbert S Jr | San Francisco |
| Gould, Arthur A | Los Angeles |
| Graeser, Henrik S | Woodland |
| Graf, Walter S | Los Angeles |
| Graves, Clifford L. | San Francisco |
| Gruenberg, Herbert M | Los Angeles |
| Guggenheim, Paul | Los Angeles |
| Gurnee, Landon H | Los Angeles |
| Guthrie, Myron S | Bakersfield |
| Hackley, Roger W | Oakland |
| Hall, George E | Los Angeles |
| Hall, Henry R | Santa Ana |
| Haller, Austin P | Los Angeles |
| Hammond, Howard Jr | San Rafael |
| Hanigan, Thomas E. | Oakland |
| Harrison, Richard S | Pasadena |
| Hartzell, Walter J Jr | Los Angeles |
| Haskell, Joe S | Los Angeles |
| Heath, Richard S | Los Angeles |
| Heckel, Donald Q | Los Angeles |
| Heldfond, Alfred J | Los Angeles |
| Heldobler, Alfred O | San Bernardino |
| Henderson, Andrew M Jr | Sacramento |
| Henderson, Charles F | Santa Barbara |
| Herrmann, Victor A. | Los Angeles |
| Hess, Rolla B | San Francisco |
| Hill, Wilmot T | Stockton |
| Holder, Hall G | San Diego |
| Hollombe, Samuel M | Los Angeles |
| Holloway, James F | Lompoc |
| Horwitz, Emanuel | San Francisco |
| Huff, Louis L | Inglewood |
| Hughes, Clara L | San Francisco |
| Jones, Joseph R | Sacramento |
| Kandel Alfred | San Francisco |
| Karo, Harold L | Grass Valley |
| Kaslow, Arthur L | Palo Alto |
| Kassel, Maxwell S | Long Beach |
| Kesling, Emmett F | Wilmington |
| Kirchdoerfer, Herman | Pasadena |
| Kirchner, Herbert J | Los Angeles |
| Kirk, Arthur H | Fresno |
| Kirlin, Laurence P | Gilroy |
| Kirwin, John J | San Diego |
| Knapp, Lester B | Fresno |
| Kotler, Morris J | San Diego |
| Krohn, Leon | Los Angeles |
| Kupers, Edward C | Los Angeles |
| Kuzell, William C | San Francisco |
| Lagen John B | San Francisco |
| Latourette, Donald P | Los Angeles |
| Leffingwell, Forrest E. | Montebello |
| Leix, Frederick W S | Los Angeles |
| Lighthill Jack A | Santa Monica |
| Lloyd, Robert E | San Francisco |
| Lomas, Jack B | Los Angeles |
| Lorish, Frederick C. Jr | San Diego |
| Louie, Stanley | San Francisco |
| Lukens, Robert G | Sanitarium |
| McDonald John B | Los Angeles |
| McKinney, Charles L | Visalia |
| Malone, John T | San Fernando |
| Maloney, Edward S | Alameda |
| Marks, Roland F | Hillsborough |
| Marsden, Charles S | San Diego |
| Masters Elson J | San Francisco |
| Michelson, Robin P | San Francisco |

### California—Continued

| | |
|---|---|
| Mickel, Arthur A | St Benicia |
| Miles, Robert H | Alameda |
| Miller, Benjamin F | Yuba City |
| Miller, Ivan J | San Francisco |
| Millzner, Raymund J | Belvedere |
| Missall, Albert S | Santa Maria |
| Moore, Chester G Jr | San Francisco |
| Morreale, John J | Los Angeles |
| Movius Herbert J II, | North Hollywood |
| Mozar, Harold N | Hollywood |
| Mueller, Edward J Jr | Los Angeles |
| Mumma, Claude S' | Santa Monica |
| Murphy Paul L | Hanford |
| Nash, Acatius M | Altadena |
| Newman, Harold | Ventura |
| Newman, Harry W | W Los Angeles |
| Newsom, William A | San Francisco |
| Newton, Paul A | Taft |
| Nixon, Charles E | Bakersfield |
| Olson, Burton G | Orange |
| Orleans, Leslie S | Los Angeles |
| Pace, Paul T | San Jose |
| Perlmutter, Roland J | Fresno |
| Phalen, James R | San Diego |
| Ray, Earl B | Bellflower |
| Reinard Erich | Los Angeles |
| Reis, Joseph B | San Leandro |
| Sampson, John J | San Francisco |
| Schield Emmett LeR. | Pomona |
| Schwartz, Simon DeW | Beverly Hills |
| Scott, Clarence L | Bishop |
| Segal, Adolph | San Francisco |
| Seiler, William E | San Diego |
| Shear, Henry R | Los Angeles |
| Shwayder, Montimore C | San Francisco |
| Simard, Ernest E | Los Angeles |
| Simmonds Leslie | Beverly Hills |
| Simmons Robin E | Los Angeles |
| Snipes, George W | Sacramento |
| Traylor, Adolphus R | Los Angeles |
| Unsell, Ira M | Santa Monica |
| Ussher, Neville T | Santa Barbara |
| Vannucci Oliver R. | San Francisco |
| Wilkinson, Jack E | Fresno |
| Yonan, Marshall E | San Francisco |
| Young, Robert B | Los Angeles |

### Colorado

| | |
|---|---|
| Bell, Herbert J | Denver |
| Buchanan Lawrence D | Wray |
| Faust, Louis S | Denver |
| Finkelstein Max | Denver |
| Foster, John McE Jr | Denver |
| Freshman, Alexander W | Denver |
| Friedland, Joseph D | Denver |
| Gerringer, William F | Ouray |
| Haley, James S | Longmont |
| Hartley, George Jr | Denver |
| Hendryson, Irvin E. | Denver |
| Howell, Ira L. | Denver |
| Kaplan, Morris | Denver |
| Lee, Robert M | Ft Collins |
| Livingston, Wallace H Jr | Denver |
| Lloyd, Leo W | Durango |
| Lubchenco, Alexis E | Denver |
| McGrath, Neill B Jr | Lamar |
| McMullen, James W | Colorado Springs |
| Mason, Charles L | Durango |
| Naugle John E | Denver |
| Nice, Philip O | Las Animas |
| Shand, James A | Pueblo |
| Swanson, Roy A L | Pueblo |
| Williams, George S Jr | Denver |

### Connecticut

| | |
|---|---|
| Canfield, Norton | New Haven |
| Covey, Jerome A | Bridgeport |
| Crowe, Thomas J | Waterbury |
| Davis, Jachin B | New Haven |
| Delgrego, Arthur L. | Hamden |
| Dillon, John A | Westbury |
| Findorak, Francis G | Stratford |

# PHYSICIANS SEPARATED FROM SERVICE

### Connecticut—Continued

| | |
|---|---|
| Fleri, Santo H | Hartford |
| Furniss, William E | West Hartford |
| Geer, William A | Bridgeport |
| Gillespie, Harry | Hartford |
| Hamilton, John S M | Stanford |
| Hardenbergh, Daniel B | Fairfield |
| Henderson, Jean | Stamford |
| Hough, Perry T | Hartford |
| Hudon, Frederick A | Bristol |
| Jennes, Milton L | Waterbury |
| Jovell, John W | Waterbury |
| Kenigsberg, Nathaniel | New Haven |
| Lavorgna, Michael H | West Haven |
| Levinsky, Aaron | Wilton |
| Manheimer Leon H | Torrington |
| Major, James W | New Haven |
| Martin, John G | West Hartford |
| Maynard, Harry H | New Haven |
| Monacella, John M | Windsor |
| Monroe, Robert W | Chester |
| Moriarty, Louis | Willimantic |
| Morris, Joyce S | Hartford |
| Riordan William D | Wallingford |
| Swift, William E Jr | Hartford |
| Wolfe, John J | New Haven |

### Delaware

| | |
|---|---|
| Fenimore, William N | Marshallton |
| Goldman, Hyman J | Wilmington |
| Gunby, Walter E Jr | Seaford |
| Hume, William G | Wilmington |
| Love, Jack W P | New Castle |
| Rovitti, Francis P | Wilmington |
| Stat, Sidney | Wilmington |

### District of Columbia

| | |
|---|---|
| Bennett, Webster W Jr | Washington |
| Berthrong, Morgan | Washington |
| Brue, Peter P | Washington |
| Delahoussaye, A J Jr | Washington |
| Dredge, Thomas E. | Washington |
| Flocks, Milton | Washington |
| Foster, Stuart O | Washington |
| Freeman, Cary H | Washington |
| Granger, Gordon A | Washington |
| Halperin, Alexander | Washington |
| Harding, James C. | Washington |
| Haws, Ralph J | Washington |
| Hecker, Robert C | Washington |
| Hillman, Samuel A | Washington |
| Jacobson, Benjamin D | Washington |
| Jana, Joseph T | Washington |
| Kelly, John E | Washington |
| Koch, Benno F | Washington |
| Ladd, John M | Washington |
| Latimer, John W Jr | Washington |
| Lewis, William Jr | Washington |
| Lieber, Maurice F | Washington |
| McMahon, Raymond A | Washington |
| Mazer, Milton | Washington |
| Nolan, David M | Washington |
| Norton, Joseph G | Washington |
| Sabin, Hilbert S | Washington |
| Shumate, Lincoln W | Washington |
| Sondheimer, Daniel | Washington |
| Ulm, Aaron H | Washington |

### Florida

| | |
|---|---|
| Blackmon, Heyward J | Tampa |
| Coleman, Nathan W | St. Petersburg |
| Daly, Thomas E | West Palm Beach |
| Dowlen Otto S | Miami Beach |
| Gable, Linwood M | St Petersburg |
| Goodman, Bernard | Miami Beach |
| Graham, Henry H | Gainesville |
| Griffin, Taylor W | Quincy |
| Haverfield, William T | Jacksonville |
| Jones, Will O'D | Bay Pines |
| King Fletcher G | Jacksonville |
| McSween, John C. | Pensacola |
| Martin, Emmett E | Haines City |
| Miller, Seymour M | Miami |

### Florida—Continued

| | |
|---|---|
| Salley, Samuel M | Miami Beach |
| Sessions, Raymond R | Kissimee |
| Shepperd, Lewis A | Miami |
| Sollod, Bernard W | St Petersburg |
| Stannus, Donald G | Miami Beach |

### Georgia

| | |
|---|---|
| Cochran, George H | Atlanta |
| Freedman, Louis M | Savannah |
| Glenn, Robert B | Waycross |
| Harrell, Edward McL | Tifton |
| Harris, Charles I Jr | Rome |
| Giddens, Isbin S | Millen |
| Holman, Charles M | Atlanta |
| Lange, John H | Atlanta |
| McPherson, John H T Jr | Athens |
| Marsicano, Anthony R | Macon |
| Nabors, Dewey T | Atlanta |
| Pinson, Harry D | Augusta |
| Shalloway, Charles L | Atlanta |
| Smaha, Tofey G | Griffin |
| Smith, Carter | Atlanta |
| Smith, Richard L | Cochran |
| Spearman, Walter D | Social Circle |
| Young, John D | Atlanta |

### Idaho

| | |
|---|---|
| Davis, John W | Glenns Ferry |
| Davis, Richard L | Malad City |
| Engelcke, Raymond H | Boise |
| Hill, John R | Emmett |
| Hollingsworth James E | Boise |
| Wasserman, Sidney E. | Boise |

### Illinois

| | |
|---|---|
| Alderson, Charles F | E. St. Louis |
| Alesi, Joseph J | Chicago |
| Allen, Hubert L. | Alton |
| Ashkenazy, Moses | Chicago |
| Backer, Meyer | Chicago |
| Baker, Edwin F | Ashton |
| Baker, Frank M | E. St Louis |
| Bard, George W I | Sheldon |
| Baum, Hugo C | Chicago |
| Beck, Paul M | Oak Park |
| Becker, Harry G | Evanston |
| Berardi, James B | Chicago |
| Berger, Irving R. | Chicago |
| Berger, Samuel | Markham |
| Bernstein, Haskell E | Chicago |
| Bewersdorf, Herman L | Melrose Park |
| Boike, Wilbur F | Chicago |
| Boswell, Clarence H | Rockford |
| Bovik, Leslie E | Waukegan |
| Bradley, Robert L | Chicago |
| Bratrude, Amos P | Antioch |
| Brewer, Lewis R | Oak Park |
| Campbell, Crawford J | Chicago |
| Cavins Elmer W | Lansing |
| Christie, John B | Champaign |
| Cirzan, John L | Chicago |
| Cochran, Terence H | Chicago |
| Cohen, Hyman | Chicago |
| Condon John B | Chicago |
| Dangremond, Gerrit | Chicago |
| DeQuevedo Eugenio G | Centralia |
| De Rosa, Francis P | Chicago |
| Dessen, Samuel | Chicago |
| Dimicelli, Salvatore A. | Chicago |
| Doud, Ray W | Normal |
| Draa, Cecil C | Chicago |
| Dreyfuss, Ernst H | Good Hope |
| Dubrow, Benjamin | Chicago |
| Ehrlich, Norman J | Chicago |
| Epstein, David | Chicago |
| Fabian, Sydney | Chicago |
| Fardy, Francis P | Chicago |
| Farney, William E | Chicago |
| Favus, Irving | Peoria |
| Feinhandler Emanuel J | Chicago |
| Feldser, A. V | Chicago |
| Fildes, Charles E | Olney |

### Illinois—Continued

| | |
|---|---|
| Finkle, John R | Plainfield |
| Foley, John D | Waukegan |
| Foster, Ray T | Morris |
| Friefeld Nathan | Chicago |
| Frigo, Leo H | Chicago Heights |
| Furby, Seeley B | Paxton |
| Gardner, Clarence L Jr | Aurora |
| Garthe, Joseph H | Rockford |
| Geever, Ernest D | Chicago |
| Geittmann, William F | Chicago |
| Geraci, Angelo S | Chicago |
| Gillig Frederick W | Peoria |
| Gino, Marcello V | Chicago |
| Gittelson, Lloyd A | Chicago |
| Gladson James E | Pinckneyville |
| Gladstone, Lee | Chicago |
| Glasser, Julius M | Chicago |
| Goldberg, Benjamin | Chicago |
| Goldenberg, George | Chicago |
| Goldinger, James M | Chicago |
| Graf, Carl N | Chicago |
| Grandone, Joseph J | Gillespie |
| Gray, Otto E | Chicago |
| Greene, Joseph M | Chicago |
| Gunn, Samuel A | Chicago |
| Guest, Samuel I | Chicago |
| Guy, Chester C | Chicago |
| Haedike, William D | Chicago |
| Hall, Philip V | Princeton |
| Hammond, Rex D | Chicago |
| Hanselman, Russell C | Chicago |
| Harrell, Julius G | Carmi |
| Harrison, Camille J | Chicago |
| Havranek, James C. | Cicero |
| Hiatt, Kenneth N | Glen Ellyn |
| Hillenbrand Charles J | Chicago |
| Horner, Charles E | Petersburg |
| Hrejsa, Allen C | Chicago |
| Hrejsa, Francis J | Cicero |
| Huerta, Salvador J | Towanda |
| Huml, Anton P | Peoria |
| Humphrey, Kenneth E. | Alton |
| Hunter, Don J | Chicago |
| Hurwitz, Charles L. | Chicago |
| Jacobi, Rudolph E. | Chicago |
| Jacobs, Maurice B | Chicago |
| Jaffe, Ewald M | Manteno |
| Jana, Edward C | Chicago |
| Jenkins, Albert H | Chicago |
| Jennings, Laurence S | Chicago |
| Johnson, Frank W | Chicago |
| Julian, Ormand C | Chicago |
| Kadin, Milton M | Chicago |
| Kadzewich, Joseph W | Chicago |
| Kanter, Joseph | Chicago |
| Kanter, Myron F | Chicago |
| Kaplan, George P | Rockford |
| Kaplan, Joseph H | Rockford |
| Kaplan Max | Chicago |
| Kapustka, Edward J | Chicago |
| Kawaoka, Wallace S | Chicago |
| Ketay, Joseph M | Peoria |
| Klingroffer, Max | Decatur |
| Kirgis, Harold J | Chicago |
| Klawans, Harold L | Chicago |
| Klein Samuel | Joliet |
| Koepke, Earl H | Chicago |
| Koesterer, Philip J Jr | Freeburg |
| Korngold, Herbert W | Chicago |
| Kramer, Philip | Chicago |
| Kristianson, Clarence T | Chicago |
| Krystosek, Joseph W | Chicago |
| Lambertus, Paul T | Quincy |
| Landy, Nathaniel E | Chicago |
| Lawrence, Charles H | Chicago |
| Lawrence, James O | Chicago |
| Lebensohn, Asher N | Chicago |
| Ledoux, Alfred C. | Evanston |
| Lennarson, Vincent A E | Waukegan |
| Lewandowski, Henry C | Chicago |
| Lewis, James W | Evanston |
| Lieberstein, Joseph H | Oak Lawn |

# PHYSICIANS SEPARATED FROM SERVICE

### Illinois—Continued

| | |
|---|---|
| Lieberthal Frederick | Evanston |
| Long, William | Chicago |
| Lucas Nicholas L | Braidwood |
| Lundgren, Edward S | Chicago |
| Lykkebak, Robert P | Heyworth |
| McCarthy, Martin J | Chicago |
| McIntyre, Caryl C | Riverside |
| McNamara, Edward W | Chicago |
| Magill, Clark R W | Oak Park |
| Maginn, Richard J | Clay City |
| Magit, Jack R | Chicago |
| Mahoney Joseph M | Chicago |
| Matson, Kenneth L | Chicago |
| Melyn Michael A | Chicago |
| Menton, Harry M | Moline |
| Meyers, Sidney S | Chicago |
| Miller, Clay "O | River Forest |
| Miller, Nathan H | Chicago |
| Mock Charles J | Evanston |
| Morris, Hyman R. | Chicago |
| Morris, Kenneth L. | Waukegan |
| Morrow, William E | Chicago |
| Mosko Milton M | Chicago |
| Moswin, Jack A | Chicago |
| Moulton Horace K. | Petersburg |
| Newell, Robert H | Oak Park |
| Noto Samuel C | Chicago |
| O'Brien Donald E. | Chicago |
| Olson, Lorin M | Chicago |
| Olszewski Walter J | Chicago |
| Ovenu, Harold | Chicago |
| Padorr, Marvin P | Chicago |
| Pelkey, George L | Chicago |
| Plaut, Clarence T | Chicago |
| Platt, Matthew | Forest Park |
| Pollack, Seymour L | Chicago |
| Rachlin Sol | Chicago |
| Rappaport Joseph N | Evanston |
| Rebillot, Joseph R. | Litchfield |
| Richter, Irving B | Chicago |
| Rink, Arthur G | Chicago |
| Rosenberg, Rudolph | Chicago |
| Rubnitz Willard | Chicago |
| Saberman, Meyer I | Chicago |
| Saletta Frank J | Chicago |
| Sanders, Jack H. | Chicago |
| Satz, Leo A | Chicago |
| Schnepp, Kenneth H | Springfield |
| Schroth, George J | Chicago |
| Schuman Irving | Chicago |
| Schwartz Edward J | Chicago |
| Seltzer Sam | Chicago |
| Shulruff, Joseph T | Chicago |
| Shuman, Harry W | Rock Island |
| Simons, Morton | Chicago |
| Sinnott, Richard F | Chicago |
| Sladek, William R. | Riverside |
| Smith Harvey S | St. Louis |
| Tepper Sidney M | Chicago |
| Washington, John C | Evanston |
| Winn John P | Murphysboro |

### Indiana

| | |
|---|---|
| Ash Alfred S | Lewisville |
| Bachmann, Arnold J | Cambridge City |
| Baldridge, William O | Terre Haute |
| Bard, Frank B | Crothersville |
| Bernstein, Joseph | Indianapolis |
| Bowers Copeland C. | Kokomo |
| Brother, George M | Indianapolis |
| Bryan, Franklin A | Ft. Wayne |
| Buckingham, Richard E. | Indianapolis |
| Buhrmester, Harry C Jr | Lafayette |
| Clark, William H | South Bend |
| Denny, Forrest L. | Madison |
| Deutsch, William Jr | Muncie |
| Drohan Edward P | Lawrenceburg |
| Fouts Paul J | Indianapolis |
| Fromhold Willis A | Indianapolis |
| Gardner, Frederic B | Indianapolis |
| Garner, William S | Indianapolis |
| Goodman, Hubert T | Terre Haute |
| Grzesk, Leo L | South Bend |
| Hall, Alvin P McD | Richmond |
| Hancock, John G | Indianapolis |
| Harstad Casper | Rockville |
| Hedde, Eugene L | Logansport |
| Jones Paul A | Dugger |
| Joseph, Herbert L | Indianapolis |
| Kirshman Forrest E | Muncie |
| Kirtley, William R | Crawfordsville |
| Klain, Benjamin V | Indianapolis |
| Kline, Jacob M | South Bend |
| Koehler, Elmer G | Elkhart |
| Langenbahn, Carl J | South Bend |
| Lindsay Hamlin B | Washington |
| Loewenstein, Werner L | Terre Haute |
| Long, Paul L | Anderson |
| Lorenty Thaddeus B | Gary |
| Loring Mark L | Valparaiso |
| McKinley, Arthur D Jr | Indianapolis |
| McMahan Virgil C | Bedford |
| McKinney, Daniel H | LaFayette |
| Marks, Salvo P | Hammond |
| Miller, Orval J | Ft Wayne |
| Miller, Robert B | Nappanee |
| Nakadate Katsumi | East Chicago |
| Neidballa, Edward G | Bristol |
| Nigg Herbert L | Auburn |
| Nonte, Leo R | Indianapolis |
| Richart, James V | Terre Haute |
| Richey, Clifford O | Evansville |
| Siebenthal, Ben J | Indianapolis |
| Siekierski, Joseph M | Gary |
| Silbert, David B | Shelbyville |
| Slama, John T | Indianapolis |
| Smith, Byron J | Kingman |
| Stevens, Sydney L. | Indianapolis |
| Thatcher, Hugh K Jr | Indianapolis |
| Weissman, Irving | Ft Wayne |

### Iowa

| | |
|---|---|
| Anstey, George C | Massena |
| Barrent, Milton E | Sioux City |
| Blackman Nathan | Clarinda |
| Boller, Galen C | Tracer |
| Bruns, Paul D | Des Moines |
| Campbell, Harry B | Des Moines |
| Carrow Roland A | Des Moines |
| Cochran, Jesse L | Carroll |
| Cooper, Raymond E | Keokuk |
| Elliott Olin A | Des Moines |
| Farris Jack M | Oakland |
| Galinsky, Leon J | Sioux City |
| Hamilton, Charles F | Iowa City |
| Harvey, Glen W | Storm Lake |
| Heffernan, Chauncey E | Sioux City |
| Henderson, Walker B | Oelwein |
| Henkle, Wayne M. | Afton |
| Hess John Jr | Des Moines |
| Hughes Parker K. | Des Moines |
| Kerr William H | Hamburg |
| Kiesau Milton F | Postville |
| Kimberly, Lester W | Davenport |
| Koontz, Lyle W | Vinton |
| La Dage Leo H | Bettendorf |
| Lande, Jacob N | Sioux City |
| Landis, Sylvanus N | Des Moines |
| Larson John B | Laurens |
| Locher Robert C | Cedar Rapids |
| McCann John P | Centerville |
| McDonald, Donald J | Cedar Rapids |
| Margolin Julius M | Perry |
| Moskovitz, Julius M | Council Bluffs |
| Newkirk William H. | Oxford |
| Oldag George E | Paullina |
| Paragas Modesto R. | Creston |
| Pratt, Elmer B | Des Moines |
| Sattler Dwight G | Iowa City |
| Skouge Oren T | Kanawha |
| Sulek, Arthur E | Cedar Rapids |
| Sulzbach John F | Oelwein |
| Wagner, Eugene C. | Davenport |

### Kansas

| | |
|---|---|
| Anderson, Robert C | Topeka |
| Beller, Willis L | Topeka |
| Drake, Ralph L | Wichita |
| Eckdall, Funston J | Emporia |
| Garrett, Glen H | Clay Center |
| Grove, John A | Newton |
| Hanson, Frederick R | Atchison |
| Henning, Calvin W | Ottawa |
| Henry, Schubert D | Kansas City |
| Hohman, Louis M | Wadsworth |
| Hovorka Joseph J | Emporia |
| Hyde, Marshall E | Augusta |
| Kirkpatrick, Hazen L | Topeka |
| Lewis, Letteer G H | McPherson |
| McComas Marmaduke D | Courtland |
| McDougal Warren W | Colby |
| Magee, Charles R | Wichita |
| Mills, Earl L | Wichita |
| Nevitt, James R | Moran |
| Rapp, William E | Kansas City |
| Robison, Corbin E | Horsington |
| Schmidt, Clarence R. | Halstead |
| Smith, Lewis A | Kansas City |
| Wallace, Leo F | Wichita |

### Kentucky

| | |
|---|---|
| Aydelotte, Benjamin I | Louisville |
| Bond, Albert H | Hardy |
| Burns, Eugene J | Louisville |
| Clardy, Delmas M | Hopkinsville |
| Erth, Gustave T | Ft. Thomas |
| Faulkner Joseph S | Bellevue |
| Gordon, Samuel S | St Mathews |
| Griffin Robert J | Lexington |
| Hackett, Louis J | Louisville |
| Houston, Hal E | Murray |
| Lande, Frank | Outwood |
| McCarty, Arthur C | Louisville |
| McEwen, John C | Van Lear |
| Quinn, Charles S | Louisville |
| Ray, Edward H | Lexington |
| Rodgers, Bradford D | Lexington |
| Schosser, Milo H | Benham |
| Webb, Jack G | Louisville |

### Louisiana

| | |
|---|---|
| Bilbro, Griff W | New Orleans |
| Braswell, Marlin T | Minden |
| Burton, John P | New Orleans |
| Crawford, Walter J | New Orleans |
| Dougherty, Cary M | Jackson |
| Dupuy, Homer J | New Orleans |
| Duxbury, Millard H | New Orleans |
| Faust, Edmond L | New Orleans |
| Feldner George D | New Orleans |
| Fendler, Benny | Alexandria |
| Ferguson Edmund P | Campti |
| Finkelstein, Wilfred | New Orleans |
| Fornea, Ruffin D | New Orleans |
| Garcia, John E | New Orleans |
| Geraci, Dominick J | Paradis |
| Gold Philip S | New Orleans |
| Goldberg, Michael N | New Orleans |
| Gray, Courtland P Jr | Monroe |
| Hatchette Stakeley F | Lake Charles |
| Holcombe, Richard G Jr | New Orleans |
| Holland Ned W | New Orleans |
| Holloway, Hosah S Jr | New Orleans |
| Holt, Charles S Jr | Shreveport |
| Horn, Phillip W | New Orleans |
| Kimata Harold T | New Orleans |
| Lazaro Ladislas | Opelousas |
| Lunin Arthur B | Patterson |
| McClelland, Norman M | Alexandria |
| McClure John G | Welsh |
| Miller, Jack G | New Orleans |
| Motty, Jules S Jr | New Orleans |
| Redler, Irving | New Orleans |
| Sellmann, Adolph H | Metairie |
| Shlenker Lenard L | Monroe |
| Shute, Frank C Jr | Opelousas |
| Smith Courtland P | Baton Rouge |
| Vickery George W | New Orleans |
| Weiss, Thomas E | New Orleans |
| Witt, Everett J | New Orleans |

# PHYSICIANS SEPARATED FROM SERVICE

## Maine

| | |
|---|---|
| Cohen, Sidney | Upper Gloucester |
| Donahue, Clement L | Hancock |
| Downing, Jere R | Kennebunk |
| Fagone, Francis A | Portland |
| Fox, Francis H | Portland |
| Osler, Jay K | Bangor |
| Schwartz, Carol | Portland |
| Smith, Jacob | Bath |

## Maryland

| | |
|---|---|
| Borden, Melvin M | Jarrettsville |
| Buck, Walter B | Roland Park |
| Caplan, Lester H | Baltimore |
| Clark, Fred H | Baltimore |
| Cutler, Frank H | Hagerstown |
| Dodd, William A | Baltimore |
| Ellison, Emanuel S | Baltimore |
| Filtzer, David L. | Baltimore |
| Gaver, Leo J | Myersville |
| Goldman, Abram | Baltimore |
| Gonder, Thomas A Jr | Oakland |
| Grier, George S III | Baltimore |
| Guyton, William L Jr | Baltimore |
| Hauver, Richard V | Hagerstown |
| Highstein, Benjamin | Baltimore |
| Hills, Ralph G | Baltimore |
| Honigman, Milton A | Baltimore |
| Ingalls, George S | Towson |
| Jonas, August F Jr | Baltimore |
| Johnston, Clarence F Jr | Baltimore |
| Kane, Harry F | Baltimore |
| Karns, James R | Baltimore |
| Layman, William T | Hagerstown |
| Long, William B | Princess Anne |
| MacMillan, Hugh A Jr | Cumberland |
| Martin, Earl A | Chevy Chase |
| Mays, John R S | Baltimore |
| Mishtowt, George I | Chevy Chase |
| Morrison, Samuel | Baltimore |
| Moseley, Herbert L Jr | Baltimore |
| Murphy, William S | Rockville |
| Resnick, William J | Deal Island |
| Roberts, David P | Baltimore |
| Rosenberg, Morris H | Silver Spring |
| Sacks, Seymour | Baltimore |
| Schindler, Blanc M | Cumberland |
| Seegar, John K. B E Jr | Baltimore |
| Selby, George D | Germantown |
| Siscovick, Milton | Baltimore |
| Skloven, Joseph | Baltimore |
| Smith, Andrew L | Hyattsville |
| Spurrier, Oliver W | Ruxton |

## Massachusetts

| | |
|---|---|
| Abkowitz, Herbert | Everett |
| Alpert, George R | Brookline |
| Arent, Anthony P | Cambridge |
| Armstrong, Frank L | Boston |
| Barbieri, Joseph G | Lawrence |
| Bassett, Arthur M | Boston |
| Benoit, Noe N | Fisherville |
| Binnig, Carl M | Westfield |
| Bradley, Joseph A | Methuen |
| Burke, Edward W | Brighton |
| Champ, Anthony M | Brockton |
| Churchill, Edward D | Belmont |
| Clapp, Ralph S | St. Amherst |
| Clarke, Winthrop I | Fall River |
| Converse, John M | Boston |
| Cosby, Richard S | Boston |
| Crone, Neil L | Belmont |
| deAguiar, Alcinda P | Wrentham |
| Dutton, David P | Malden |
| Feinman, Maxwell H | Lynn |
| Fishman, Myer | Cambridge |
| Fleming, James P Jr | Williamstown |
| Ford, Frederick F Jr | Roslindale |
| Fournier, Joseph A | Fall River |
| Fox, Samuel | Malden |
| Fox, Samuel F | Lawrence |
| Frank, Israel R | Jamaica Plains |
| Franseen, Clifford C. | Newton Centre |
| Garment, Edward M | Rutland Heights |

## Massachusetts—Continued

| | |
|---|---|
| Genest, George S | Ludlow |
| Geran, William F | Springfield |
| Glazer, Carl | Chelsea |
| Glick, Harry S | Leominster |
| Godfrey, John | Jamaica Plain |
| Goethals, Thomas R | Boston |
| Goodman, Harry | Gardner |
| Graham, John R. | Brookline |
| Green, Max B | Methuen |
| Greenberg, Reuben | Bridgewater |
| Gregorie, Joseph | E Boston |
| Gregory, William M | Chicopee |
| Groden, Harold M | Boston |
| Grosberg, Samuel | Newton |
| Hall, Leonard J | Lowell |
| Harrison, Marlow B | Boston |
| Haselhuhn, Donald H | Springfield |
| Helman, Milton E | Chelsea |
| Hill, Lewis W | Boston |
| Huntress, William W | Fall River |
| Jacobs, Salvador | Hathorne |
| Karlin, Harold | Brookline |
| Kassels, Maurice E | Everett |
| Keenan, George F | Humarock |
| Kemble, Robert P | Worcester |
| Kelley, John S | Boston |
| Kickham, Edward F | Brookline |
| Killoran, Daniel M | Lynn |
| Klam, Najeeb | Boston |
| Koczera, Stanley J | New Bedford |
| Kozodoy, Max. | Boston |
| Kraus, Edward I | Chicopee Falls |
| Lampner, Harold | Brookline |
| Lancaster, Harland F | Bedford |
| Leckart, Harvey H | Stoughton |
| Leffingwell, Harold R | Paxton |
| Lentine, Joseph | Roxbury |
| Levin, Aaron H | Newton Centre |
| Levine, Irving M | No Grafton |
| Levine, Louis | New Bedford |
| London, Clarence | Lynn |
| Longpre, J H F | Northampton |
| Lord, Charles R. Jr | Bedford |
| McCabe, George E | Worcester |
| McDermott, William V Jr | Salem |
| McGirr, John C. | Belmont |
| McKee, David O | West Roxbury |
| MacLachlan, Kenneth L | Melrose |
| McQuade, Lewis S | Quincy |
| Maffeo, Peter A R. | East Boston |
| Maloof, Emil G | Boston |
| Marble, Alexander | Boston |
| Marshall, Edward J | Waltham |
| Massik, Paul | Dorchester |
| Massimiano Antonio G | Pittsfield |
| Mullaney, Owen C | Dorchester |
| Murray, Arthur C | Winthrop |
| Murray, Henry A | Boston |
| Murray, Martin B | Springfield |
| Nadel, Frederick P | Cambridge |
| Norton, Thomas M | Pittsfield |
| Nichols, Charles I | Medford |
| Oliker, Abraham J | Rockland |
| Pash, James J | Lawrence |
| Ramer, Alexander | East Cambridge |
| Riseman, Benjamin | Dorchester |
| Sapienza, Peter L | Everett |
| Schneider, Benjamin | Monson |
| Schultz, Philip E | Boston |
| Schwartz, Isadore | Quincy |
| Seigal, Harold L | Boston |
| Sherman, David E | Springfield |
| Simkin, Stanley | Pittsfield |
| Slomkowski, Thaddeus J | Wrentham |
| Smith, Leonard | Westfield |
| Smyth, Duncan C | Green Harbor |
| Stacks, Irving H | Boston |
| Sullivan, Eugene R. | Fall River |
| Swartz, Morris | Dorchester |
| Vidoli, Marino F | Newton |
| Walsh, Francis X | Dorchester |
| Watts, Winthrop F | Marblehead |
| Wolfe, Louis M | Chelsea |

## Michigan

| | |
|---|---|
| Bailey, William J | Detroit |
| Barish, Julian I | Sault Ste Marie |
| Beeman, Carl B | Grand Rapids |
| Beer, Joseph F | Grosse Pointe Park |
| Berkaw, Kenneth A | Detroit |
| Biery, Martin L | Detroit |
| Bornstein, Sidney | Detroit |
| Bush, Glendon J | Detroit |
| Campbell, Malcolm D | Detroit |
| Caraway, James E | Wayne |
| Carp, Joseph | Detroit |
| Chason, Jacob L | Monroe |
| Chisena, Peter R | Bridgeport |
| Cigany, Zoltan B | Waltz |
| Clarke, Niles A | Detroit |
| Conn, Raymond W | Detroit |
| Denham, Robert H Jr | Grand Rapids |
| Davis, William I | Detroit |
| Devine, Herbert W | Grosse Pointe Pk. |
| Donovan, Richard S | Detroit |
| Dore, Clarence E | Detroit |
| Edson, James | Ann Arbor |
| Farber, Charles E | Grand Rapids |
| Feldstein, Martin Z | Detroit |
| Ferguson, Franklin F | Detroit |
| Finkelstein, Theodore | Flint |
| Fitzgerald, Thomas D | Ann Arbor |
| Flood, Richard E | Detroit |
| Forsyth, James E. | Albion |
| Foster, Earl B | Detroit |
| Freedland, Morris | Eloise |
| Fuller, Hugh McL | Grosse Pointe |
| Fuller, Paul M | Kalamazoo |
| Fuller, William J | Ann Arbor |
| Gage, David P | Saginaw |
| Gates, Edward M | Detroit |
| Gilmore, John R. | Detroit |
| Goff, Sidney B | Eaton Rapids |
| Gorelick, Martin J | Dearborn |
| Griffith, Robert M | Muskegon |
| Gronemeyer, William H | Bay City |
| Hause, Glen E | Detroit |
| Herbst, Harold B | Detroit |
| Herschelmann, Roy F | Detroit |
| Hillenbrand, Carl M | Detroit |
| Hirschfeld, Alexander H | Ann Arbor |
| Hong, Charles J | Ann Arbor |
| Huene, Nevin | Traverse City |
| Hanna, Carl | Detroit |
| Hillenbrand Alfred E | Grosse Pointe |
| Hubert, John R | Pontiac |
| Hunt, Homer H | Detroit |
| Huyck, Stanhope P | Sunfield |
| Janes, Robert G | Marquette |
| Johnson, David B | East Lansing |
| Keith, Kelly | Ferndale |
| Kernick, Melvin O | Highland Park |
| Knapp, Byron S | River Rouge |
| Kniskern, Paul W | Grand Rapids |
| Kuhn, Robert | Highland Park |
| Leader, Samuel A | Battle Creek |
| Lewis, Raymond O | Detroit |
| Leva, John B | Benton Harbor |
| Livingston, George D | Detroit |
| Long, Edgar C | Monroe |
| McCampbell, Ernest J | Detroit |
| McGillicuddy, Oliver B | East Lansing |
| McGillicuddy, Robert J | Lansing |
| McKenna, Charles J | Detroit |
| McLauthlin, Herbert B | Jackson |
| McLean, Don W | Detroit |
| Machin, Harold A | Kalamazoo |
| Middleton, John W | Detroit |
| Mattes, Max W | Detroit |
| Mandiberg, Jack N | Detroit |
| Miller, Jack L | Jackson |
| Miller, Karl L | Detroit |
| Nagel, Oscar | Detroit |
| Nicholson, Hayden C | Ann Arbor |
| Ohlmacher, Albert P | Royal Oak |
| Oliver, Richard M | Ann Arbor |

# PHYSICIANS SEPARATED FROM SERVICE

### Michigan—Continued

| | |
|---|---|
| Ottoman, Richard E | Jackson |
| Putra, Anthony M | Detroit |
| Purfield William P | Ann Arbor |
| Schiff, Benton A | Flint |
| Schmale, Herbert T | Ann Arbor |
| Scholes, Daniel R | Detroit |
| Scholle, Norbert W | Muskegon |
| Schrier, Clarence M | Kalamazoo |
| Shewchuk, Alexander P | Detroit |
| Shiovitz, Louis | Detroit |
| Shook Ralph W | Kalamazoo |
| Shumaker, Edward J | Detroit |
| Siegel, Henry | Detroit |
| Smeltzer, Merrill | Detroit |
| Spaulding, Thomas M | Almont |
| Stander Aaron C | Saginaw |
| Szabunia, Sigismund C | Hamtramck |
| Van Pernis Paul A | Grand Rapids |
| William, Edwin Moore | Kalamazoo |
| Yeager Ben G | Ft. Custer |

### Minnesota

| | |
|---|---|
| Bray, Kenneth E | Park. Rapids |
| Carlson, Russel E | Still Water |
| Diessner, Grant R | Waconia |
| Dysterheft Adolf F | Gaylord |
| East, John | Northome |
| Eckdale John E. | Lyle |
| Ericson, Reinhold M | Minneapolis |
| Flinn John H | Rochester |
| Fortier Rene G | Little Falls |
| Galloway, John D B | Rochester |
| Giere, Joseph C. | Minneapolis |
| Gifford, Byron L. | Long Prairie |
| Grant Russell | Rochester |
| Hallenbeck, George A | Rochester |
| Halper Bernard | St. Paul |
| Hartwich, Roger F | Mankato |
| Harvard Bell M Jr | Rochester |
| Hayford William D | Minneapolis |
| Hilton Hiram D | Rochester |
| Johnson, Clive R. | Rochester |
| Johnson, Youbert T | Minneapolis |
| Joss Charles S | Rochester |
| Kern, Maximilian C | Freeport |
| Kierland, Robert R. | Rochester |
| Kuris David B | Duluth |
| Leary William V | Rochester |
| Lund, Joshua B | Pelican Rapids |
| McCallig John J | Rochester |
| Martinson, Elmer J | Wayzata |
| Mears, Frederick B | Minneapolis |
| Michels, Roger P | Willmar |
| Milhaupt, Emmett N | St. Paul |
| Monahan, R H Jr | International Falls |
| Moren, Leslie A | Duluth |
| Morgan, Loran B | Pipestone |
| Moss, Arthur J | S E Minneapolis |
| Nelson Lawrence M | Minneapolis |
| Nickelsen, John R. | St Paul |
| Nuebel Charles J | St Paul |
| Rasmussen, Theodore B | Minneapolis |
| Rick, Paul F | St Paul |
| Rowland Robert T | Houston |
| Sanderson, Eric R | Minnesota |
| Sather, Richard N | McIntosh |
| Sayre, George P | Rochester |
| Schlesselman, Edmond A | Mankato |
| Smykin, Melvin B | So Minneapolis |
| Skinner Abbott | St. Paul |
| Sloan, Julius | Minneapolis |

### Mississippi

| | |
|---|---|
| Gillespie, Charles R. | Jackson |
| Hand, Benjamin F | Greenville |
| Heard Wilbur L | Biloxi |
| Hille, Richard W | Biloxi |
| Hooker, Orval N | Rolling Fork |
| Hudson, Robert P | Utica |
| Johnson, Cyrus C | Greenville |

### Mississippi—Continued

| | |
|---|---|
| Kendall, Nathan F | Jackson |
| Kirk, Robert D | Tupelo |
| Morrison, Marcus E | Oxford |
| Noblin, William E | Jackson |
| Neukom, George B | Batesville |
| Rabinowitz, Arthur J | Gulfport |
| Tatum, Addison T | Hattiesburg |

### Missouri

| | |
|---|---|
| Adler, Benard C | Stockton |
| Allen, Joseph E | Columbia |
| Atkins, James A | Lamar |
| Barnes, James P | Koch |
| Bartnick, Mitchel L. | St. Louis |
| Baum Frank E | St. Louis |
| Blades, Brian B | St. Louis |
| Brown, Lyman D | Kansas City |
| Charles Benjamin H | St. Louis |
| Cohen Harry K | Kansas City |
| Crouch, Francis R. | St Louis |
| Denny, Chester H | Creve Coeur |
| Echterhoff, Harry R | St Louis |
| Ecker, Desider B | Pacific |
| Fleishman, Alfred | St Louis |
| Fleming, Jacob W Jr | Moberly |
| Friedman, Morris L | Kansas City |
| Gale, Richard O | Kansas City |
| Galt, Charles E Jr | Ferguson |
| Gansloser, Wilbert M | St Louis |
| Gibson, Dunbar P | St. Louis |
| Gillmor, Charles S | Kansas City |
| Gnade, Albert J | Old Monroe |
| Hampton, Oscar P Jr | University City |
| Hardin, John F | St Joseph |
| Harkness, Harry Jr | Warrensburg |
| Harpole, Bernard P | St. Louis |
| Hoover, Robert A. | St. Louis |
| Kahn, Leon | St Louis |
| Kelling Jordan A | Waverly |
| Kelly, Robert E | University City |
| Kingsland, Robert C | St. Louis |
| Kirstein, Melvin B | St. Louis |
| Knapp Louis G | St Louis |
| Lakaytis, Charles A | Kansas City |
| Lewellen, Charles H | Louisiana |
| Levin, Myron J | Jefferson Barracks |
| Long Forrest C | Savannah |
| Luedde, Philip S | St. Louis |
| Lundgren, Fred H Jr | Kansas City |
| McDonald, George J | St. Louis |
| McDonald, Wilbur P | St Joseph |
| McLellan, Marion S | Sumner |
| McSwiney, John G | Normandy |
| Marcus Morris D | St Louis |
| Merenda, Sam J | St. Louis |
| Merz Jean J | St Louis |
| Moore, George E. | Fulton |
| Nester Charles A. | St. Louis |
| Powers, Pierce W | St. Louis |
| Roebber, Harry McD | Bonne Terre |
| Rosenthal, Irwin I | St Joseph |
| Roulhac George E | St Louis |
| Ryan John B | Webster Groves |
| Sanders Robert D | St Louis |
| Schechter, Samuel E | St. Louis |
| Scott Henry Field | Ballwin |
| Semon Earle P | Kansas City |
| Shaner, John F | St. Louis |
| Siegel, Carl DeH | Florence |
| Snead William H Jr | Kansas City |
| Stepman, Theodore R. | University City |
| Underwood Dick H | St. Louis |
| Waihoja, William J | Lebanon |
| Zillgitt George H | St. Louis |

### Montana

| | |
|---|---|
| Allard, Louis C | Billings |
| Crago, Felix H | Great Falls |
| Fisher, Marshall L | Hardin |
| Gordon, Donald A. | Hamilton |

### Nebraska

| | |
|---|---|
| Best, Rolland R | Omaha |
| Brush, John H | Norfolk |
| Carey, Blaine P | Nebraska City |
| Coe, Charles M | Wakefield |
| Fairchild, John A | Omaha |
| Garcia, Hector P | Omaha |
| Gross, Joseph F | Omaha |
| Hayes, Charles B | Minden |
| Heinke, John P | Nebraska City |
| Hennegan, George F | Omaha |
| Higgins, Joseph P | Albion |
| Huber, Paul J | Exeter |
| Kingsley, Donaldson W | Hastings |
| Long, Robert S | Grand Island |
| Longo, Charles A | Omaha |
| Longo, Joseph A | Omaha |
| Lukens, Isaiah | Tekamah |
| McLaughlin, Bernard F | Omaha |
| Mangimelli Samuel T | Omaha |
| Millhouse, John H | Platte |
| Morrow, Paul N | Omaha |
| Reuben, Ronald | Omaha |
| Salter, George B | Norfolk |
| Shaughnessy, Edwin J | No Platte |
| Stein, Robert J | Lincoln |
| Van Ackeren Eugene G | Lincoln |

### New Hampshire

| | |
|---|---|
| Feiner, Samuel | Ashland |
| Elgosin, Emid D | Whitefield |
| Goodman, Melvin O | Manchester |
| Hamel Paul R. | Manchester |
| Heller, Morris L. | Claremont |
| Kapopoulos, Garifalos J | Manchester |
| Klinger, L | Rochester |
| Leclerc, Jean N | Manchester |
| McGregor, Eugene B | Lisbon |
| McIntire, Barron F Jr | Marlboro |
| Shuman, Richard | Dover |

### New Jersey

| | |
|---|---|
| Aitken, Frank J T | Bridgeton |
| Albert, Perry | Trenton |
| Aronoff, Herman L | Jersey City |
| Audi, Eugene J | Englewood |
| Bardfeld Benjamin B | Vineland |
| Barrett, Joseph F | Maplewood |
| Beekman, George C | Middletown |
| Berlin, Morris R | Neward |
| Berlin Walter | Jersey City |
| Berman, Sol | Elizabeth |
| Brancone Alphonse M | Paterson |
| Brawer, Jerome | Paterson |
| Bump, Samuel C | Ridgewood |
| Burns, Wilmer F | Audubon |
| Charnock Maurice P | Trenton |
| Cichon Elmer J | Clifton |
| Coe, Edward M | Jersey City |
| Cohen Paul | Camden |
| Collins, Louis K | Glassboro |
| Colton, Ethan T Jr | Upper Montclair |
| Conte, Andrew N | Trenton |
| Daly, John F | Jersey City |
| Davis, Joseph A | Westfield |
| Deutsch Nathan S | Plainfield |
| Della Fera Lucien F | Newark |
| Dreskin Herman O | Dunellen |
| Drews Frank F W Jr | North Bergen |
| Esposito Anthony L | Clifton |
| Fattel, Henry C | North Bergen |
| Federer, John J | Weehawken |
| Feller William | Jersey City |
| Ferenchak Ralph S | Plainfield |
| Finegan, Eugene F | Jersey City |
| Friedman, Abraham I | Hackensack |
| Gannon, Joseph M | Plainfield |
| Garfinkel Abraham | Flemington |
| Garrison, Sherman Jr | Cedarville |
| Gaumer, George W | Lakewood |
| Gianni Angelo R | Jersey City |
| Gilbertson Robert L | Morristown |
| Glazier, Jesse T | Newark |

# PHYSICIANS SEPARATED FROM SERVICE

### New Jersey—Continued

| | |
|---|---|
| Goeller, Jacob D | Irvington |
| Gould, Werner | Hackensack |
| Greer, Melvin A | Bloomfield |
| Greene, Edwin C | Bridgeton |
| Greiner, George F | Jersey City |
| Gurnee, Quimby DeH | Hawthorne |
| Halpern, Jesse O | Dumont |
| Herron James R Jr | Audubon |
| Holoman, Mahlon B | Margate City |
| Howard, Weaver O | West Cape May |
| Jacobson, Murray B | Perth Amboy |
| Janeway, Margaret | Trenton |
| Jordan, Joseph C. | Manasquan |
| Kearney, Hugh J | Pleasantville |
| Keyssar, Alexander | Jersey City |
| Klein, Andrew J | Orange |
| Knight, William T | Oradell |
| Kunz, Harold G | Bloomfield |
| Lane, Thomas F | Jersey City |
| Levendusky, Daniel E | Clifton |
| Lewandowski Edmund | Irvington |
| Liccese, Emanuel | Newark |
| Licks, Frederick C | S Orange |
| Mabee, John R. | Paterson |
| Matthews, Clifford B | Newark |
| McBride, Andrew F Jr | Paterson |
| McDede, Joseph S | Jersey City |
| McDermott, Vincent T | Camden |
| Meyer, Eugene A | Moorestown |
| Modrys, Walter F | Hudson Heights |
| Moore, Ralph L | Woodbury |
| Morrison, Donald W | Ridgewood |
| Murray, Norman L | Summit |
| Naame, John M | Ventnor City |
| Normand, Alphonse F | Perth Amboy |
| Oakes, William R | Arlington |
| Oshrin, Henry | West New York |
| Permison Michael | Irvington |
| Rosen, Emanuel P | Newark |
| Saffron, Morris H | Passaic |
| Saradarian, Albert V | Union City |
| Schaberg, Frank J | Englewood W |
| Scheller, George A | Short Hills |
| Shipman, Robert T | Jersey City |
| Shor, David M | East Orange |
| Schwartz, Charles I | Jersey City |
| Shapiro, Edward E | Bayonne |
| Shechner, Isadore | Newark |
| Sheche, Norman L | Rockford |
| Silon, Milton R | Hoboken |
| Smith, Herman | Phillipsburg |
| Smith, Percy L | Dayton |
| Spencer, James H Jr | Franklin |
| Szelewa, Edward S | Newark |
| Thompson, Frank F Jr | Montclair |
| Vita, Frank J | Grantwood |
| Ward, Christian G | Irvington |
| Wilcox, Frank A | New York |
| Yood, Harold S | Plainfield |

### New Mexico

| | |
|---|---|
| Marshall, Ulysses S | Roswell |
| Metzger, Elisha A | Artesia |
| Seligman, Randolph V | Bernalillo |

### New York

| | |
|---|---|
| Aaron, Harold H | New York |
| Abrahams, Joseph | Brooklyn |
| Adelman, Max | Brooklyn |
| Adest, Jacob H | Brooklyn |
| Ainsworth, Thomas H | Newburg |
| Alden, Ruel L | Hempstead |
| Amar, Vincent F | Yonkers |
| Amster, Joseph J | Brooklyn |
| Arden, Michael J | New York |
| Ariel, Irving M | New York |
| Auerbach, Sidney | New York |
| Bachrach, Clifford A | Brooklyn |
| Ballweg, Harry A | Brooklyn |
| Bander, Nathan | Ellenville |
| Barcham, Aaron | New York |
| Bardoly, Emery A | New York |
| Barlow, William H | Staten Island |
| Barnes, Earle E Jr | Lowville |
| Barranco, Anthony J | Brooklyn |
| Bassen, Frank A. | New York |
| Beckwith, Irving H | Scarsdale |
| Bejian, Henry L | Albany |
| Bell, Leo S | Sunnyside |
| Bendix, Paul A | Mt Vernon |
| Benson, Raymond LaV | Elmira |
| Berg, Nathaniel | Sunnyside L I |
| Berlatt, Louis | Middletown |
| Berliner, Harry M | Jamaica |
| Bernhardt, Herman | Brooklyn |
| Bernhoft, Willard H | Buffalo |
| Berry, Lewis W | New York |
| Berry, William H | New York |
| Bessey, Charles E | Troy |
| Biglan, Albert M | Central Islip, L I |
| Bizzaro, Emanuel V | Bronx |
| Black, Howard A | Brooklyn |
| Blechman, Benjamin | New York |
| Blondheim, Solomon H | New York |
| Bloomstein, Herman | East Setauket, L I |
| Bonadia, Calogero | Brooklyn |
| Boswell, John R | New York |
| Boyle, Robert E | Buffalo |
| Braaf, Murray M | Bronx |
| Breed, Eben | Garden City |
| Breslow, Samuel | Brooklyn |
| Britt, Richard W | Tonawanda |
| Brody, Henry | New York |
| Brown, Matthew J Jr | Jamaica |
| Brown, William | Long Island City |
| Brown, William | Astoria |
| Buchbinder, Murray W | Jamaica |
| Burger, Robert A | New York |
| Burgin, George A | Little Falls |
| Burton, Robert B | Rochester |
| Calabrese, Edward St. James | Florida |
| Caliendo, Angelo J | Brooklyn |
| Canaday, John W | Hudson Falls |
| Cancellieri, Carmelo J | Southampton, L I |
| Capson, David R | Brooklyn |
| Carter, Clifford C | Bronx |
| Chapman Asher S | Roslyn L. I |
| Chester, William | Mamaroneck |
| Childs, Milford N | Buffalo |
| Chirico, Dominick F | Brooklyn |
| Cimildora, Anthony L | Auburn |
| Clark, Clarence L. | Ballston Spa |
| Clark, Graham | New York |
| Cohen, David L | New York |
| Cohn, Theodore L | New York |
| Cole Harold S | Brooklyn |
| Cole James R L. | Gasport |
| Collins James T | Elmhurst, L. I |
| Conrad, Joseph W | Little Falls |
| Cook Norman L | Waverly |
| Cottler, Zachary R | Brooklyn |
| Crandall, Will G | Sunmount |
| Cyrus Earland | New York |
| Daiell, Saul S | Brooklyn |
| Dannenbrink, Odell L | Bronxville |
| Davidhoff, Morris | Far Rockaway |
| Davis Hugh P | New York |
| Davis, Isidore | Brooklyn |
| Della Porta, Nicholas J | Rochester |
| Dealy Edwin J | White Plains |
| De Blase, Joseph A | Schenectady |
| D'Errico, Joseph A | Tonawanda |
| Deutscher, Aron J | Bronx |
| Dewitt, Robert M | Valhalla |
| Diamond, Israel | New York City |
| Di Donna, Angelo A | Schenectady |
| Dobkin, Julius | New York City |
| Dolgin, Walter | New York |
| Doltolo, Joseph J | Poughkeepsie |
| Donovan, William R | New York |
| Draper, John W | Hudson |
| Drazin Morris L | Maspeth L I |
| Dubowy, Jerome | Bronx |
| Dunfield, Vernon M | South Dayton |
| Dunham, Crawford D | New York |
| Dutto, Bartholomew J | Kingston |
| Dwinelle, James H | Rye |
| Edelson, Sidney | Brooklyn |
| Eden, Michael | Laurelton, L I |
| Eichner, Daniel H | New York |
| Elitzak, Jacob | New York |
| Enloe, Cortez F Jr | Manhasset, L I |
| Fabian, Norman | Poughkeepsie |
| Farnum, Waldo B | Riverdale |
| Fedde, Nathaniel M | Staten Island |
| Feder, Aaron | Elmhurst, L I |
| Felder, Samuel | Brooklyn |
| Feldman, Daniel J | New York City |
| Feldman, Raymond L | Brooklyn |
| Feldshuh, Alfred M | Kerhonkson |
| Feresten, Morris | New York City |
| Fialk, Harry | Union City |
| Fine, Seymour H | New Rochelle |
| Fishel, Leo | Floral Park |
| Fisher, Hyman | Long Island |
| Fisher, Hyman B | Bronx |
| Fishman, Morris | Jamaica |
| Fishman Samuel | Buffalo |
| Fitch, Herbert E Jr | New York City |
| Flax, Ralph W | Long Beach, L I |
| Fletcher, Donald B | Syracuse |
| Fletcher, John R. B | Brooklyn |
| Flood, Charles A | New York City |
| Florin, Abraham | Brooklyn |
| Flynn, John T | New York City |
| Folkman, Nathan | Brooklyn |
| Forman, Everett W | New York City |
| Fox, Sidney A | New York City |
| Friedman, Arnold L | Rockville Center |
| Friedman, David B | New York |
| Freiband, Benjamin | Ozone Park |
| Freshman, Ernest | Oneida |
| Fry, Nelson W | Floral Park, L I |
| Fuerst, Harold T | New York City |
| Furey, John F | Hollis |
| Gabel, Alfred | New York |
| Gage, Walter P | New York |
| Gallagher, Brian J | Bellerose, L I |
| Galvin, Eugene F | Rosendale |
| Garlick, William B | Wappingers Falls |
| George, Alfred L. | Oakfield |
| George, Amerigo L | Brooklyn |
| Gersh, William J | Mt. Vernon |
| Gershwin, Herman | New York City |
| Gewirtz, Abraham | Brooklyn |
| Gibb, Hugh H | Rye |
| Gillespy, Robert R | Garden City |
| Gillette, Tracy J | Ithaca |
| Ginsburg, Emanuel | New York |
| Giovinco, Paul A | Brooklyn |
| Gitzelter, Louis | Brooklyn |
| Glaser, Seymour | Bronx |
| Glass Irving A. | New York City |
| Glattauer, Alfred | New Rochelle |
| Gleason, Robert L | New York |
| Glen, John E. Jr | Schenectady |
| Glick, Bernard | Brooklyn |
| Goldbaum, Bernard | Brooklyn |
| Goldberg, Louis D | Poughkeepsie |
| Goldstein David H | New York |
| Gomoll, Oscar E | Auburn |
| Goodman Soll | Albany |
| Goolde, Milton H | New York |
| Gordon, David M | Mt Vernon |
| Gordon, James | New York |
| Gordon, Onslow A III | Brooklyn |
| Gostin, Seymour B | White Plains |
| Grace, Gerald W | Buffalo |
| Graziani, Amleto J | Yonkers |
| Green, Donald M | Auburn |
| Green, Emanuel | Brooklyn |
| Green, Morris | Brooklyn |
| Greer, Rex E. | Castle Point |
| Gridley, Norman G | Horseheads |
| Griffith, James D R | Dolgeville |
| Gromet, Robert Y | Brooklyn |
| Guild, Carlton J | St Alban, L. I |
| Guiss, Lewis W | New York |
| Gunkler, Walter A | Rochester |

# PHYSICIANS SEPARATED FROM SERVICE

## New York—Continued

| | |
|---|---|
| Guptill, Plimpton | Rochester |
| Guss, Louis | Brooklyn |
| Gussow, Louis | Syracuse |
| Gustafson, Carl J | Sunmount |
| Haboush, Edward J | New York |
| Hall, Gamble S | Bronx |
| Hallock, Leonard A | New York |
| Halperin, Max J | Long Island |
| Hamburger, Werner | Oneida |
| Hammerstrom Carl F | Jamestown |
| Hardegree, Harvey C | Bronx |
| Harris, Archie M | Rockville Center |
| Hart Maurice D | St. Albans L I |
| Harte, Bernice J | Brooklyn |
| Harwell, Aubrey B | Rochester |
| Heaney, John P | New York |
| Hedges, Robert W | New York |
| Heffner William N | Northport |
| Helfond, David M | Glendale |
| Heller, Joseph E | Brooklyn |
| Heller, Theodore M | Brooklyn |
| Helpern, Gottlieb | New York |
| Henig Philip E | New York |
| Herlitz George W | Flushing |
| Herman, Mark L | Adams |
| Hermel, Mortimer B | New York |
| Hero Byron A | Long Island City |
| Hershman Arthur | Brooklyn |
| Hershman Harry H | New York |
| Hertz Sylvan A | New York |
| Herzlich Jacob | Brooklyn |
| Hewes, William H | New York |
| Higby Vrooman S | Bath |
| Hilfer Nathan | Astoria |
| Hill Frederick A | Brooklyn |
| Hirshleifer, Irving | Brooklyn |
| Hirst, Donald V | New York |
| Hoefle, Milton E | Brooklyn |
| Hoffman Benjamin | Albany |
| Hofmann Aloysius C | Syracuse |
| Holbert, LeRoy J | Port Richmond S I |
| Holtzman, Irving N | Brooklyn |
| Hornstein, Norman M | New York |
| Housman Sidney H | Brooklyn |
| Howard, John C | Brooklyn |
| Hudes Joseph | Brooklyn |
| Hughes, Frederick D | Rochester |
| Hussar, Allen E | Jamaica |
| Hymes, Jesse J | Brooklyn |
| Iovine, Vincent M | New York |
| Jacobs Abraham | Brooklyn |
| Jablonsky Jacob | Brooklyn |
| Jacobs Harold | Brooklyn |
| Jacobsen Leif Y | Douglaston, L. I |
| Jaffarian John P | Troy |
| Jarrett, Julian E | Brooklyn |
| Kahaner, Jack R | Mt Vernon |
| Kahn, A. L. | Long Island New York |
| Kaman Samuel L | Putnam County |
| Kane, Edwin P | Brooklyn |
| Kanof, Morris | Brooklyn |
| Kaplan Harry A. | Bronx |
| Kaplan Louis | Brooklyn |
| Kaplan Samuel | Brooklyn |
| Karl William C | Gloversville |
| Katona, Nicholas M | Brooklyn |
| Katz, Walter | New York |
| Katzenstein Kurt H | New York |
| Keating Carroll E | Lisbon |
| Keese, Thurston L. | Fayetteville |
| Keller Paul D | Brooklyn |
| Kellman Leon | Brooklyn |
| Kelly, Lawrence J | Yonkers |
| Kelman Norman J | New York |
| Kelmenson Victor A | Brooklyn |
| Kemp Milton | Brooklyn |
| Keppel, Gordon | Montrose |
| Kiessling Charles E | New York |
| Klaiber John J Jr | Buffalo |
| Klane, Edward | Patchogue |
| Klasson David H | Brooklyn |
| Klein Jacob | New York |
| Koff Jacob | Welfare Island |

## New York—Continued

| | |
|---|---|
| Kogan, Benjamin | Brooklyn |
| Korol, Ephraim | Batavia |
| Koszalka, Michael F | Woodhaven |
| Koszalka, Theodore P | Woodhaven |
| Kovaleff, Michael O | New York |
| Kramer, Aaron S | Brooklyn |
| Kravchick, David I | Brooklyn |
| Kuperstein, David | Brooklyn |
| Kurian, Milton | Brooklyn |
| Labate, Michael R. | Brooklyn |
| Labruier, Frederic J | New York |
| Lacy, Thomas A | West Brentwood |
| Landesman Robert | New York |
| Lasdon, Albert H | New York |
| Lauritano Armando J | New York |
| Lateiner, Robert | Mt. Vernon |
| Lazarus, Ely E | New York |
| Leak, Glenn H | Buffalo |
| Lebow, Harry H | Brooklyn |
| Lefkowitz, Howard J | Bronx |
| Lehner, Jack | Kingston |
| Lehrman Samuel R | St Albans, L I |
| Leistyna Arthur | Ilion, Herkimer Co |
| Levine, Abraham J | Massena |
| Levine, Leon H | Bronx |
| Levy, Samuel B | Long Island City |
| Levy, Sidney W | Bronx |
| Lewson, Arthur C | New York |
| Linden, Arthur J | Bronx |
| Lingeman, Ralph B | Rochester |
| Lipnick, Louis | Franklin Square |
| Lipscomb Harold R | Sunmount |
| Lipsett Robert W | Buffalo |
| Locascio John | Bronx |
| Locke Frederick (Fred) C | Batavia |
| Lomnitz, Gunther | New York |
| Lumine, Bernard H | Brooklyn |
| McDermott, Thomas F Jr | Bronx |
| McDowell Robert C | Buffalo |
| MacGuire, William B Jr | New York |
| McMahon, Thomas A | St Albans |
| McNeil, Crichton | Buffalo |
| MacDonald John K. | Charlotte |
| Madonia Angelo J | Rochester |
| Maglio Louis A. | Bronx |
| Mais Edward L. | Riverhead L I |
| Mandour, Brahim A | Utica |
| Maniscalco Francis X | Glendale |
| Manze, Louis F | Buffalo |
| Margolius Bernard R | Greene |
| Markell Ellis M | Harrison |
| Masor, Nathan | Brooklyn |
| Masotti, George M | Buffalo |
| Mazar, Steven A | Binghamton |
| Mead, John W | Poughkeepsie |
| Melore Carmine | Brooklyn |
| Mendelson Milton | New York City |
| Merlis Martin R | Brooklyn |
| Messe Abba A | Far Rockaway L. I |
| Messina, John | Brooklyn |
| Miller, Henry | Brooklyn |
| Morton, Frank L | N Rochelle |
| Moseley, Robert F Jr | Kingston |
| Mound, Daniel | New York City |
| Mountain, John D | Flushing |
| Mule Joseph S | Jamaica Estates |
| Mulford, Edwin H | Little Falls |
| Murphy, Harry M | Buffalo |
| Myerson, Alfred I | Brooklyn |
| Nadell Bernard B | New York |
| Narins Lester M | New York |
| Napolitani Frank D | Bronx |
| Needles, William | New York |
| Newman Harry H | Brooklyn |
| Noerling H J | Valatie |
| Norcross Bernard M | Buffalo |
| Northridge, John A | Brooklyn |
| Noto Anthony | Brooklyn |
| Nott, Perry J | Long Beach |
| Ochs Isidor | New York City |
| O'Connor, Edmund G | Amityville, L. I |
| O Connor Robert W | Buffalo |
| O Donnell Leo P W | Brentwood L I |
| Oestreich, Mitchell | Brooklyn |

## New York—Continued

| | |
|---|---|
| Orens, Martin H | Manhattan |
| Orenstein Leo L | New York |
| Ostrow, Irving | Poughkeepsie |
| O'Sullivan, Ward D | New York |
| Pierce, Edison E | E Aurora |
| Posner, David J | Brooklyn |
| Pozner, Harry B | New York |
| Prentice, Stanley E | Brooklyn |
| Rappole, Albertus W | Jamestown |
| Reicher, Norbert B | Syracuse |
| Reif Irving L | Brooklyn |
| Reiff, Sidney | Brooklyn |
| Rifkin, Alfred H | New York |
| Rittenhouse, Harvey L | Albany |
| Robbins Herman | New York |
| Robertson, William W | Rochester |
| Roh, Charles E | New York City |
| Rooker, Richard W | Niagara Falls |
| Rosbasch, Gustav | Rochester No |
| Rosner, Albert A | New York |
| Rothman, Lester D | Bronx |
| Rozov, Aurelia | New York City |
| Rubin, Ira L | New York |
| Ryan Bernard J | Chateaugay |
| Ryon, Walter G | Schenectady |
| Safran, Morton M | Jamaica |
| Sanders Ernest A | Lima |
| Sartori Joseph P | Staten Island |
| Savitsky, Elias | New York |
| Scadron Eugene N | New York City |
| Scaramoza, Anthony L | New York City |
| Schoen Herbert E | Staten Island |
| Schuback, Seymour | Bronx |
| Schullinger Rudolph N | New York City |
| Schwartzbard, Harry | Brooklyn |
| Schwartzman Joseph | Brooklyn |
| Seitz, William H | Jackson Heights |
| Self, William G | New York City |
| Shafer, Donald McK | Staten Island |
| Shapiro, Joseph | Edgemore, L I |
| Shapiro, Joseph | Syracuse |
| Shaskan Donald A | New York City |
| Shapiro Morris J | Rochester |
| Shatinsky Harry | Brooklyn |
| Shea, Raymond G | New Rochelle |
| Shearer, William A. | Newburg |
| Sheftman Murray | Bronx |
| Shelcrawt Samuel R | Bronx |
| Shields, Milton | Bronx |
| Shields, Vincent M | Brooklyn |
| Siegel, Irving | Averne |
| Siegel Maurice B | Brooklyn |
| Siegel, Sidney J | Brooklyn |
| Silberstein Alexander G | New York |
| Silk Maurice H | Kingston |
| Simon, Kona | New York City |
| Singer, Alexander | Brooklyn |
| Singer, Joseph I | Brooklyn |
| Sisson, Bernard J | Syracuse |
| Skol, Joseph | Brooklyn |
| Sliski Henry J | Syracuse |
| Smith, Clement A | Schenectady |
| Smith Thomas W | Springfield Center |
| Soifer, Hyman | Brooklyn |
| Solomon Stanley E | New York |
| Sorrentino, Albert J | Rockville Centre |
| Statman Solomon H | Brooklyn |
| Spring Maxwell | Bronx |
| Stoll, Bernard | Brooklyn |
| Streitel Walter P | Floral Park |
| Swire Howard | Brentwood |
| Szladek Frank J | Bronx |
| Thumin Mark | Long Beach |
| Tillinghast Arthur J | New York |
| Timpanelli Alphonse E | New York |
| Toye Joseph J | Brooklyn |
| Trevisano Anthony | Castle Point |
| Tuzio Vincent F | Preston Hollow |
| Ulberg, Moe | Brooklyn |
| Vincent, Bayard R. R | New York City |
| Vogel Samuel A | Buffalo |
| Wallace, Eugene W | Buffalo |
| Walsh, John W | Brooklyn |

# PHYSICIANS SEPARATED FROM SERVICE

### New York—Continued

| | |
|---|---|
| Watson, Ralph W (name changed from Wartsky) | New York |
| Weintraub, Solomon | New York |
| Weissman, Herman | New York |
| Wendelken, Herbert | Brooklyn |
| Whalen, Thomas F | Far Rockaway |
| Wiesel, Benjamin | Bronx |
| Wilcox, Daniel A | Mount Kisco |
| Wray, Clifford C | Coeymans |
| Zies, Abraham | New York |
| Zizmor, Saul | Brooklyn |

### North Carolina

| | |
|---|---|
| Anderson, Raymond B | Durham |
| Ballard, Claude H Jr | Kingston |
| Ballard, Thomas F | Charlotte |
| Breeden, William H | Fayetteville |
| Bryant, Vernon M | Elm City |
| Falls, Fred | Laundale |
| Farmer, Joseph A. | Shelby |
| Garrard, Robert L | Greensboro |
| Hairston, Roy C | Asheville |
| Haywood, Hubert B Jr | Raleigh |
| Helms, Jefferson B | Morgantown |
| Hickman, Harry S | Lenoir |
| Hunter, William B | Lillington |
| Jacobs, Paul | Oteen |
| Karansky, Stanley | Durham |
| Kernodle, Harold B | Durham |
| Kirchberg, Roy W | Sylva |
| Lanier, Verne C | Welcome |
| McRae, Cameron F | Durham |
| Mills, Hugh H | Forest City |
| Mills, James C | Henderson |
| Mitchell, R H | Victory Sta, Gastonia |
| Munroe, Henry S Jr | Charlotte |
| Newman, Glenn C | Durham |
| Rollins, Charles D | Henderson |
| Shanks, William C Jr | Burlington |
| Sikes, Charles H | Greensboro |
| Sloan, William S | Wilson |
| Sowers, Roy G | Jonesboro |
| Taylor, Rives W | Oxford |

### North Dakota

| | |
|---|---|
| Fawcett Donald W | Devils Lake |
| Frykman, Howard M | Bottineau |
| Silverman, Louis B | South Grant Forks |
| Sinner, Bernard L | Fargo |

### Ohio

| | |
|---|---|
| Ball, Olen D | New Lexington |
| Bard, Alfred K | Cleveland |
| Battles, Morris L | Chesterland |
| Berkebile, Robert D | Defiance |
| Bishko, Maurice J | Univ Heights |
| Booth, Edmond J | Newcomerstown |
| Brief, Bernard J | Columbus |
| Brown, John A | Bethesda |
| Brumm, Lewis P | Cincinnati |
| Butner, Charles O | Shiloh |
| Chappel, Merwin R | Athens |
| Crone, John T Jr | Milford |
| Edwards, Thomas L | Van Wert |
| Fidelholtz, Jacob N | Toledo |
| Fink, Joseph J | Cleveland |
| Firestone, Bertrum I | Youngstown |
| Fish, John S | Cleveland Heights |
| Foley, Norman K | Perrysburg |
| Frank, Herbert | Cincinnati |
| Frederick, Victor R | Urbana |
| Freiden, Joseph N | Cincinnati |
| Gault, Ross M | Portsmouth |
| Gibson, James K. | Tiltonville |
| Gist Harold H | Cleveland |
| Goldstein, Harry | Cincinnati |
| Goler, Harold K. | Cleveland |
| Goodman, Joe I | Cleveland |
| Gordon, William T | Cincinnati |
| Graller, David L | Cincinnati |
| Grandin, Woodth R | Dayton |
| Greegor, David H | Columbus |
| Greenlee, Arthur A | Dennison |
| Gross, Alex | Cleveland |
| Grossman, Royal G | Lakewood |
| Hapke, Fred B | Troy |
| Harris, Charles P | Cleves |
| Haufrect, Fred | Cleveland Heights |
| Hudson, William E | New Philadelphia |
| Hawver, Kenneth G | Lima |
| Hayes, Thomas M | Springfield |
| Hayman, Joseph M Jr | Cleveland |
| Hayne, Harold C | Toledo |
| Hedges, Jasper M | Columbus |
| Heringhaus, Francis J | Mansfield |
| Herrick, Charles L | Akron |
| Hiestand, Richard C | Springfield |
| Hill, Edward R | Cleveland |
| Hochwalt, William R | Dayton |
| Hoerner, Jerold K. | Dayton |
| Hudson, James R | Madeira |
| Hunsche, Charles W | Cincinnati |
| Iglauer, Arnold | Cincinnati |
| Johnson, Cecil A | Canton |
| Karam, Harvey A | Akron |
| Keidel, Clifford L | Cleves |
| Kirchman, Herbert | Germantown |
| Klein, Zolton L | Cleveland |
| Knapp, John A | London |
| Lamb, Andrew J | Euclid |
| Landt, Harry E | Cincinnati |
| Langsam, Charles L | Macedonia |
| Lazarus, Lawrence | Cleveland |
| Lord, Raymond S | Fredericktown |
| Lovebury, William F | Columbus |
| Lowry, Forrest E | Urbana |
| McElroy, William D | Youngstown |
| McFadden, Harry W | Brecksville |
| McKay, John R | Cleveland |
| Maggiore, Jerome J | Canton |
| Malmud, Morris M | Sharon Center |
| Maple, John L. | Louisville |
| Markey, Leo R | Cleveland Heights |
| Martin, Archie J | Adena |
| Martin, Norvil A | Gallipolis |
| Matteo, Michael L | Cleveland |
| Meyers, George A | Cincinnati |
| Michael, Nicholas | Columbus |
| Mielcarek, Paul A | Cleveland |
| Miller, Isador | Urbana |
| Orosz, Ernest C | Fairport Harbor |
| Pevaroff, Herschel H | Cleveland |
| Plymale, John L | Marion |
| Ralston, Joseph A | Warren |
| Read, William A | Cleveland |
| Renner, George Jr | Cincinnati |
| Rosenow, Oscar F | Columbus |
| Rossman, Phillip L | Cleveland |
| Schirripa, Frank R | Cleveland |
| Schmidlapp, Carl J | Cincinnati |
| Schroder, John R | Cincinnati |
| Schroeder, Raymond H | Quincy |
| Scott, Harry M | Toledo |
| Shilling, Ralph H | Columbus |
| Silver, Ezra I | Cleveland |
| Simon, Aaron I | Cleveland |
| Smarrella, John P | Steubenville |
| Sparling, William R | London |
| Speed, George W | St. Marys |
| Stark, Jack J | Belpre |
| Surington, Cyril T | Columbus |
| Switzer, Malcolm E | Galion |
| Urbanski, Walter J | Garfield Heights |
| Votypka, Edward A | Cleveland |
| Whitman, Joseph J | Cleveland |
| Wright, Jackson W | Cincinnati |

### Oklahoma

| | |
|---|---|
| Allen, George T | Oklahoma City |
| Allgood, John M | Altus |
| Anderson, Paul S | Claremore |
| Brightwell, Richard J | Okla City |
| Dyer, Isadore | Tahlequah |
| Holcombe, Roland N | Muskogee |
| Hood, Frederick R. | Oklahoma City |
| Huff, Thomas J Jr | Walters |
| Johnson, Henry M | Supply |
| Lusk, Earl M | Tulsa |
| Padberg, Frank T | Canton |
| Paul, William G | Durant |
| Sanders, Harmon U | Muskogee |
| Shepard, Robert M | Tulsa |

### Oregon

| | |
|---|---|
| Anderson, Melvin W | Portland |
| Buren, Wolcott E | Salem |
| Chauncey, Lester R | Portland |
| Chernenkoff, Peter W | Bend |
| Currin, Richard L | Klamath Falls |
| Daniels, John Q A | Portland |
| Dunham, Tom H | Salem |
| Emmerson, Howard C | Portland |
| Folts, Lynd L | Portland |
| Goodnight, Scott H | Portland |
| Hurd, "E" L | Portland |
| Kuhn, Clifford W | Portland |
| Lemery, George W Jr | Cloverdale |
| Merryman, G H Jr | Klamath Falls |
| Mills, Victor D | The Dalles |
| Otten, Fred R | La Grande |
| Platner, Clyde D | Sandy |
| Seabrook, Dean B | Portland |
| Seeley, John R | Marshfield |
| Short, Faulkner A | Portland |
| Simons, Max | Portland |
| Sullivan, Arthur W Jr | Portland |

### Pennsylvania

| | |
|---|---|
| Aberant, Edward R | Wyoming |
| Abernethy, Hugh C | W Chester |
| Agee, Ernest B Jr | Nemacolin |
| Agnone, Peter M | Scranton |
| Almes, Emanuel M | Elkins Park |
| Alter, Samuel | Philadelphia |
| Altman, Charles C | Munhall |
| Antenson, Charles M | Philadelphia |
| Armstrong, Beverly W | Athens |
| Barrett, Eugene B | Scranton |
| Barry, James A | Pittsburgh |
| Batory, Roman J | Stroudsburg |
| Baum, Jerome N | Philadelphia |
| Batts, James A Jr | Philadelphia |
| Bausch, Richard D | Allentown |
| Bayer, George A | Pennsburg |
| Beck, Sidney | Philadelphia |
| Bergad, Saul | Irwin |
| Berman, Bernard H | Washington |
| Bers, Sol N | Philadelphia |
| Bitman, Joseph | Abington |
| Bland, Chester B | Reading |
| Blaum, Louis C | Wilkes Barre |
| Bloom, Joseph | Philadelphia |
| Bobeck, Joseph J | Hudson |
| Borus, Harry E | Pittsburgh |
| Bradley, William P Jr | Coraopolis |
| Brandt, Charles R | Mechanicsburg |
| Brinig, Francis J | Erie |
| Brong, George C | Bath |
| Brown, John L. | Ford City |
| Brown, John W Jr | Pittsburgh |
| Bulger, Richard H | Pittsburgh |
| Campana, Frederick T | Monessen |
| Caplan, Bernerd | Lebanon |
| Carp, Albert A | Philadelphia |
| Casey, William R. | Allegheny |
| Cherashore, Ralph R | Phoenixville |
| Chicote, Alfred L | Phoenixville |
| Cleland, Charles E Jr | Kane |
| Coffin, Henry F | Newark |
| Cohen, Ben | Sharon |
| Cohen, Frank L | Philadelphia |
| Colwell, Miles O Jr | Philadelphia |
| Cook, Robert C | Pittsburgh |
| Corrigan, Timothy M | Hazleton |
| Covalla, George C | Clearfield |
| Crumay, Hugh M | Mercer |
| Davison, Lewis W | Paoli |
| Deardorff, Frederick W | Philadelphia |
| deBerardinis, Camillo T | Philadelphia |
| Delaney, William F | Philadelphia |
| Ditchey, Francis J | Tamaqua |

# PHYSICIANS SEPARATED FROM SERVICE

### Pennsylvania—Continued

| | |
|---|---|
| Dobosh, Andrew J Jr | Lansford |
| Domonkos, Anthony N | Huntingdon |
| Drake, Alonzo H B | Philadelphia |
| Ericksen, Arthur N | Reading |
| Faller, William W | Philadelphia |
| Farmer, John L | Lancaster |
| Fear, Jesse G | Berwick |
| Fegley, Homer B | Catasauqua |
| Fellows, William W | Pittsburgh |
| Ferguson Thomas G | Pittsburgh |
| Fetter, Franklin C | Philadelphia |
| Fiedler Frederick F | Pittsburgh |
| Flick, John B | Bryn Mawr |
| Fincke, Gerald P | Philadelphia |
| Fissel, George E | York |
| Ford William E | Emlenton |
| Forman Samuel | Philadelphia |
| Foulk, William T Jr | Cochranville |
| Frank, Lewis P | Lebanon |
| Frankel, Samuel S | Pottsville |
| Frazier, William D | Philadelphia |
| Freeman, Albert W | Shippensburg |
| Gabriel Louis T Jr | Eldred |
| Garner, Blaine R | Doylestown |
| Gaskill, Herbert S | Bryn Mawr |
| Glassburn, Edward M | Pittsburgh |
| Goff Herbert K | Pittsburgh |
| Goldstein, Benjamin L | Pittsburgh |
| Goodstone, Samuel B | Pittsburgh |
| Goodwin, William P | Steelton |
| Gordon, Burgess L | Philadelphia |
| Gordon Donald C | Scranton |
| Gormley, James B | Hazleton |
| Granatir William L | Philadelphia |
| Gribovsky Emil | Kingston |
| Gross, Cyril V | Philadelphia |
| Guenon, William A | Greencastle |
| Guthrie, Michael A | Pittsburgh |
| Halley, Emil J | Pittsburgh |
| Hamdi Turgut N | Bryn Mawr |
| Hart Francis F | Ambler |
| Hauber, Charles A | St. Mary s |
| Hauk, William L | Duquesne |
| Hays, Ephraim B | Carlisle |
| Hazlett, Esten L | Canonsburg |
| Hazlett, William H | Wyoming |
| Heim, Hugh W | Schuylkill Haven |
| Hennemuth, John H | Emmaus |
| Hennigan, John J | Old Forge |
| Herman Julius | Crafton |
| Hess Grant E Jr | Washington |
| Hiles Homer L | Pittsburgh |
| Hoffman Carl C | Harrisburg |
| Holl Paul F | Lebanon |
| Holmes Arthur E. | Lancaster |
| Hottenstein Rahn L | Millersburg |
| Houston Bernard J | Mount Carmel |
| Humphrey Isaac | Nanticoke |
| Hyman Jacob G | Wilkes-Barre |
| Irwin Ralph T | Lancaster |
| Jackier Leonard J | Wilkes Barre |
| Johnston, Bernard J | Pittsburgh |
| Johnston John A Jr | Canonsburg |
| Jones Donald E | Mt Pleasant |
| Kay Calvin F | Wynnewood |
| Keebler, Howard M Jr | Norwood |
| Keller William C | Upper Darby |
| Kennedy Paul A | Scranton |
| Kotanchik Walter E | Shamokin |
| Kremer Charles E Jr | Philadelphia |
| Lakoff, Herbert H | Philadelphia |
| Latoff Thomas J | Coatesville |
| Lenhert, Amos E | Marietta |
| Lentz, George E | York |
| Lever Haseltine Smith Jr | Abington |
| Levin Moses J | Philadelphia |
| Levine, Herbert J | Pittsburgh |
| Llewellyn Joseph A | Butler |
| Lewey, Frederic H | Philadelphia |
| Lewis Homer H Jr | Clearfield |
| Linguiti, Paschal A | Philadelphia |
| Linn Jay G Jr | Pittsburgh |
| Lloyd John T | Philadelphia |
| Lockett Sidney W | Duryea |

### Pennsylvania—Continued

| | |
|---|---|
| Long, Joseph P | Roaring Springs |
| Long, Julian S | Wilkes Barre |
| Lynch, James J | Philadelphia |
| McAleese, John J | Pittsburgh |
| McCloskey, Richard C | Pittsburgh |
| McCormick, Richard H | Emsworth |
| McElroy, William J | Blossburg |
| McLain, Paul L | Pittsburgh |
| McMaster, Gilbert B | Mt Lebanon |
| McShea, James J | Norristown |
| McSteen, Arthur J | West Newton |
| Magrath, Joseph L | Upper Darby |
| Malishaucki, Thomas J | Tamaqua |
| Markunas, Francis B | Forest City |
| Matonis, Joseph F | Schuylkill Haven |
| Matthews George R | Temple |
| Means, Louis L | McKeesport |
| Mease, William H | E Pittsburgh |
| Meckstroth, Herman F | Red Hill |
| Menapace, Francis J | Atlas |
| Merlin, Albert A | Philadelphia |
| Miller, Elmer H | Scranton |
| Mirbach, Sidney H | Bethlehem |
| Moore Edward J | Merion |
| Morgan, William F | Harrisburg |
| Morgenroth Irvin | Philadelphia |
| Mozdy, Frank L | Erie |
| Naegeli Frank DeL | Philadelphia |
| Neumann, George L. | Scranton |
| Nill Jacob P | McKeesport |
| Noble, Nathan M | Philadelphia |
| O'Brien, Joseph J | Avoca |
| O'Connor Raymond F | DuBois |
| O'Hare, Hugh A | Corry |
| Order, Albert A | Philadelphia |
| Orringer, David | Pittsburgh |
| O'Toole, Kenneth G | York |
| Pease, Fred. | Steelton |
| Pickel, Ray W | Walnutport |
| Pohl, Henry | Johnstown |
| Pollock Arthur E | Gallitzin |
| Ritter, Richard C | Bellevue |
| Rothrock, Vance McC | Carlisle |
| Rowe, Harold J | Meadville |
| Rubin, Nathan W | Norristown |
| Sales Irving J | Elkins Park |
| Schneider Joseph F | Philadelphia |
| Scott, John G Jr | Reading |
| Shaffer, John F R. | Pittsburgh |
| Sharp, Edward G | Philadelphia |
| Shaw, Harry E | Westmoreland |
| Sheehan, William C | Philadelphia |
| Shipley, Alan E | Erie |
| Silverman, Morton I | Allentown |
| Sion Edward G | Shenandoah |
| Sloane, Norman G | Philadelphia |
| Smolens, Nathan M | Philadelphia |
| Smolev, Joseph M | Bradford |
| Snedeker Alfred W | Philadelphia |
| Snyder John N | Masontown |
| Snydman, Leonard | Philadelphia |
| Solomon, Charles | Windber |
| Stanley, Thomas Z | Wilkes-Barre |
| Strang James MacL | Pittsburgh |
| Tallant, Edward J | Philadelphia |
| Tamarelli John A | Wilkinsburg |
| Troxel, Richard S | Allentown |
| Wapner Paul M | Philadelphia |
| Weiss, Edward D | Philadelphia |
| Welsh John W | Leechburg |
| Wilson, John S | New Bethlehem |
| Wood Rowland E | Philadelphia |
| Wunsch, Joseph J | Scranton |

### Rhode Island

| | |
|---|---|
| Beaudin, Briand N | West Warwick |
| Bianchini Vincent A | Cranston |
| Bruno Rocco | Providence |
| Ermakes Peter C H | Warwick |
| Farrell Robert L | Providence |
| Fenino Richard D | Providence |
| Freedman, David | Providence |
| Gilbert Robert L Jr | Providence |
| Goldowsky Seebert J | Providence |

### Rhode Island—Continued

| | |
|---|---|
| Hecker, Daniel | Valley Falls |
| Jacobson, Frank J | Providence |
| Jennison, David B | Providence |
| Keohane, John T | Providence |
| King, Alfred E | Woonsocket |
| Lamb, Francis D | W Warwick |
| Litchman David | Providence |
| Lury, John J | Providence |
| Manter, Wilbur B | Providence |
| Motta, Gustavo A | Providence |
| Nadworny, Adolph J | Providence |
| Richardson, Ralph D | Providence |
| Riley, Clarence J | Providence |
| Seltzer, Edward I | Cranston |

### South Carolina

| | |
|---|---|
| Allison, Harold McW | Greenville |
| Butt, William J | Columbia |
| Dotterer Thomas D | Columbia |
| Gaines, Thomas R | Anderson |
| Goodlette, William W | Greenville |
| Greenberg, Stephen A | Florence |
| Guyton, Clarence L | Columbia |
| Harding, Benjamin H | Yadkinville |
| Hutchinson, Manly E | Columbia |
| Kalil, Charles | Spartanburg |
| Law, Edward H | Columbia |
| Matthews, Rudolph S | Columbia |
| Reese, David P | Charleston |
| Sullivan, Edgar N | Florence |
| Zimmerman, William F | Charleston |

### South Dakota

| | |
|---|---|
| Bushnell, John W | Elk Point |
| Graeber, Marcus P | Aberdeen |
| Homan, Richard W | Ft Meade |
| Orlik, Theodore C | Chamberlain |

### Tennessee

| | |
|---|---|
| Bourkard, Harrison O | Deer Lodge |
| Dodson, George Day Jr | Chattanooga |
| Ely, James B | Knoxville |
| Ferber, Leon | Nashville |
| Fletcher, Harry Q Jr | Chattanooga |
| Gallaher, William T | La Folette |
| Gardner, Carl C Jr | Columbia |
| Gardner, James C | Nashville |
| Hannum, William Y C | Memphis |
| Harvey, Robert H | Erwin |
| Hawkins Alvin | Old Hickory |
| Haynes, Leigh K. | Woodlawn |
| Herzfeld John G | Nashville |
| Hill, Oliver W Jr | Knoxville |
| Hillard Irving R | Jackson |
| Irwin, Willard J | Knoxville |
| Jackson, George W | Middleton |
| Jones, Harry D | Nashville |
| Johnson, Glen R | Memphis |
| Kasselberg Lyman A | Memphis |
| Kennon, William G Jr | Nashville |
| Kinzel, Gerald E | Nashville |
| Lowe Jackson, P | Nashville |
| Lowenstein Solomon L | Nashville |
| McCann Ezelle | Memphis |
| McFarland James J Jr | Lebanon |
| Mackey, Sidney L. | Johnson City |
| Mason, Hobart O Dell | Lancaster |
| Mayes Ben R. | Nashville |
| Overholt, Bergein M | Knoxville |
| Pack, Charles E Jr | Sevierville |
| Prater, Charles A | Memphis |
| Smith Moore J Jr | Chattanooga |
| Waring, Harold R | Mountain Home |
| Werner Emil A | Mountain Home |
| Witt William J | Memphis |

### Texas

| | |
|---|---|
| Aldredge George N Jr | Dallas |
| Allen, Walter B | Marlin |
| Asper, Samuel P Jr | Ft Worth |
| Burk, Joseph E | San Antonio |
| Bush, William L | San Angelo |
| Casey, Robert E | Galveston |
| Compere, Dolphus E | Dallas |

# PHYSICIANS SEPARATED FROM SERVICE

### Texas—Continued

| | |
|---|---|
| Cowart Edmund M | Houston |
| Crumpler, Walter E Jr | Port Arthur |
| Curry, Dwight E | Port Arthur |
| Deter, Russell L | San Antonio |
| deVlaming, William | Kaufman |
| Donohue, William M | Houston |
| Douglas, R C | Lubbock |
| Evans, Robert W | Edinburg |
| Ewert, William A | Kingsville |
| Fillmore, Rollin S | Jacksboro |
| Fox, Kermit W | San Antonio |
| Fried, Bernard H | San Antonio |
| Garrett, Leslie M | Corpus Christi |
| Gendel, Joseph | Dallas |
| Gerardy, Carl W | Seagraves |
| Gerlich, Norman A | Waco |
| Gibson, Hester M Jr | Lubbock |
| Gilbert, Joe T | Austin |
| Gill, Earl K | Corpus Christi |
| Gill, Horace E | Dallas |
| Goodloe, Basil L | El Paso |
| Granbery, Richard G | Marshall |
| Guthrie, Thomas H | Houston |
| Harris, Charles H II | Ft Worth |
| Harrison, Richard H Jr | Bryan |
| Hartman, Albert W Jr | San Antonio |
| Hilgartner, Henry L Jr | Austin |
| Hopkins, Jesse J | Dallas |
| Johnson, Dale F | Loraine |
| Johnson, Leonard B | Houston |
| Klatman, Sol | Waco |
| Lovett, Raymond E | Olney |
| McKinney, William W | Houston |
| Magliolo Andrew J | Galveston |
| Major, Alexander D | Ft Worth |
| Main Robert M | Wichita Falls |
| Meyer, Henry S | Houston |
| Murphy, Joseph G | Palestine |
| Nathan Robert E | Wichita Falls |
| Osmun, Paul M | Houston |
| Parrish, Beuford R | Galveston |
| Peavy, James E Jr | Sweetwater |
| Peterson, Edwin P | Amarillo |
| Rothen, Robert M | Austin |
| Schwartzberg, Samuel | San Antonio |
| Sprott, Curtis B | Beaumont |
| Siegel, Lawrence H | San Antonio |
| Smith, Sydnie G | San Antonio |
| Waldron, Wilbur D | San Antonio |
| Wiesner, William A | San Antonio |

### Utah

| | |
|---|---|
| Bowen, John McKell | Salt Lake City |
| Budge, Robert S | Logan |
| Hirst, Russell N | Ogden |
| Meilstrup, Drew B | Salt Lake City |
| Pace, John W | Salt Lake City |
| Pace William D | Ogden |
| Riter, Kersey C | Logan |
| Shannon, Rollin R | Milford |
| Smoot, Seth E | Provo |
| Wakefield, Roger H | Salt Lake City |

### Vermont

| | |
|---|---|
| Bellerose, Alberic H | Rutland |
| Farmer, Henry M | Burlington |
| McIntyre, Frederick P | Brandon |
| Mumler, William C | Bradford |
| Persons, Duncan W | St Johnsbury |
| Saia, John L | Barre |
| Segal, Leo | N Troy |
| Stone, Bartlett H | White River June. |

### Virginia

| | |
|---|---|
| Allen, Benjamin R | Suffolk |
| Bourne, Henry R | Danville |
| Buckner, Walter | Roanoke |
| Carter, Peter J | Franktown |
| Coleman, John G | Charlottesville |
| Cooper, Kenneth | Lynchburg |
| Curd, Howard H | University |
| Fogel, Julius | Lynchburg |
| Fox Charles G Jr | Shawyers Mills |
| Frazer, William P | Hamilton |

### Virginia—Continued

| | |
|---|---|
| Gayle, John F | Newport News |
| Gearhart, Robert S | Arlington |
| Gerchow, Keith E | Morgantown, West |
| Glover, Mervin W | Arlington |
| Harris, Leonard | Danville |
| Helbert, Hollen G | Harrisonburg |
| Himmelwright, G G Jr | Newport News |
| Holmes, Edward M | Richmond |
| Hulcher, Julius C | Richmond |
| Irons, Cary F Jr | Rockbridge Baths |
| Jones, Robert A. G | Hampton |
| Kirby, Edgar W Jr | Charlottesville |
| Knight, Thomas E | Farmville |
| Kolodny, Abraham L | Norfolk |
| Lyons, Sidney | Lexington |
| McCall, George W | Bristol |
| McDaniel, Samuel M Jr | Charlottesville |
| McDonald, Roderick L | Richmond |
| Mangus, Lewis E II | Vesuvius |
| McMann, Walter S L | Danville |
| McNeel John O | Charlottesville |
| Magruder, Roger G | Charlottesville |
| Mathers, James A L | Smithfield |
| Mirmelstein Samuel H | Newport News |
| Moody, William E | Charlottesville |
| Ney, Joseph | Richmond |
| O'Brien, David C | Portsmouth |
| O'Neal, James T | Amelia |
| Rucker, William V | Bedford |
| Shapiro, Andrew D | Roanoke |
| Sharove, Nathan | Richmond |
| Silver, Sam | Waynesboro |
| Sinclair, Cecil L | Hampton |
| Smethie, William M | Richmond |
| Stuart, Emmert C Jr | Winchester |
| Suter, James M | Bristol |
| Thabault, Louis G | Winooski |
| Walke, John T | Norfolk |
| Webb, Harold B | Waynesboro |

### Washington

| | |
|---|---|
| Ackerman, Frederick I | Seattle |
| Blackman James F | Seattle |
| Brooke, J R | Tacoma |
| Falkner, George A | Spokane |
| Cornelius, Frank J | Olympia |
| DeLateur, Conrad A | Seattle |
| Florence, Robert W | Seattle |
| Hackett, Gordon C | Longview |
| Hartung, Frank H Jr | Olympia |
| Haug Albert D | Wenatchee |
| Helwig Carl M | Seattle |
| Highmiller, Ralph H | Olympia |
| Hillman, Van Kirk | Seattle |
| Kerr, James McG | Seattle |
| Kurbitz, Kenneth W | Seattle |
| *Lyle Francis M* | *Spokane* |
| McBride, Glenn G | Tacoma |
| McClure, Rexford D | Yakima |
| Mercer, Samuel T | Seattle |
| Miller, Cecil C | Wenatchee |
| Narodick, Philip H | Seattle |
| Nelson, John A | Longview |
| Newsom, Samuel J | Walla Walla |
| Sewall Ralph J | Davenport |
| Sims, Wayne W C | Seattle |
| Stevens, Ralph W | Walla Walla |
| Stokesbary, Delbert L. | Ferndale |
| Thomas, Howard B | Seattle |
| Valentine, Howard V. | Spokane |
| Walters, Carl C. | Yakima |
| Yunck, William P | Seattle |

### West Virginia

| | |
|---|---|
| Berkley, Julius L. | Charleston |
| Campbell, James A | Glen Rogers |
| Chenoweth, Perthas C | Elkins |
| Ferrell, Robert M | Lewisburg |
| Garred, Emery W | Milton |
| Gatherum Robert S | Bluefield |
| Greene, Ralph | Morgantown |
| Hale, Daniel | Princeton |
| King, Lewell S | Philippi |
| McClung, James E | Richwood |

### West Virginia—Continued

| | |
|---|---|
| McElrath, Percy J | Bramwell |
| Matthews, LeRoy B | Charleston |
| O Dell, Morris H | S Charleston |
| Palmer, Glenn F | Pine Grove |
| Sites, Charles J | Upper Tract |
| Spargo, James E. Jr | Wheeling |
| Todd, Gordon L Jr | Princeton |
| Vaughan, Paul E | Fraziers Botton |
| Vial, Horace R W | Charleston |
| Youngue, Eugene L. Jr | Lakin |

### Wisconsin

| | |
|---|---|
| Ansfield, Fred J | Gladden |
| Appleby, Keith B | Milwaukee |
| Backus, Edward A | Milwaukee |
| Barnett, Harry J | Milwaukee |
| Becker, Reinhard | West Allis |
| Bingham, James B Jr | Madison |
| Bolles, Carlton S | De Pere |
| Boxer, Sidney | Milwaukee |
| Calvy, Thomas L. | Fond du Lac |
| Champney, Richard D | Milwaukee |
| Conover, John L | Milwaukee |
| Daniels, Einar R | Wauwatosa |
| Dockendorff, Bernard C | Arcadia |
| Faber, Samuel J | Racine |
| Eagleburger, Leon S | Waupun |
| Frick, John C | Waukesha |
| Friedman, Gerald H | Milwaukee |
| Frisch, Robert A | Milwaukee |
| Fulton, John K | Sparta |
| Gallimore, Robert G | Fond du Lac |
| Gantz, Hyman A | Waukesha |
| Gilbert, Joseph | Milwaukee |
| Groendahl, Raymond C | Seymour |
| Guardalabene, Vito | Milwaukee |
| Hathaway, George J | Superior |
| Hauch Francis M | Kaukauna |
| Hein, Richard J | Milwaukee |
| Henske, William C | Chippewa Falls |
| Hoeffel, Joseph M Jr | Green Bay |
| Huth, Melvin F | Baraboo |
| Johnson, Francis C | Madison |
| Justen, Ralph T | Milwaukee |
| Kanzler, Reinhold | Madison |
| Kastl, Karl G | Waukesha |
| Kierzkowski, Casimir V | Beaver Dam |
| Kindschi, Donald R | Prairie du Sac |
| Kvarnes, Robert G | Superior |
| Lane, Francis C | Merrill |
| Macht, Arthur J | Milwaukee |
| Mayer, Robert G | Kaukauna |
| Mirman, Ben H | Wausau |
| Mueller, Clarence J | Sheboygan |
| Myers, Myron A | Madison |
| O'Neill John W | LaCrosse |
| *Orr, Edwin R* | *Madison* |
| Picotte, Lyman W | Chippewa Falls |
| Regan, David M | Neenah |
| Ryan, Paul W | Milwaukee |
| Sandin, Howard V | W Ashland |
| Shemanski Leonard S | Menasha |
| Simones John J | La Crosse |
| Wigod, David | Waterford |
| Ziegler, Clement T | Wauwatosa |

### Wyoming

| | |
|---|---|
| Allegretti, Anthony J | Cheyenne |
| Iseman, Robert M | Cheyenne |
| Lawton, Latham B | Jackson |

### Hawaii

| | |
|---|---|
| Cockett Patrick M | Wailuku |
| Giles, Frederick L | Honolulu |
| Katsuki, Robert Y | Honolulu |
| Murray, Douglas H | Lanai City |

### Puerto Rico

| | |
|---|---|
| de la Torre, Felix G | Santurce |
| Santos, Juan J | Yabucoa |

### Canal Zone

| | |
|---|---|
| Guijarro, Antonio | Santurce |
| Vaughan, Sanford M | Howard Field |

# ORGANIZATION SECTION

## National Health Program

### PLATFORM ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

*One of the ten points in this platform will be published each week.*

8 Research for the advancement of medical science is fundamental in any national health program The inclusion of medical research in a National Science Foundation, such as proposed in pending federal legislation, is endorsed

## Washington Letter

*(From a Special Correspondent)*

May 27, 1946

### Veterans Administration to Increase Number of Patients

Dr Paul R. Hawley, medical director of the Veterans Administration, reports that the agency expects to treat 50 per cent more veterans a year in its existing hospitals by reducing administrative red tape and providing enough doctors to take care of veterans as they seek hospitalization Dr Hawley has just completed a tour of veterans hospitals and predicted that the Veterans Administration will be able to end its long hospital waiting lists by the end of this year He also revealed plans to increase salaries for resident doctors in training at veterans' hospitals to advance the program for more young physicians in the institutions.

### Two Federal Agencies Plan Employment for Disabled Workers

The Veterans Administration and the United States Employment Service have both launched programs to aid disabled veterans and other handicapped workers in finding jobs. The Veterans Administration has just arranged to give help to veterans who have had trouble getting and holding jobs because of ear trouble Courses will be given in lip reading speech and voice correction. The United States Employment Service will launch its program at Chicago, whereby the handicapped will be helped by an expanded placement service.

### Washington Slum Areas Criticized Again

Continuing its report on health conditions in the nation's capital the Metropolitan Health Council reported that more than 100,000 people are housed in 25,000 slum dwellings which lack inside water faucets and toilets, another 25,000 dwelling units are "substandard," and outmoded outdoor water hydrants and toilets backsiphon filth and sewage into the water supply The housing situation was reported to be worse than in any other city surveyed to date

### Bill Would Assist Mental Patients

Representative McMillan, Democrat of South Carolina, has introduced a bill which would allow legally competent persons suffering from mental disorders to be admitted to St. Elizabeths Hospital for treatment at their own request. The proposed legislation was drafted by the committee on mental health of the Medical Society of the District of Columbia, headed by Dr Winfred Overholser, superintendent of St. Elizabeths Hospital.

### District Health Conditions Defended

Major General Philip B Fleming of the Federal Works Administration followed up the blast by a Metropolitan Health Council survey against Washington hospitals with the statement that hospital conditions in the District of Columbia are deplorable." He advocated appropriation of funds by Congress for construction of a hospital center However, District Budget Officer Walter Fowler has come out in defense of the capital's health record, as follows "The District has a wonderful record in view of the fact that our hospital facilities have not adequately kept pace with population increases" He pointed out that the mortality rate in the District in 1945 was 9 7 per thousand of population, lowest in city history, the tuberculosis rate had shown a steady decline from 290 per hundred thousand of population in 1,900 to 61 9 per hundred thousand in 1945 The maternal mortality rate of 1 per thousand live births in 1945 was the lowest among the nation's large cities

### $47,000 in Fines Assessed Against Limb Makers

*The eight remaining defendants in the trial of some sixty* artificial limb makers on anti-trust charges have been sentenced following conviction at their trial before Justice Bower Broaddus Already fines totaling more than $47,000 for conspiracy to restrain trade in the artificial limb industry have been imposed against some twenty-five individuals and twenty-five companies manufacturing, selling and servicing artificial limbs who had pleaded nolo contendere, or unwillingness to contest government charges About half of the fines, ranging from $400 to $3,000, according to the size of the operation and the ability to pay, were suspended and the defendants placed on probation for a year

### Washington to Set Up Hospital Council

Following condemnation of lack of cooperation between Washington hospitals by a metropolitan health and hospital survey sponsored by the Council of Social Agencies a National Capital Area Hospital Council is in the process of formation. All hospitals in the District and nearby counties are to be represented. Representatives have drawn up by-laws The council will be patterned on similar groups in Cleveland and Boston During observance of National Hospital Day at Freedmen's Hospital, Rabbi Norman Gerstenfeld declared that the key words of our duties at home and abroad are "health, justice, decency, honor, righteousness and peace."

### Visiting Foreign Physicians Honored

The International Medical Club of Washington entertained as guests of honor Dr J Guiterrez Osorio, surgeon general of the Venezuelan army, and Raymond Darget, professor of urology at the University of Bordeaux Dr Walter Bloedorn dean of the Medical School of George Washington University and president of the club, welcomed the visitors, inviting them to take advantage of the "open door policy" of the American medical profession

### Rare Disease Studied in Leesburg, Va, Area

U S Public Health Service scientists are studing histoplasmosis, 4 cases of which have been reported near Leesburg, Va., since 1921 The most recent case was reported last September Only 100 cases of the disease have occurred since its discovery in 1906 in the Panama Canal Zone.

### Brief Items

The Medical Society of the District of Columbia has elected Dr Raymond T Holden, Washington physician recently discharged from the Navy, to be president for 1947

Col Wallace H Graham of Kansas City, Mo, personal physician to President Truman, received the French Chevalier of the Legion of Honor and the Croix de Guerre for services in Normandy He was cited for personally caring for wounded French soldiers

Dr Paul R. Hawley, Veterans Administration medical director, reports that 2,753 veterans have been treated in "surplus" hospitals taken over from the Army

The *District of Columbia Zoning Commission* has ruled that a doctor may set up an office in a residential area only if he lives on the premises

# Medical Legislation

## MEDICAL BILLS IN CONGRESS

### Maternal and Child Welfare

The Subcommittee on Aid to Physically Handicapped, House Committee on Labor, has scheduled hearings on three identical bills proposing to enact a Maternal and Child Welfare Act, H. R. 3922, H. R. 3994 and H. R. 4059. These are companion bills to legislation introduced by Senator Pepper and nine other Senators, as S. 1318. According to the announcement of the chairman of the House subcommittee, hearings will be held on May 28, May 29, June 6 and June 7. Representatives of the Association will testify on June 7.

### Dental Research

The Senate Committee on Education and Labor has reported favorably, with an amendment, S. 190, a bill to provide for, foster and aid in coordinating research relating to dental diseases and conditions and to establish a National Institute on Dental Research.

### Federal Security Agency

President Truman has submitted to the Congress Reorganization Plan No. 2 of 1946, proposing to transfer to the Federal Security Administrator the functions of the Children's Bureau, except those relating to child labor under the Fair Labor Standards Act, the Vital Statistic functions of the Census Bureau, and the functions of the United States Employees' Compensation Commission. He also indicated that he will recommend soon that legislation be promptly enacted making the Federal Security Agency an executive department. This plan will become effective unless the Congress rejects it within sixty days.

### Miscellaneous

The Public Health Subcommittee of the House Committee on Interstate and Foreign Commerce has reported the Hill-Burton hospital construction bill, S. 191, with amendments, to the full committee. One proposed amendment would eliminate the right of appeal to the courts if the Surgeon General refuses to approve an application for a construction project. Another would provide that four instead of five members of the Federal Hospital Council shall be persons who are outstanding in fields pertaining to hospital and health activities and that four instead of three members will be representative of the consumers of hospital services. A third amendment would authorize the appointment of additional commissioned officers in the Public Health Service.

The President has signed H. R. 6305, making permanent the provisions of the act of July 11, 1941 prohibiting prostitution in the vicinity of military and naval establishments.

H. R. 6448 introduced by Representative Mills, Arkansas, proposes to establish in the executive branch of the government an independent agency to be known as the National Science Foundation in order to secure the full development and application of the nation's scientific and technical resources for national defense, national prosperity and the national health and welfare.

## STATE LEGISLATION

### Louisiana

*Bills Introduced*.—H. 38 proposes to authorize the Louisiana State Board of Medical Examiners and the Louisiana Homeopathic State Board of Medical Examiners to issue temporary permits to native born citizens of foreign countries of the Western Hemisphere to intern and serve residency in the private and public hospitals of the state which are approved for training by the American Medical Association and the American College of Surgeons, to serve fellowships in medical schools, to serve fellowships in private clinics, to take training therein with and under the supervision of doctors who are qualified as specialists by their respective boards and to take training with private doctors who are qualified as specialists by their respective boards. The temporary permits would be limited to three years and would be issued only to graduates either of colleges and universities of the United States of America of "Class A College Standard American Medical Association" or to graduates of such foreign colleges and universities of countries of the Western Hemispheres of "Class A College Standard American Medical Association" or the equivalent thereof which the board may from time to time approve. No more than twenty-five temporary permits would be permitted to be issued in any one year, and the total out standing at any one time would not be permitted to exceed seventy-five.

H. 118, relating to the annual inoculation of dogs, proposes to require the owner of every dog over 3 months of age to cause such dog to be inoculated against rabies by a licensed veterinarian annually.

H. 148 proposes that all persons between the ages of 14 and 50 years, inclusive, residing within the state of Louisiana shall submit to a blood examination for syphilis by an approved laboratory test.

### Massachusetts

*Bills Introduced*.—H. 1899 proposes that no person shall sell, exchange, deliver or have in his possession with intent to sell, exchange or deliver any preparation containing dichlorodiphenyl-trichloroethane, hereinafter referred to as DDT, unless each bottle, can, package or other container containing such preparation is plainly labeled with a statement of the percentage of DDT contained in such preparation and the word 'Caution' followed by statements and warnings as to the toxicity of the preparation if inhaled or if brought into contact with the skin of man or animals, together with directions for removal of the same from the skin in case of accidental contact. The label would also be required to include instructions relative to the prevention of contamination of foodstuffs by such preparation. S. 507 proposes the creation of a commission for the continuous study and investigation of the problem of drunkenness within the commonwealth and all matters relating thereto.

*Bill Passed*.—H. 230 passed the house May 10 and the Senate May 20. To amend the medical practice act, it proposes to authorize the board of medical examiners to grant certificates of registration, without examination, to such persons as shall furnish with their application satisfactory proof that they have the qualifications required in Massachusetts to enable them to be examined and have been licensed or registered on a written examination in another state whose standards, in the opinion of the board, are equivalent to those in Massachusetts. The proposal also provides that no person shall be registered without an examination if he is a graduate of a medical school not approved by the approving authorities.

*Bills Enacted*.—H. 1728 has become chapter 293 of the Laws of 1946. It provides that all persons who were residents of the state at the time of their matriculation at the Middlesex University School of Medicine, and who received the degree of doctor of medicine from that college prior to Jan. 1, 1946 and all persons not residents of the state who received the degree of doctor of medicine from the university prior to Jan. 1, 1946 and who shall have interned in a charitable or municipal hospital within the state, said internship having commenced prior to June 1, 1946, shall be eligible to be applicants for registration as qualified physicians, shall be examined for such registration by the board of registration in medicine and shall be subject to and have the benefit of all pertinent provisions of law relative to such eligibility and examination to the same extent as if they had matriculated at said school prior to Jan. 1, 1941. H. 1780 has become chapter 272 of the Laws of 1946. Relating to the practice of pharmacy, it provides that schools of graduation may be approved by the board of registration in pharmacy and the commissioner of education and by the board of registration in pharmacy and the United States Veterans' Administration. S. 462 has become chapter 268 of the Laws of 1946. Relating to the replacement of a city board of health by a city health department, it provides that the commissioner of health be a citizen of the United States who has been graduated from a medical school approved by the state authorities for the approval of medical schools and either shall be the holder of a degree of public health with at least two years' full time experience in a responsible position in public health service or shall have had four years' full time experience in a responsible position in such service. He shall be eligible to be registered to practice medicine under the laws of the state.

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*—ED)

*(Continued from page 346)*

United States Senate, Committee on Education and Labor

APRIL 18, 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Pepper, Ellender and Donnell

### Statement of Dr E I Robinson, President, National Medical Association, Accompanied By Dr Paul B Cornelli

DR ROBINSON The National Medical Association which is composed of approximately two thirds of the approximately 4 000 Negro physicians in this country and which is separate and distinct from the American Medical Association is in favor of and supports S 1606 known as the Wagner-Murray-Dingell bill It bases its support primarily on the fact that this bill is an expression of the democratic principle that an attempt will be made to give the most to the greatest number of individuals and because it is in conformity with the general welfare clause in our constitution

(*Dr Robinson cited statistics on Negro health*)

There is need for trained professional personnel in the Negro population There are only approximately 4,000 Negro physicians in this country, or 1 Negro physician for about every 3 500 Negroes In some states the number of Negro physicians is insufficient to take care of the needs of the population A study in North Carolina has shown that there is need for 800 Negro physicians in that state alone, yet at present there are only 170 In the state of Mississippi, with a million or so Negroes the number of Negro physicians is about 50 There are only about 1,700 Negro dentists in this country to care for a population of 13,000 000 Negroes There are other professional deficiencies, such as public health nurses, medical social workers and laboratory technicians

(*Senators Donnell Murray and Pepper with Dr Cornelli debated at some length the significance of the general welfare clause in the Constitution*)

### Statement of Dr Harold T Low, President, Association of American Physicians and Surgeons

DR. LOW The Association of American Physicians and Surgeons was organized a little more than two years ago In this short time it has gained far reaching and rapid acceptance having members in every state of the Union and in 851 county medical societies Its purpose is to represent physicians in the fields of medical economics public relations and legislation It is financed entirely by membership fees and accepts no donations or other financial aid outside its membership The association strongly believes that this nation can continue its customary record of health improvement and increasingly wider distribution of better medical care through the use of voluntary plans of prepayment sickness insurance for considerably less money than the costs of socialistic systems with their excessively expensive administration

The Association of American Physicians and Surgeons believes that the need for compulsory insurance and state medicine, as proposed by Senate bill 1606 is poorly established since the experience of those countries having this type of system does not indicate an improvement in health or medical care.

SENATOR MURRAY I would like to stop there. What countries in Europe have precisely the type which we have proposed here? DR. LOW None that I know of The association holds to the belief that no actual need can be shown or sound arguments advanced for socialization of medicine Therefore we are concerned with why apparently sincere and intelligent people continue to agitate for its adoption It is the answer to this question in our opinion that contains the sinister implications of a plan to socialize not only medicine but all industry as well If proponents of S 1606, which we claim constitutes socialized medicine, are sincere in their desire to provide better medical care with wider distribution of this service, and since experience of other countries shows that federal compulsory systems do not accomplish this objective, then perhaps socialization is starting on the wrong end For a number of years we have heard that one third of American people are ill housed, ill clad, ill fed and ill cared for, and yet government sources were maintaining that we enjoyed the best health of any nation in the world Analysis of these four postulates shows them to be purely economic If ill health is due to poor food or lack of sufficient food, it would seem that socialization should begin with the butcher and the grocer for certainly the problem of feeding the people should not be laid on the doorstep of the American medical profession The association is fearful that the scheme for the federal government to establish political control of physicians and their patients is an entering wedge for the accomplishment of a completely socialized economy for this nation We believe that the proponents of political medicine, a few knowingly and a majority unwittingly, are using this plan as a stepping stone to a socialistic state.

Compulsory health insurance will encourage public dependence increase bureaucracy and the burdens of taxation It will lower the standards of medical practice, hinder medical progress and result in regimentation of physicians and patients Physicians are fighting this bill, not for financial preservation but because they conscientiously believe it is not in the public interest but on the contrary, will result in a serious impairment of the nation's health We repeat, voluntary plans of prepayment medical care and hospitalization insurance will meet satisfactorily the health needs of the nation Insurance records for recent years show an increasingly greater acceptance of these plans by the American public. We urge that the federal government give support and encouragement to these voluntary plans which, if given time and not in the too dim distant future as the records indicate, will furnish the objectives of this bill without jeopardizing the system of medical care which has made this nation foremost in health without compulsion and regimentation We believe that the Association of American Physicians and Surgeons' "Plan for National Health" if executed will achieve health goals satisfactory to the most idealistic. Therefore we submit, for the consideration of the committee, the plan in these words

The association proposes and recommends that medical care and hospitalization prepayment insurance be made available to the public by establishing voluntary plans of nonprofit insurance in all states For all those unable to pay and if they so elect, the association proposes and recommends that the federal government share equally with the states in providing funds to purchase insurance for this group under a plan to be administered by state and local agencies of the respective states The selection of the voluntary plan to provide insurance for those unable to pay should be made by the state medical associations of the respective states, subject to agreement with the appropriate state agency and determined on a basis of securing the most comprehensive and economical coverage

Recognizing that this nation desires and is obligated to furnish the best medical care and hospitalization for veterans the association recommends that such medical care be provided by a physician of the veteran's choice and hospitalization be given as near to the veteran s home as possible whenever it is feasible to do so It is recommended that payment for these services be made by the Veterans Administration through a plan acceptable to the respective state medical associations and the Veterans Administration

Modern hospitals and health and diagnostic centers properly distributed in relation to need, are essential to the provision of adequate medical care. Therefore the association recommends that where such facilities are not available and cannot be furnished by local agencies the federal government give aid to the respective states for the purpose of providing additional

hospitals and health and diagnostic centers in those communities in which a need is shown and there is evidence of the communities ability to maintain them The administration of the plan of federal aid to hospitals and to health and diagnostic centers should be under the jurisdiction of the respective states and their local agencies

The association recommends the improvement of existing federal health agencies with increased facilities and personnel where need is shown, and emphasis placed on control by the local areas where the public health services are established Health departments should not administer medical care and should approve the policy of medical care being provided by the physician of the patient's choice.

Higher standards of nutrition, housing clothing and recreation should be achieved through education, individual initiative community effort and federal aid where needed

The association recommends that a nationwide campaign of health education should be conducted under the cooperating sponsorships of national medical associations, state medical associations county medical societies and state and federal agencies Emphasis should be placed on health education in the schools and enlistment of the aid of all local civic groups and agencies The educational campaign should stress the desirability for all individuals to participate in the voluntary plans of insurance

SENATOR MURRAY Do you desire to submit any further statement? DR. LOW With your permission sir The suggestion was made to this committee by William Green that a thorough investigation be made of the lobbying activities of certain medical organizations including the American Medical Association, and that the sources of their funds be made public May I respectfully suggest to the chairman of this committee that an equally thorough investigation be made of the groups lobbying for the Wagner-Murray-Dingell bills (S 1050 and S 1606)? The American public has a right to know whether this legislation has been drafted in response to popular demand or whether it is being sponsored by government officials who have a vested interest in perpetuating and expanding their own jobs On April 4 Arthur J Altmeyer chairman of the Social Security Board testified that Isadore S Falk had written the major portion of S 1606 with the aid of the U S Public Health Service I think it is of great importance to every one in this country to know about the professional competence and background of those who have essayed to write health and medical legislation that would affect 85 to 90 per cent of the population Who is Isadore Falk? What is his professional record? Who have been associated with him? What medical men have aided him? What part has Michael M Davis played in lobbying for this legislation? Who finances Mr Davis? What has been his past connection with the Rosenwald Fund? With what committees is he now connected for the purpose of pushing enactment of this legislation? How many federal civil servants are assisting Mr Davis despite the provisions of title 18 section 201, of the U S Code. These pertinent matters, I believe should be investigated by your committee

SENATOR MURRAY Thank you very much, Doctor I am sure it would be a great help if all these organizations would voluntarily submit to us statements of their organizations how they are financed and what money they have spent for or against this legislation. Some of the witnesses who have appeared here already who are sponsoring this bill have presented that, some organizations which favor the bill Dr Boas who explained the setup of his committee stated further the funds it has accumulated and how it has been spent. It would be helpful if all organizations on both sides would give us information such as Dr Boas gave us here this morning Of course, it would be a terrible task for this committee right now to launch into an investigation of these organizations We simply could not. This hearing will take maybe another month before we are through, and therefore it could not be expected that we could stop now and launch into an investigation of these organizations who are for or against this legislation You feel that there are not very many people in this country denied access to modern medical care? DR LOW I feel there are certain low income groups that perhaps are yes, sir

SENATOR MURRAY But you think there are few and it can be easily remedied? DR LOW It can be remedied by grants-in-aid to the states which would take care of the needy

SENATOR MURRAY How would it take care of those people in the very low income groups? In what manner would it make it possible for them to secure the best modern medical care and hospitalization? DR. LOW By the rules and regulations which the authority who had the regulation of the system would set up, a minimum wage under which a man would be entitled to these benefits as set up under the voluntary plans by the government paying that premium in a voluntary plan of insurance.

*(Senator Donnell brought out through Dr Low that the advisory committee with sixteen members appointed by the Federal Security Administrator would be mostly laymen)*

SENATOR DONNELL You state in your testimony that your organization is financed entirely by membership fees and accepts no donations outside its membership What are those fees? DR. LOW Ten dollars a year

SENATOR DONNELL You get all the income, or the association does, from that source? DR LOW Yes sir

### Statement of Vlado A Getting, M D, Secretary, Association of State and Territorial Health Officers, Commissioner of Public Health, Boston

DR GETTING I appear here today as secretary of the Association of State and Territorial Health Officers and have been authorized by the executive committee to speak for the entire association, which represents the forty-eight states the territories and the District of Columbia I am at the present time commissioner of public health of the commonwealth of Massachusetts, which position I have held since April 14 1943 The State and Territorial Health Officers are naturally in favor of any legislation which will benefit the public health of the nation. We are however, concerned that all such legislation should be administered efficiently and effectively in order that the people may derive the maximum benefit consistent with the minimum interference with their normal course of life For over seventy five years state departments of health have been charged with the responsibility of administering programs of public health The association therefore is in favor in principle of any bill which will ultimately bring about an improvement in public health The association, on the other hand, must call to the attention of the committee shortcomings in Senate 1318 and in Senate 1606 which in its opinion would be detrimental to the health of the people

As a member of the Subcommittee on Economics of the Committee on Postwar Planning of the Massachusetts Medical Society, I assisted in the formulation of certain statements which in my opinion are applicable to both of these bills They not only express the objectives of adequate medical care but set forth the prerequisites for the success of an officially administered medical care program These basic principles were adopted by a council of the Massachusetts Medical Society on Jan 9, 1946 and appear in the *New England Journal of Medicine* of March 7, 1946. They are as follows

1 The objective of adequate medical care in our free society is to make available to every one—regardless of race color creed financial status or place of residence—every known essential preventive, diagnostic and curative medical service of high quality The attainment of such medical care must necessarily be an evolutionary process which will require the cooperation of all concerned over a period of years.

2 The success of any plan for medical care is dependent on the mutual cooperation of the public those rendering professional services and the administrative agencies This cooperation can be obtained only if those rendering the services are convinced that they will have a continuing authoritative voice in the formulation and execution of policies and plans thereby assuming their proper share of responsibility

3 Provision of adequate medical care for those unable to obtain it by voluntary prepayment plans or by direct payment is the responsibility of the local or state government Part of the burden of this responsibility may be assumed by charitable agencies Federal grants-in-aid to state programs administered by state boards of health is an acceptable method of helping to meet this responsibility

4 The medical care of those who are able to purchase it by voluntary prepayment plans or by direct payment is the responsibility of the individual

5 Eligibility for receiving benefits under a program aided by federal grants should be determined by the individual states

6 The patient shall have free choice of his physician group of physicians clinic or hospital from among those participating in any plan, provided the physician group of physicians clinic or hospital selected shall have the right to refuse or to accept the patient.

7 Physicians and other qualified persons rendering medical care shall receive adequate remuneration for their services.

8. The physician shall be free to elect or reject without prejudice participation in a medical care plan The rights of the physician as to the choice of methods by which he is to be paid shall be fully protected.

*(Dr Getting presented an extended analysis of S 1318)*

DR. GETTING The changes, as underlined in this draft would bring about an expanded public health program with special emphasis on maternal and child health. The Association of

State and Territorial Health Officers has carefully reviewed Senate 1606 It is in principle in favor of title I of this bill which authorizes grants in-aid to states to extend public health services, to increase maternal and child health services and to provide medical care for the needy It is naturally desirous of supporting a bill which seeks to promote the development of public health and which would make essential preventive diagnostic and curative medical services available to every one However the association does not believe that the passage of this bill in its present form would insure this objective

*(Dr Getting offered resolutions amending S 1606)*

Title I, Part C, Grants to States for Medical Care of Needy Persons The association believes that the medical care of persons otherwise unable to procure such care is a governmental responsibility However, we believe that such a program should be administered by the state health departments, as outlined in the suggested amendment of Senate 1318 The addition of the male adult and the woman who is not pregnant to Senate 1318 would in effect create a complete medical care program Moreover, it is the opinion of the association that the federal agency responsible for the administration of a federal grant-in aid program for the medical care of needy persons should be the U S Public Health Service until such a time as a federal department of public health is created. We believe that the placing of this responsibility in the Social Security Board on the federal level and in the departments of welfare on the state level would create undesirable duplication, inefficient administration and considerable confusion in the minds of the public—all of which would tend to make medical care unavailable to those for whom it is intended It is the opinion of the association that the inclusion of cash payments to individuals is not apt to result in any improvement in the public health Benefits should be in a service basis rather than on a cash basis

Title II, Prepaid Personal Health Service Benefits This is compulsory health insurance and would to a large extent duplicate some of the benefits under Senate 1318 and under section C of title I The reading of this bill, throughout its various titles, leads us to the conclusion that it has failed to present a coordinated program either of public health or of medical care. Certainly the passage of either Senate 1318 or of part C of title I S 1606 and the simultaneous passage of title II would lead not only to duplication but to an intolerable state of administrative confusion. It is therefore the recommendation of the Association of State and Territorial Health Officers that before undertaking any expansion of a medical care program or any compulsory health insurance program a detailed study should be made as to the necessity for and the requirements of a comprehensive public health program. This should be established before a medical care program. As has already been explained, there are not enough health departments in the United States at the present time to provide adequate minimal public health services for all the people. Moreover it seems logical to try to prevent sickness and death before providing for governmental care of the sick

*(Dr Getting offered detailed criticism of S 1606)*

SENATOR MURRAY If it was left to the states, the states might have varying laws with reference to who would be entitled to practice medicine. That is true, is it not? In some places they permit osteopaths to practice just the same as medical doctors? DR GETTING That is correct.

SENATOR MURRAY And so that each state would have a different system? DR. GETTING As to the qualification of medical practice? SENATOR MURRAY Yes DR GETTING That is a constitutional right SENATOR MURRAY Also have different sets of regulations governing the manner in which the law would be administered? DR GETTING That is correct. And it is our recommendation that the states should also set up eligibility and domicile requirements SENATOR MURRAY For the profession? DR. GETTING For the recipients of any medical care program, because if the state governments are to appropriate any funds they want to make sure that they can control the expenditure of funds for the citizens of their respective states In relation to the benefits and limitations imposed on benefits as specified under the law and I am referring in general to pages 15 and 16 of my statement it is the consensus of the state health officers that those benefits should be set up by regulation and not by law, since they may have to be changed from time to time. We also are opposed to the idea of paying cash benefits to patients and believe that a service program would obtain the objective. It has been the experience that too often cash benefits given to patients are expended for permanent waves rather than for hospital or doctor bills

SENATOR DONNELL The Association of State and Territorial Health Officers, as you indicated in your statement, represents the forty-eight states, the territories and the District of Columbia? DR GETTING That is correct, sir

SENATOR DONNELL And you gentlemen have no interest in this matter except one of public welfare? DR GETTING That is our only interest

SENATOR DONNELL Doctor, as I understand it from the conclusion of your statement, you believe that the sudden overwhelming expansion as envisioned in S 1606 of a multiple medical care program, administered by numerous agencies on both federal and state levels, would not only prove too costly but be confusing to the public? DR GETTING Yes

SENATOR DONNELL So, your estimate as I understand it, which I take it is merely an estimate, for the cost of title II prepaid personal health service benefits if applicable to 105 million people would be from $7 350 000 000 per year to $10 500,000 000 per year? DR GETTING That is my estimate

SENATOR DONNELL I observe when you are quoting from the basic principles adopted by the council of the Massachusetts Medical Society on Jan 9 1946 you quote this "Provision of adequate medical care for those unable to obtain it by voluntary prepayment plans or by direct payment is the responsibility of the local or state government." Does that represent your own personal judgment likewise? DR GETTING Senator in this statement I have alluded to the Constitution where it states that the health and welfare of the people has been delegated to the state as its responsibility, in that it is not specifically delegated to the federal government.

SENATOR DONNELL In other words, you are proceeding on the theory, at least in the minds of some of the people nowadays, which seems to have been outmoded and in the minds of some of the rest of us has not, that the federal government has not been delegated any authority except that which has been conferred on it? DR GETTING That is correct sir

SENATOR DONNELL You adhere to that? DR GETTING Not only do I adhere to it, but from my experience as a city and health officer, and also working on other local levels, it has been my experience that those best able to judge the needs of the people are those who are closest to the people, and therefore any program which is intended to be national in scope, unless it is decentralized to a state or even lower level is apt to have many features about it which would not meet the needs of the people.

SENATOR DONNELL So you would not regard your views with respect to the retention of power of authority in local governments to be based solely on some technical construction of the Constitution but to be based first, on the Constitution itself the substance of it, and, in the second place, on a strong practical, sound common sense reason as you have observed in your actual practice? DR. GETTING That is right

---

APRIL 19, 1946

HONORABLE JAMES E. MURRAY, Presiding

PRESENT Senators Murray, Aiken and Donnell

SENATOR MURRAY The committee will come to order, please Yesterday we had on the witness stand Dr Low, representing the Association of American Physicians and Surgeons I wish, in connection with his testimony, to insert in the record some literature from that organization in which the organization states its position. In this literature we find the following statement

> The Association of American Physicians and Surgeons is an organization of physicians who contract and agree not to participate in systems of state medicine
>
> Therefore when a majority of the physicians of the nation become members of the A. A P S., systems of state medicine cannot be operated.
>
> The best available legal advice concurs with the validity and legality of the actions proposed by this line of reasoning Opinions of the legal counsel of the association have been made available to attorneys of medical organizations throughout the nation and there have been no disagreements with the first objective of the A. A P S to so organize ethical physicians that they may determine and enforce the conditions under which they will or will not give their services

The American Medical Association apparently does not agree with this organization, and I wish to insert in the record an article from THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Feb 23, 1946 entitled 'The Public Relations of Amer-

ican Medicine," by Morris Fishbein, M D, Editor, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION It contains the following statement

The American Association of Physicians and Surgeons has according to fairly well substantiated rumor received $10 from each of 6,000 physicians who have subscribed to its principles. Just what it has accomplished other than to state its objectives and to get them out in the press is not clearly apparent This group however, proposes that the physicians of the United States strike against the sick public in case the government of the United States should establish compulsory sickness insurance Such an action would be contrary to all the tradition of medical science covering the responsibility of the physician to the sick No official body of the American Medical Association has ever ventured even the thought that physicians would neglect to minister to the sick as evidence of their opposition to the law of the nation

I also wish to insert in the record some other literature showing the application forms of this Association of American Physicians and Surgeons

### Statement of Dr Edward H Cary, Chairman of the Board of Trustees of the National Physicans Committee

DR CARY My being present is the result of an interchange of seven or eight telegrams between Senator Murray and our headquarters in Chicago In answer to the first invitation we requested the privilege of having seven witnesses appear, each one of whom would briefly cover a different aspect of the problem We stated "We believe the issues involved in S 1606 are of such importance that attempts to present all phases of our viewpoint by one person at one session would be grossly inadequate"

In effect, Senator Murray replied that the overcrowded schedule of witnesses practically precluded the possibility of allowing more than one witness to appear I should like to file for the record copies of the telegrams that finally resulted in my being here

*On Tuesday evening of this week, April 16, during the discussion period after the American Forum of the Air, broadcast over a nationwide network, a proponent of this legislation stated "The National Physicians' Committee has spent one million dollars for the publication and distribution of one pamphlet"* This in some respects is a flattering statement. This amount is more than the total that has been spent by the National Physicians' Committee over a period of six years of operation Some interest has been manifested in these expenditures The committee's expenditures by years have been

| | |
|---|---|
| For twelve months ended Oct 31, 1940 | $150 131 29 |
| For twelve months ended Oct. 31, 1941 | $ 63 438 70 |
| For twelve months ended Oct. 31, 1942, | $ 77 657 73 |
| For twelve months ended Oct 31 1943, | $151,937 31 |
| For twelve months ended Oct 31, 1944 | $223 176 48 |
| For twelve months ended Oct 31, 1945 | $239,017 72 |
| Total expenditures six years | $905 359 23 |

During this period we received in the form of voluntary contributions from individual physicians and physician groups, $492,079 04, or 54.3 per cent of the total expenditures These came from slightly more than 22,000 doctors More than 90 per cent of other revenue came from ninety-seven business firms generally classified as manufacturing pharmacists and allied industries We have never received one dollar of contributions from any commercial insurance company

*(Dr Cary called attention to a vicious attack on the N P C in PM)*

*(Dr Cary indicated the suggestions made by N P C to meet the objectives of a health program)*

Our opposition to title II of S 1606 is based on

First, our conviction that the establishment of this kind of a system would lead to a serious deterioration in the quality of medical care for all people, rich and poor alike

Second, it would establish a core of centralized control, applying to the most sacred and vital wants of every human being which once established would require a miracle for free enterprise in any of its forms to survive.

Title II of this legislation is truly and limitlessly revolutionary in its purpose and scope.

First, it would introduce an actually revolutionary concept in social security, as we know it in the United States Under existing law, employment offices are maintained, under federal and state control, to find jobs for the unemployed Provisions are made for aid to the aged, the blind and for dependent children. Payments are made in cash To beneficiaries under the Social Security Act, compensation is paid during periods of unemployment Payments are made in cash Retirement benefits, death benefits for surviving relatives, monthly allotments for widows and dependent children are provided The *payments are made in cash The new Wagner-Murray-Dingell* bills would place in the hands of the federal government responsibility for providing medical care and hospitalization for all Social Security beneficiaries and their dependents Authority is given a single political appointee to hire doctors and establish rates of pay, to control and operate hospitals and actually to dispense medical care to 110 million people. No cash payments are involved Assuming that at least 100,000 physicians would be needed to service the plan, then in effect the federal government would establish 100,000 retail medical outlets, man them and conduct the business of providing medical care, to say nothing of dental, hospital and nursing services provided for in the bill

Second, such a move would represent a revolutionary change in our whole concept of the distribution of medical care and of medical care as such It presupposes standardization and mechanization of administering medical care. Such procedure would involve making the doctor subordinate to the bureaucrat It would mean the regimentation of the medical profession Consummation of the plans inevitably would result in absolute regimentation of the people as far as medical care is concerned. *They would be forced by law to accept such medical care as* could be provided by the politically appointed administrator or pay twice for the same service

There are few people in this or any other country, even among the supporters of this revolutionary legislation, who do not acknowledge the actual superiority and effectiveness of the type of medical care that is provided by our free and independent medical profession There are some factors in this situation that are somewhat difficult to understand but they are vital to an intelligent solution of the problem which is generally recognized

Medical care such as has been provided the American people cannot be measured by the hour, piece or pound The National Physicians' Committee has been and will continue to be in *vigorous and uncompromising opposition to entrusting to any centralized authority the responsibility for the distribution of* medical care and hospitalization for 110 million people The proponents of this legislation attempt to make the public believe that more people would secure better medical care On the basis of every experience, the reverse is the inevitable result.

I am the chairman of the board of trustees of the National Physicians' Committee and have been since the committee was organized in October 1939 I think it essential that it be known that the National Physicians' Committee for the Extension of Medical Service is exactly what its name implies It is strictly an independent committee, representing physicians throughout the United States It has many local and state groups that support its point of view

The term "patent medicine manufacturers," used by Senator Pepper, was apparently one of disdain, intended to discredit the institution of which I am a part. For the record, may I say that during its more than six years of operation not one of these so-called 'patent medicine manufacturers" has endeavored to influence the policies or point of view of the committee or exert any influence in the expenditure of its funds Actually, these firms to which Senator Pepper has referred are almost exclusively "manufacturing pharmacists" These are the institutions that gave to us for war use the sulfonamide drugs, atabrine and penicillin These are the firms which, *with mass production* technics, became a deciding factor in the saving of lives within our armed services Of them, Col Perrin H Long said less than a week ago "Their genius for organization and production should receive the highest praise from a grateful people"

A bulletin recently received from the British Bureau of Information stated "Their genius for mass production'—referring to atabrine, the sulfonamide drugs and penicillin—"became a vital factor in the winning of the war"

SENATOR MURRAY Now, are the members of this National Physicians' Committee members of the American Medical Association, also? DR. CARY Yes, sir

SENATOR MURRAY Why was it necessary for the National Physicians' Committee to take on the task of opposing this legislation? Weren't the members of the American Medical Association competent to handle that task? DR CARY I can answer that, I think, to your satisfaction Senator I am sure you remember that the President of the United States appointed in 1935 an Interdepartmental Committee for study of medical care And in 1938, in July, there was a meeting in Washington in which very few doctors were invited A great many so

called social workers and welfare workers and "do gooders," they were there in great shape and to our consternation the medical profession generally throughout the United States waked up and recognized that the greatest propaganda organization we had ever known or heard of was attempting to change the whole practice of medicine

SENATOR DONNELL What was the date of this, doctor? DR CARY July 1938. A lot of us had been interested in the welfare of the people of this country a long time, and we recognized this particular group making this particular study had a perfect right to have their own ideas and they were projecting something into the body politic of this country and had created all at once the greatest propaganda machine backed by the government that any of us had ever seen or heard of

SENATOR MURRAY That is this interdepartmental committee you have described? DR CARY When that took place It was not a great while following that until the American Medical Association was charged with criminally violating the—

SENATOR DONNELL Antitrust? DR CARY Antitrust laws Now, we are not so dumb, we doctors We have some smart folks, just like you Senators and we recognized that there was a limitation to what the American Medical Association could do under its own charter It is and was created for the purpose of education and aiding public health Now, we are independent doctors, we belong to the organization, we know all about the organization we know all about those purposes, we know all about the possibilities, but we felt there should be some means of combating the greatest propaganda machine that had ever been created affecting the welfare of the people of this country and affecting us as doctors and we proceeded to create the National Physicians' Committee, and I think, Senator, unless you pass more restrictive laws, that we have a right to our opinion and have a right to organize and combat anything we think is bad for the people of this country

SENATOR MURRAY So the limitation imposed on the American Medical Association by its charter made it necessary for them to carry on any opposition to this proposed legislation, and this fight against this propaganda machine—DR CARY You are attempting to say through us, that is what you mean

SENATOR MURRAY What is that? DR CARY You are attempting to say through us, the National Physicians' Committee I think that is what you mean SENATOR MURRAY Yes

DR. CARY I would say this, that they would be very simple minded if they did not appreciate that the doctors of this country could do independently things which they could not do themselves

SENATOR MURRAY But you are working with the American Medical Association, and you have the endorsement of the American Medical Association? DR CARY Fortunately, when the House of Delegates had a meeting I think they passed a resolution We were gratified.

SENATOR DONNELL What is the date of the resolution? DR. CARY This resolution was unanimously adopted Dec 5, 1945

SENATOR MURRAY So that your organization has the approval and endorsement of the American Medical Association and its House of Delegates? DR. CARY I would certainly be greatly disappointed if they did not approve what we were doing

(*Senator Murray and Dr Cary crossed swords sharply on the question of their personal attitudes in the hearing*)

(*Senator Murray and Dr Cary had considerable discussion on the right to deduct contributions to N P C in deducting for income tax purposes*)

SENATOR MURRAY The taxpayers of the United States, generally, find that they must know what they are doing when they are making their income tax returns and that they have no right to assume things that do not justify them in evading their taxes So I am sure that when you take this matter up with the Treasury Department you can have that matter adjusted In your statement here, Doctor, you tell about the funds that you collected up to Oct 31, 1945, making a total, you say of $905,359.23 What collections have you made since that time? DR. CARY There has been, I think, over $125,000 from the medical profession For the five months up to April 1, 1946 it has collected in voluntary contributions $246,222 82, and of this sum $162,000 was in voluntary contributions from the doctors

SENATOR MURRAY In addition to the collections that you have taken up, haw much money was spent in addition to what you have accounted for by advertising that was paid by individuals, physicians, dentists and drug stores? DR CARY Well, now, Senator, the medical profession has been disturbed very deeply about this type of legislation and they have carried on in their own way throughout the United States, not stimulated by us, but separately through the general desire to meet the situation They have carried advertisements of their own In other words, county medical societies, with some of their friends, have paid for page advertisements, and that would happen in different parts of the country I think many millions of people have read literature that was brought out in that manner

SENATOR MURRAY In other words, you prepare literature in your office and send it out to various parts of the country? DR CARY You would be surprised to know how many other people are doing the same kind of thing

SENATOR MURRAY I am not disputing that I am merely talking about your organization DR CARY Well, I think they use some of our literature, because it is pretty good

SENATOR MURRAY Here is an ad appearing in the *Daily Sun*, Goose Creek, Texas, Saturday, March 2, 1946, which has the signatures of a great number of doctors at the bottom of it. Is that literature that you have prepared? DR. CARY I have never seen it, never saw it in my life, but I do know that that has happened time and again in various parts of the country, and it is an awfully little town too, don't you know, you can hardly find it

SENATOR MURRAY You supply this literature to the medical profession, and in your statement that you gave here this morning you say that you have carried on this educational campaign? DR. CARY We think so

SENATOR MURRAY You call it an educational campaign? DR CARY We think so

SENATOR MURRAY And you have got out pamphlets and sent them across the country to the medical profession and to every one that could be reached? DR CARY Every one we hope will read it.

SENATOR MURRAY I have here some samples of your literature which I would like to submit for the record DR. CARY If you do not mind, Mr Senator, we would just submit the whole file here We have lots of them. Maybe you have not seen them We will submit the whole file

SENATOR MURRAY Let me look at them This literature goes to the medical profession and others that receive it. as you say Here is one pamphlet that you have that says "Showdown on Political Medicine," You refer to this bill S 1606 as political medicine? DR CARY That is, at least, our conception of what it leads to

SENATOR MURRAY And you also refer to it as socialized medicine? DR. CARY We think it is, if enacted

SENATOR MURRAY This literature, generally is along that line, entitled "Political Medicine and other names, such as that "State Medicine" is another name you give it. DR. CARY We are not the only ones who coin names, you know, and terms

(*Senator Murray asked for a list of all contributions of $1,000 or more*)

SENATOR MURRAY Will you also furnish for the record the other donations that you have received in sums of $1,000 or more? DR. CARY I do not know, Senator, whether you have attempted to find out from any other group that has come before you information of this kind We have bared our expenditures here.

SENATOR MURRAY Yes, sir DR CARY And we have told you what we have collected.

SENATOR MURRAY I am not asking you that DR. CARY So and so, but do you not think that you had better treat all of us alike?

SENATOR MURRAY Yes, sir DR. CARY I do not know of any other group that has come before you that has even been asked where they got their money or what they were doing with it

SENATOR MURRAY I suggested yesterday—DR CARY But when you do that, I think we ought to be all treated alike. We have bared this thing We have given you the facts there, and I think that is alright.

SENATOR MURRAY Nevertheless, Doctor, I have asked you to do this I want you to submit for the record here the donations that you have received Will you or will you not do that? DR. CARY I do not know whether that is the thing that we should do or not.

SENATOR MURRAY Well all right, I just want you to go on record as declining to give us that information DR CARY I am not declining I am just—

SENATOR MURRAY You do not know whether you will or not? DR CARY That is the point I think we have been very liberal about this whole thing

*(Senator Donnell introduced into the record an account of Dr Cary's career and encomiums on his work from the* Congressional Record)

Dr Edward Henry Cary outstanding Dallas eye surgeon and medical educator for nearly half a century was acclaimed Thursday as the outstanding citizen of Dallas during 1945 for his work as founder and guiding genius of the great medical center of the Southwestern Medical Foundation

SENATOR MURRAY I am sure, Doctor that you feel that you are well entitled to that award? DR CARY Well, I would not like to make any claims as to that, Senator What ever I have done in my community stands for itself I think you can find out about it from any citizen in my section of the country

SENATOR MURRAY You are well acquainted I am sure, with Senator Connally? DR CARY I know Senator Connally He frequently comes into Dallas I know very well the Honorable Sam Rayburn who, I think, would tell you quite a bit. I know my friend Mr Sumners, who is retiring from Congress but who is a magnificent representative from our state. I happen to know a number of other Congressmen and I think they know me and so on So I wont have to worry about what you find out

SENATOR MURRAY Are you living in Texas now or are you spending your time up here, where do you spend most of your time? DR CARY I came from Dallas up here, and I will go back to Dallas

SENATOR MURRAY You actually participate in the management of the Physicians Committee? DR CARY I am a nonpaid gentleman

SENATOR MURRAY Just a philanthropic movement on your part? DR CARY With me it is a part of the general movement —public welfare I look at it possibly a little different from you I have been engaged in medical education for all of these years and I have watched all of this thing I have been part of the evolution of medical education I have seen what the doctors have been able to accomplish in raising themselves by their own boot straps I remember well when we used to have visitation from English educators and German educators at the Council on Medical Education, and we deplored the lack of educational standards on our own part, and we gradually lifted the medical standards to such a point until we now can point with pride to them and say that the medical schools of this country are better than any other medical schools on earth And it is the kind of doctors that we are trying to turn out.

SENATOR MURRAY Before you leave the subject that you have just been discussing there, you feel that it would be of great benefit to the American people if you could succeed in defeating this effort to make available to the American people, to the fullest degree, medical care on terms that they would be able to pay for? DR. CARY Senator, we have a far better plan a far better method and less expensive one, and we think a more correct one, and we have offered what we might call suggestions here that would modify certain things that would take care of that mass of people that I think you are interested in those who cannot pay

SENATOR MURRAY When was this plan prepared that you have in mind? DR CARY Oh we have been struggling, in fact, I was a part of the development of the Blue Cross The Blue Cross has developed in my town it started there, I was given credit for it, and, as I say, it started there, and it happens among many other things, I do not want to be boastful of what I am interested in, that it is the very thing that you are interested in, except in a little different way There is possibly one of the most expansive programs of hospital service

*(Senator Donnell brought out through Dr Cary that Dr Allan Butler had recently signed another report favoring voluntary insurance)*

SENATOR MURRAY I thank you for your testimony here. You stated that in your opposition to this legislation you are not conscious of any wrongful motives in the matters pertaining to the national tax question which was raised here? DR CARY You are right, sir

SENATOR MURRAY All right. DR CARY I would like to conclude with this paper

Mr Chairman, in my prepared statement I indicated that it would require the lengthy testimony of several witnesses in order to express adequately the point of view of the vast majority of doctors on the radical and revolutionary proposals contained in S 1606, and to illustrate what I mean I should like to conclude my testimony by pointing out very briefly some of the points which I believe may be passed over during the course of these hearings, for example

1 I am sure, Mr Chairman, that should this legislation approach enactment there will be a mighty rush of the groups who desire to be excluded from its provisions The rush to get out of the bill will become so widespread that the whole compulsory health insurance program will degenerate into a simple tax on the unorganized who are unable to support and finance a lobby here in Washington to protect their interests

2 I should also like to allay once and for all the specious argument of inevitability that is being used by the proponents in an effort to stampede the Congress and the people into accepting the principle of compulsory health insurance. That is the same argument which Hitler made for his "new order" When he was warning France and Great Britain and the United States to keep hands off and permit him to have his way with the small nations of Europe There are some today who argue that free enterprise is old fashioned and outmoded, that a government controlled economy, of which political medicine is a part, must be accepted because it is "inevitable." That type of defeatism doesn't impress me in the slightest, and I don't think it impresses any American who has the gumption to fight for his grand heritage There is no change in our American form of government which is "inevitable' unless the American people, in their wisdom, determine that that change is desirable and beneficial

3 And, finally, I believe that if this legislation was submitted to the people in a referendum, with full knowledge of its implications, the voters of this country would finally and forever reject the meddling and the presumption of the bureaucrat to interfere in the sacred relationship of patient and physician, and would cast against this kind of revolutionary legislation the everlasting scorn of a free born and freedom loving people

Mr Chairman, I wish to express my gratitude for the privilege of coming before your committee as a representative of the point of view of my organization, the National Physicians' Committee for the Extension of Medical Service, which I sincerely believe to be the point of view of the vast majority of physicians

---

APRIL 22, 1946

PRESENT Senators Murray, Ball, Ellender and Donnell

### Statement of C Rufus Rorem, Ph D, C P A Director Blue Cross Commission of the American Hospital Association, Accompanied by John R Mannix, Chairman, Blue Cross Commission of the American Hospital Association

MR ROREM We are here, frankly, to espouse the cause and the interests of voluntary prepayment programs The Blue Cross Plan is a nonprofit community organization sponsored by the medical profession, the hospitals, representatives of industry, labor, welfare, government, the entire population The ordinary Blue Cross Plan, which is of course a prepayment plan for health service, costs for hospital protection about 75 cents a month per person or $2 per family Medical and surgical protection for hospitalized illness costs about the same. Typical benefits are three or four weeks' hospitalization at full coverage, with discounts beyond that period The governing body serves on a nonprofit basis, as do the trustees of any nonprofit organization All these men get for their work is the satisfaction of having participated in a community program The benefits are available in services rather than in cash allowances This is a very important contrast with commercial insurance, of course The benefits are also guaranteed under contractual arrangements with member hospitals, approximately thirty-five hundred in the United States There are eighty-six Blue Cross plans in the country at the present time. They are supervised through an approval program by the American

Hospital Association This approval program includes various standards such as nonprofit sponsorship, free choice of hospital and doctor, guaranty by the hospitals of the service and, of course, such characteristics as financial solvency and other standards of good business practice.

Blue Cross plans now protect approximately 21½ million persons Growth during the first quarter of this year exceeded our expectations approximately 1,400,000 in the three months just ended, right in the face of the strike situation, and it is particularly significant because some of the largest growth during this time was in areas where we were not able to get in the strike-bound industries Our statistics show also that even in the industrial states that have a high percentage, such as Michigan, the percentage of the population is just as high in the smaller towns and county seat cities throughout the state as it is in the metropolitan centers

SENATOR ELLENDER Might not this percentage be also due to the fact that many of those states provide facilities in the nature of charity cases just as Louisiana does? MR. OREM That is right.

SENATOR ELLENDER You have as many as six hospitals entirely maintained by the state and all of the people sick and unable to pay get the service free of charge? MR. OREM That is one of the factors, of course Two factors hold down enrolment on a state level One is the sheer difficulty of reaching the rural areas and the other is the point you mentioned, namely, it is hard to get people in the habit of paying for something they used to get for nothing That is present in any program, voluntary or governmental

SENATOR ELLENDER You say the people enrolled are 21½ million Is that exclusively Blue Cross? MR. OREM That is exclusively Blue Cross alone.

SENATOR ELLENDER What period of time has it been that high? In other words, what has been your progress? MR. OREM This last year a little over 4 million, 36 hundred thousand in the calendar year 1945

SENATOR ELLENDER Has that been your greatest advance? MR OREM The last three months are the largest three months in the history They are larger than the last year during the war, which we feel is significant. Apparently the net enrolment is growing more rapidly than ever

*(In response to questions from Senator Murray, Mr Orem gave the details of Blue Cross plans)*

SENATOR MURRAY What we are searching for is the best possible plan whereby the American people can get the modern medical care that is necessary for protecting the health of the American people If that can be done by a voluntary system, why of course, no one would want to oppose it. But the feeling is that these voluntary systems, while they are all right as far as they go, do not go far enough. MR. OREM We have some suggestions to how we think they can go further and faster SENATOR MURRAY All right.

SENATOR ELLENDER Is there any time element in your contract as to the length of time that persons can have services for the pay that they make each year or each month? MR. OREM Ordinarily there is a limit either per illness or per year But it starts again each year The typical contract at the present time is three or four weeks per year per person of what we call full coverage plus from sixty to ninety days or more of some partial discount, usually about 50 per cent of the hospital bill

SENATOR ELLENDER In the event a person should exceed that how is that person taken care of? MR OREM He is on his own until the next year starts

SENATOR MURRAY *After an operation is completed and* he is dismissed from the hospital, does he continue to get medical care at his home? MR. OREM Not under the Blue Cross contract, no

SENATOR MURRAY So that if he remained ill for some months following that and required medical care, that would be outside the plan? MR OREM That is right. I would like to read the next four paragraphs because they are discussing what we are discussing This is page 3, the second full paragraph

> The complete costs of medical care for hospitalized illness (including physicians services) represent approximately 50 per cent of the average family budget for health services. Only one tenth of the people are hospitalized in the course of a year Yet 10 per cent of the individuals bear 50 per cent of the load for the costs of medical care to the employed population and their dependents
>
> Which is the more important in the first instance, to cover the 50 per cent of the sickness costs which represent the small bills paid by 90 per cent of the population or to cover the 50 per cent of the costs loaded on the 10 per cent who suffer a serious illness requiring hospitalization? There is no clear cut answer in principle they should have everything but administrative considerations are important
>
> Access to the facilities and personnel of a good hospital is itself a form of prevention It removes the economic barrier and encourages the subscriber to seek early treatment and attention
>
> It is desirable of course that patients have early and easy contact with general practitioners and specialists Yet it has proved very difficult to initiate and administer such benefits unless both subscribers and practitioners are thoroughly familiar with their rights and responsibilities The problems of administering the benefits for a minor illness are more complex than for a catastrophic illness Legislation alone will not remove the practical administration difficulties nor will it provide the facilities essential to a comprehensive prepayment program of health service.

The point I wish to make is that maybe we are too much occupied with the administrative practicalities of a prepayment program, but we live with them every day and are inclined to appraise proposals in terms of whether or not they will work Maybe we get pessimistic, but we know that administration is difficult. It is not difficult to demand that somebody else do something, but sometimes it is difficult following through I suppose a member of Congress knows that better than we

SENATOR ELLENDER Under your plan who determines whether or not a person is entitled to hospitalization? MR OREM The doctor

SENATOR ELLENDER What influence have you over that doctor if any? MR. OREM Moral influence only

SENATOR ELLENDER Is he paid by you or by the patient? MR OREM No In a prepayment plan, just coming out of prepayment for medical care, for hospitalization, of course, the hospital is paid by the Blue Cross Plan For a medical plan they would, if the plan went with it, pay the doctor directly by the medical plan

SENATOR ELLENDER So that your plan is to have hospitalization as one factor and then— MR. OREM Medical care for hospitalized illness for the next, and, the third, comprehensive care in the home and in the office.

SENATOR ELLENDER All of that could be combined into one policy? MR OREM That is right.

SENATOR ELLENDER Or take either of these three policies MR OREM Yes It might be done but ordinarily the public demand starts with the hospitalization. Second medical care for the catastrophic illness and, third, home and office.

SENATOR ELLENDER Do you propose to cover that phase of the plan dealing with the payment of doctors bills? MR. OREM Over *half* of the eighty-six plans are now coordinated with such a program for doctors Louisiana happens to be one

SENATOR ELLENDER Who selects the doctors? MR. OREM The patient

SENATOR ELLENDER The patient. Are they paid out of a regular stipulated fee by you or whatever they charge? MR. OREM There are two kinds of prepayment plans for medical care. They are really modifications of one type. First of all, they are paid by the plan, not by the patient. Second, the benefits which are paid to the doctor are stated amounts A fee schedule Now, for people below certain income groups in some of the plans the doctors agree that they will not charge more. Some of the plans are on what is called an indemnity basis and *only* protect the patient as against the doctor charging more Either the doctor does or does not In introducing this phase of the plan a few years ago a so-called indemnity basis of paying physicians many people in perfectly good faith would ask "How do I know that the doctor will *not* charge any more?' One simple and straightforward reply to that question is 'Ask him" When they ask the physician if he is going to charge more, it is amazing how many of them take the position that it was a reasonable amount in view of the fact that they were getting it regularly from every person

SENATOR ELLENDER In fixing these fees, do you have a regular fee rate applicable to all communities or does it vary in localities? MR. OREM On the statewide plans they operate throughout the state as a standard set of fees There may be as many as one hundred different items on the list For local plans, within a state, they may be different New York City has four different plans which are slightly different in the payments

SENATOR ELLENDER Do you have any method of employing certain groups of physicians to do your work? MR. OREM No

SENATOR ELLENDER It is left entirely to the patient? MR. OREM That is right.

SENATOR ELLENDER However the doctor must abide by whatever fee system you establish? MR. OREM That is right

SENATOR BALL I have been a member of the Blue Cross since it was first organized in Minnesota, and it has done a marvelous job there Could you tell us what percentage of hospital beds in the country are participating in the Blue Cross Plan

MR. OREM About 80 per cent of the general hospital beds under nongovernment auspices That is a low estimate. I thought you were going to ask this What percentage of hospital beds are occupied by Blue Cross patients? This ties in very closely with the whole question of need for hospital facilities The one thing that happens to be clear is that Blue Cross plans are not filling the hospitals. In your state and in Buffalo and St. Louis, where spot checks have been made, and in Cincinnati, the number of Blue Cross subscribers in the beds of those towns on any given day was smaller percentage-wise than the percentage of the people enrolled. The people get in earlier and get out earlier More people go, but they do not stay so long

SENATOR BALL What percentage of your subscription funds goes for administration expense? MR. OREM I am awfully glad you asked that, because that is way down at 12 per cent. On the average, in the United States, 12 per cent goes for all types of overhead cost, administrative expense In some of the plans it is considerably lower In Baltimore, for example, 9 per cent In Cleveland, less than 8 per cent. It is higher in the areas where the population is more widely scattered and it is also higher in the early days of organization Of this 12 per cent, on the average, 3 per cent is used for consumer education and what we might call promotion, the entire salaries of the field representatives The other 9 per cent is for accounting for keeping track of eligible persons and paying hospital bills One out of three of these families involves a case each year, which means a lot of record keeping

SENATOR BALL A lot of bookkeeping? MR. OREM A lot of bookkeeping But, nevertheless it is approximately 12 per cent About 7 per cent this past year went to a reserve for the payment of date bills and 81 per cent was paid out in cash, currently for hospital payments Approximately 129 million revenue, 105 million hospital payments, and it would be about 8 million to reserve this year

SENATOR BALL This 21 million I take it that are covered, includes the family MR. OREM Yes, it does include the family

SENATOR BALL And that is growing pretty fast? MR. OREM There is no evidence of any slowing up at all Some of the plans have had net deductions following V-J day and are now increasing very rapidly

SENATOR ELLENDER Reverting to your method of fixing fees, do you have much difficulty among the doctors of a community as to the schedule of fees you agree to pay MR. OREM It is their committee that sets these up

SENATOR DONNELL Does the person organizing the plan organize it in a corporate form or a noncorporate form, or what is done actually MR. OREM You are right in your statement that a plan is the association

SENATOR DONNELL Yes MR. OREM In every instance it is the corporation A nonprofit corporation organized under the laws of the state

SENATOR DONNELL Of the state where it is located MR. OREM Of the state where it is located. In most areas it is organized under special enabling legislation which brings it under the supervision of the department of insurance for purposes of determining subscription rates benefits payment to hospitals and other administrative and financial features of the program

SENATOR DONNELL Suppose that public spirited citizens in the city of St Louis decide to organize a plan and they organize it under the corporate laws of the state of Missouri as the St. Louis Plan No 1 Does the St. Louis Plan No 1 become affiliated with some other plans either in the state of Missouri or elsewhere? MR. OREM Each plan is a separate legal and administrative entity, but under the Blue Cross Commission, of which I am director, we now have administrative arrangements by which transfers can be made of membership from one plan to another with a minimum of administrative routine also arrangement for providing out of town benefits when a person is traveling, by which a Blue Cross plan furnishes service. Let us take St. Louis as an illustration. Suppose St. Louis Hospital had a subscriber from Chicago That subscriber would contact the St. Louis Hospital, where he needed to be cared for The hospital would contact the St. Louis Blue Cross Plan, which would handle that subscriber just as if he lived there. They would handle the arrangements and collect from Chicago These are administrative arrangements

SENATOR DONNELL What is the approximate annual income that comes into the Chicago office from these various eighty-six plans MR. OREM Our budget for this year is $124 000 SENATOR DONNELL I see. MR. OREM About one tenth of 1 per cent.

SENATOR MURRAY Doctor I believe you indicated that a group of public spirited citizens in any part of the country could get together and organize one of these Blue Cross plans? MR. OREM That is right.

SENATOR MURRAY After they organized it, then they are in control of it Do they manage it and determine the manner in which it shall operate or how is that handled? MR. OREM That is true. Some of the plans have arrangement by which the general public may have voting procedures to elect such people, even the subscribers It has not been administratively so very practical, for this reason, that usually when the vote is taken in one city 25,000 people are eligible at that time, or about 150 000 are eligible to vote, but they do not all vote or come to the meeting They find it difficult to do so, and the nominees presented by a nominating committee of subscribers are elected, which is often the case. They represent the subscriber interest, the public interest. That is likewise true in the judicious and equitable selection of the people for the boards

SENATOR MURRAY How are they selected by the members? MR OREM Typically by the board. They are what are commonly called self-perpetuating boards

SENATOR DONNELL How do they start? Who determines the initial membership of them? MR. OREM It is determined, I suppose, by the strength of the personality of the organizing committee. In some states it is determined by law Colorado, for example, requires that it shall be one third general public, one third representatives of hospitals and, if there is a medical plan involved, one third representative of the medical profession.

SENATOR MURRAY As a practical matter, in the eighty-six plans developed are the boards that manage those plans made up of consumers largely representative of the hospital and the medical profession? MR. OREM On the arithmetic of that, and depending on the use in which you define the terms I would say that a large percentage have some direct connection with hospitals as trustees or for that matter as administrators

SENATOR MURRAY In any of the eighty-six plans that are in existence, is there a board or directors that is made up exclusively of the consumer? MR. OREM One plan, Cleveland which has the highest percentage of enrolment, has no hospital superintendents It has hospital trustees which is primarily hospital trustees, no hospital administrators The same thing was true until recently in the state of Connecticut. The same thing is true on a small plan in Decatur, Ill., in which the dominating factor is the local credit union

SENATOR MURRAY The great problem we have in this country is to make medical care available to the great masses of the people who have heretofore felt they could not afford to consult a doctor MR. OREM That is right.

SENATOR MURRAY If we had a system of that kind in operation in this country it seems to me we would have less hospital cases MR. OREM That is right. SENATOR MURRAY Because it is neglect that builds up the ill health of the country and makes it necessary for hospital operations in the final end MR. OREM That is right.

SENATOR MURRAY So it seems to me that the Blue Cross Plan is effective in that respect, because it does not at the present time cover that situation. MR. OREM Well I am interested to hear you say that, because among our suggestions are ways in which we believe the federal government can be of genuine help to volunteer programs Seven years ago we were very proud, and critics and friends were proud when we had 1 million members Now we are apologetic for having only 21½ million, and our critics and friends are apologetic

that we have not done more We are definitely concerned in anything that will make the present service expand both in its coverage of the type of care and in the number of people

SENATOR DONNELL Has there been any unfortunate experience with any of these Blue Cross plans where there has been defalcation or bad judgment, and money all used up, and the concern ultimately prove unable to meet its obligations? MR. OREM Oh no There have been a very few petty defalcations as in anything, but it is interesting to know that in a special study by the bonding companies, because Blue Cross had thought that they were paying too much for personal bonds, revealed the fact that it was possible to write bonds on Blue Cross subscribers at about 50 per cent of what had been charged up to the present time.

SENATOR DONNELL Do you not think that, if there had been any states in which there is not governmental supervision guaranteeing proper bonding and other protection for the subscribers, it is important that legislation of that kind be had in the states? MR. OREM Oh, very much so

SENATOR DONNELL To guarantee local supervision and along the lines that I have indicated MR OREM The interesting thing, however, is that the local boards of trustees routinely impose much stricter standards on themselves because of their own local reputation than the state regulatory bodies have done SENATOR DONNELL I can see that likelihood MR. OREM And from our office, for example, our recommendation with regard to adequacy of reserves, in every instance the recommendations of our committees have gone beyond the requirements of the local state insurance departments

SENATOR MURRAY I think that it is the natural disposition of the American people not to be classified as paupers but willing to pay That is the reason this agitation is developing in the country, a lot of poor people who cannot afford to pay the high prices are anxious to find some kind of a national insurance system which would enable them to come in and pay for their medical care. MR OREM That is right. SENATOR MURRAY And not be accepted on the basis of being impoverished

MR. OREM Employer contribution is becoming the characteristic of Blue Cross participation. That reduces the cost to the worker himself The problems of adverse selection are being brought under control I will not dwell on that but in the early days we used to settle for a low percentage of enrolment. The self-respecting policy of demanding high percentage of participation is the regular thing It improves the selection among the people, so instead of getting all the potential hospital cases we get them as well as the rest of the people. A voluntary plan must make sure that the revenue exceeds the expense

SENATOR MURRAY What health examination do you give an applicant? MR OREM None whatever

SENATOR MURRAY Any ordinary citizen can walk in and join this organization? MR. OREM That is exactly what he cannot do an ordinary citizen cannot walk in off the street. He must join through his place of employment, which is the way to improve the selection of people and get the group enrolment. Let me say that an increasing number of the plans now however, are supplementing their group enrolment, and group enrolment in this does not mean what it does in a commercial sense It means three or five or ten it means that number of people. Those same plans now have periods during which people who are in still smaller groups may enroll but a man cannot come in when he pleases He comes in when the administration pleases thus avoiding the adverse selection of getting people who are incipient hospital cases

SENATOR DONNELL Don t you accept members under these plans in some instances from a bar association? If a man belongs to the bar association he may obtain membership by reason of his membership in the association? MR. OREM That is thought of as a group and even their enrolment is scheduled. It is not casual There are certain dates by which members must make up their minds and if they do not decide, they wait until a period later to be determined.

SENATOR DONNELL I was contrasting that type with the one originating at the place of employment. MR OREM At the place of employment? SENATOR DONNELL Yes MR. OREM There are those. For economic purposes that is the same thing The same thing holds true of a farmers cooperative particularly if a producer, such as a milk cooperative or a fruit cooperative, there it is frequently withheld from the monthly check.

SENATOR MURRAY Could any group in the community, organized group, as for instance the bar association, or the different organizations, like the women s professional clubs, could they make application and every member of their organization be entitled to be accepted? MR OREM Yes

SENATOR MURRAY That would be true of unions too, for instance, the Bartenders Union? MR. OREM Typically the unions wish to handle it through their place of employment, through a checkoff directly from the employer, but in particular the craft unions, of which the one you mentioned would be an illustration

SENATOR MURRAY I do not mean that particular one, just any one. MR. OREM The hotel employees in New York, for example, are all members The dues, I say, are paid by the hotels, but nevertheless they are all members

SENATOR MURRAY As a general rule a group employed in a New York hotel would be considered a pretty fair risk MR. OREM I do not know anything about their payments It is behind closed doors and I do not know what goes on in the kitchen They do all right on the floor This point Senator Donnell mentioned, there is coordination in service to the enrolment areas of the Blue Cross in various ways The scope and content of a voluntary plan are necessarily affected by the economic level and available facilities of the community in which the subscribers are enrolled. More comprehensive benefits are available in communities with high income levels especially industrial centers where there are sufficient hospital beds and diagnostic equipment. These variations permit the establishment of higher standards, which may serve as examples in areas where the social consciousness of the population has been most fully developed This variation suggests the ultimate possibility of equalization in service through the use of local state or national government funds But the differences of income levels and living standards have many causes and will not be offset by merely introducing a prepayment health program

SENATOR MURRAY Let me ask you there any community where the facilities are not up to a high standard and a member in Blue Cross Plan wished to be sent to another community for a particular operation would that be covered in your plan? MR OREM Yes

SENATOR DONNELL One sentence I am not clear on as to what you mean in referring to the ultimate possibility of equalization in service through the use of local, state or national governmental funds Am I to understand that you look with favor along the line of the use of governmental funds for the purpose of financing the treatment of people? MR. OREM One of my recommendations with which this testimony closes is the approval of the principle of federal grants in aid to state approved voluntary programs to enable the establishment of low subscription rates to people in the low income groups

SENATOR DONNELL Do you advocate a plan of compulsory health insurance as distinguished from the grants in aid plan? MR. OREM No this would be a grant in aid plan a federally approved program for voluntary organizations

SENATOR DONNELL What you are referring to here with an inference of approval is a plan of grants in aid to local subdivisions perhaps state or even a lower level of governmental subdivision and you are not advocating as I understand it by this sentence the creation of a compulsory health insurance plan Am I correct in my understanding? MR OREM You are entirely correct In fact, I would go further and say that not only are we not advocating it but we would regard that as a last step to take, from our point of view at the present stage of the organization of health service as a premature step Blue Cross protection and other kinds of voluntary programs are actually going into wage agreements as a part of the terms of employment. That is a very important factor at the present time. In other words organized labor, which frankly sponsors and supports Senate bill 1606, takes the position that they are also worried about whether they are going to be sick tomorrow or the next day or the next. Here is a chance to get something good immediately on a basis that is sound The largest employer in the United States the federal government, does not yet permit the privilege of voluntary payroll deduction. The Blue Cross Commission office receives letters daily from units of the United States government asking for the privilege of protection. Yet there are only 300,000 federal employees and their dependents participating

in voluntary plans because of the difficulties involved in handling organization and payment details through voluntary group leaders who are employees of the federal government. Mutually satisfactory arrangements are not possible without the privilege of payroll deduction. Undoubtedly the existing makeshift enrolment and collection procedures have in many instances proved to be inefficient for the government departments involved as well as for the plans

I would say that our enrolment of federal employees is up to now approximately 300,000 and is something like the dog walking on his front legs You are not surprised that he does not do it better You are amazed that he can do it at all I am really surprised that we have as many as 300 000 federal employees now through group leaders voluntary collectors, sending their money in, or somebody walking around and asking for $2 a month Yet there are about that number Payroll deduction on a voluntary basis if authorized in writing by the individual, on groups composed of divisions or departments or bureaus, would make it easier for those who want such protection to get it

SENATOR MURRAY You find in many of the big industries of the country they are coming to agreement on this problem of payroll deductions? MR. OREM Not only that if they do not come to such an agreement at the present time they do not join the Blue Cross In other words Blue Cross is now coming to the policy which was established years ago by commercial insurance companies of demanding payroll deductions and which course is recommended in any program including the one in Senate bill 1606 Payroll deduction is absolutely necessary to economy and to maintenance of membership and general efficiency Overhead costs in my opinion have been remarkably low considering the rapid rate of growth Active sponsorship and encouragement of Blue Cross by federal state and local governments can reduce costs to subscribers and increase the membership throughout the country Certain Department of Agriculture experiments were mentioned in these hearings and were described as disappointing It was stated that among a group of low income farmers only 40 to 50 per cent of the eligible families took advantage of the privilege of voluntary prepayment for medical and hospital benefits even though the federal government participated in the cost of the program. Initial participation in a voluntary plan by 50 per cent of low income farmers is encouraging Farmers are the most individualistic and independent minded part of our entire population Many have solved their problem of health service by going without the necessary care If such an experiment was conducted in an urban community among a group of low income workers in an industrial plant, probably 85 to 95 per cent of the employees would have enrolled. Many of the Blue Cross plans have increased their benefits during their period of operation without corresponding increase in subscription rates to the beneficiary The increased benefits have been made possible through better 'selection' among subscribers and decision to apply reserves to provision of immediate benefits Blue Cross plans are, of course concerned with providing protection for all costs of hospitalized illness Voluntary plans have been accepted by many veterans as a genuine opportunity for family protection. Blue Cross has thrown down the bars of group enrolment as a patriotic gesture for the enrolment of the veteran, and beginning next month, in about ten days there will be a one month campaign by which veterans will be completely exempted from the group requirements for Blue Cross enrolment. Some of the plans are already doing so I have been surprised at the acceptance in Philadelphia, for example, and in Cleveland literally thousands of veterans who are entitled to G I benefits are enrolling and for two reasons first, there it gives them free choice of doctor and hospital, and, second, they recognize that the veteran himself is only one fourth of the total cost in hospitalization The wife and children represent three fourths of the total cost. Blue Cross plans have been recognized by government agencies as administrative units for the provision of benefits The Veterans Administration has asked Blue Cross to serve as a clearing house for it in providing service connected benefits but not non-service benefits That is just starting We do not know how well it is going to work. The Veterans Administration likes the idea, and we hope that it will be a genuine service to the public. Of course that is not what the Blue Cross plans were created for, to serve as a service agency for any other organization, but they can do it. I hope you will bear with me if I just say a word about Europe. I think a lot is said about Europe, both as a matter of history and otherwise. I would like to make a comment because I have been there and I have talked to the people who have administered the plans, and I would just like to make this one comment.

It seems to me that there is very little affirmative suggestion and recommendation that can come from the experience there The voluntary subscribers in America at the present time in their total are as many in their total as in Netherlands, Belgium, Norway, Denmark and Finland all put together, and Blue Cross plans alone have more members than the entire population of all the Scandinavian countries which are very civilized organizations I am a Scandinavian myself I do not think that just because a compact small organization, a small country, has had certain experience it means that we would have the same in the United States We might. But here is the real point I want to mention, because it comes up in connection with voluntary health insurance generally In England in 1911 there were small mutual benefit societies formed all through the country They had to be scooped up into the national health insurance act, and I understand that they are still living with the administrative complexities of those plans Some were for all practical purposes private ventures In the United States that is not true. The largest movement in the country is one with a large number of members, each operating unit ranging on the average of more than 200,000 participants but only eighty-six in the entire country, and there ought to be less I think seventy-five would be plenty They are all coordinated and not disjointed and are a network or foundation for a real public service.

Another angle about the European situation in health insurance is this, that at the times when health insurance really began to expand, hospitalization was already tax supported except in England. In the krankenkassen, to mention Germany before the war—and the same thing is true in Norway and Denmark—the amount which the health insurance funds paid to the hospitals for a few illnesses made no pretense of covering the cost of the operation of those hospitals They were city or county institutions or local institutions with salaried doctors, and it made no pretense of covering that We are considering this at a time when the ordinary American thinks of health as a personal problem to be handled in some sort of joint action This is one of the few countries where a man still thinks his health is somewhat his own responsibility

I would say that in England there is a voluntary program called the contributary scheme. That was set up not to relieve the patient but to relieve the taxpayer In other words, the whole movement behind the prepayment in the European countries was to give the taxpayer a break. That is an honorable motive also It was quite different here, where it is to relieve the individual patient who might need care In England in that pattern the only difference was that most of the charity work was done in what we call voluntary hospitals supported by well to do people who are not allowed to use the hospitals

SENATOR DONNELL You mentioned something about the number of plans eighty-six you thought we might well get along with seventy-five. I would like to know just as a matter of interest in my own state. By your table I see there are two such plans in that state Would you be kind enough if you happen to recall, to tell us for the record and for our information what parts of the state, or what proportion of the state of Missouri is covered by those two plans? MR. OREM St. Louis handles everything except about fourteen counties in northeast Missouri, which are handled out of Kansas City

SENATOR DONNELL Is the entire state of Missouri covered by those two plans? MR. OREM Oh, yes That is in different degrees of intensity of course.

SENATOR DONNELL Take a man in Hannibal, Mo take St. Louis you are familiar with that Suppose a man wants to join Blue Cross He belongs to the bar association Is that the same Blue Cross that the man who works for the Rice Dry Goods Company joins in St Louis? MR. OREM The same one the same organization

SENATOR MURRAY And the state of Missouri, I notice, has a population of 3 524 790, and your membership enrolment in your plan there is 795 819 MR. OREM Yes

SENATOR MURRAY That is what proportion? MR. OREM 22 6 per cent.

SENATOR DONNELL Actually over this particular state, Mr Orem, what proportion would you say, roughly, of the

795 819 are outside of the two larger cities, St Louis and Kansas City? MR ROREM Not a very large proportion

SENATOR DONNELL Are you able to tell us how many hundred thousand in round figures belong in St Louis and Kansas City? MR ROREM I would be surprised, if you take the two trading areas of Kansas City and St Louis, that more than one fourth of them were outside those two areas I would say about that, maybe as much as one third

SENATOR DONNELL I do not understand that MR ROREM Those two towns represent a million and a half out of the state population, that is, out of the 3,600 000 Those two towns would represent a third of the population They probably have from one half to two thirds of the total enrolment The point is, there is greater concentration in the urban areas as a rule because of administrative difficulties in reaching people outside those areas up to now

SENATOR DONNELL How about the farmers in my state? Are they joining the Blue Cross in any considerable numbers? MR ROREM Not doing as well as they are in Iowa or in Kansas or in Minnesota, but I would say in considerable numbers

SENATOR DONNELL How about the miners, the lead miners for instance? MR. ROREM That I cannot answer The miners are joining in western Pennsylvania and elsewhere We hope they will be joining in Montana before long Incidentally, Senator you will be interested if you will look at the figures for Montana lately to know that of the 31,000 now more than half have been taken in within the last year through the revitalized management of the organization there

SENATOR MURRAY It is only in recent years that the question has taken hold? MR. ROREM That is right It is accelerating now There used to be a statement, and I remember very well when it was made by a person who was not really administering Blue Cross, that the first 10 million are the easiest From now on it will be difficult It proved the other way round.

### Statement of Mr John R Mannix

SENATOR MURRAY When the Blue Cross plans first began, were they met with skepticism by the medical profession? Did they oppose them at first?

MR MANNIX I would say that that varied in different parts of the country I happen to have been in Cleveland at the time and a great deal of the support that we got was from the Cleveland Academy of Medicine and from a Dr Follansbee, who is one of the officials of the American Medical Association at the time It is true that the members of the American medical profession in certain areas did oppose them It is true that hospitals did oppose them It is true that many employers opposed them It is also true that the public did not support them very much, and we had a problem of education with all four groups Now we are enrolling about every five days as many people as we enrolled in the first five years

SENATOR MURRAY Do you think that if the Blue Cross undertook to give the same coverage as the bill here pending, that is to say, complete medical and home care and office care, and everything pertaining to medical care, do you think that the medical profession would approve the Blue Cross system if it went that far? MR MANNIX I definitely feel that it would

MR. ROREM I would like to say one thing here, because it is worth mentioning We have spoken of Blue Cross as if it was a corporate entity in every instance that provided the medical care That is not the typical arrangement. The medical care is provided through a parallel organization administered by the same employees as Blue Cross However in a few instances Delaware, North Carolina, Louisiana and a few states and others like that one corporation offers complete health service, which is, and I speak now as an administrator as opposed to a social philosopher, preferable.

SENATOR MURRAY Where is that organization? MR ROREM It is just that the Blue Cross Plan has authority to offer complete medical care in New York Delaware West Virginia Louisiana and I think New Hampshire and Vermont.

MR. MANNIX It is about to start there

MR. ROREM And in Rhode Island it will start on that basis

SENATOR MURRAY Of course it would be impossible for the very low income groups in the United States to avail themselves of that system I mean to say people who are earning less than $1,200 a year MR. ROREM It depends on whether the employer participates We assume that with the expansion of this larger plan there will be employer contribution That is taken for granted

### Statement of Dr Alice Hamilton

DR HAMILTON I am representing the Consumers League, Mr Chairman, and I might explain that that is a league founded by Florence Kelly in the early years of the century, of consumers, in order that they might investigate and do what they could to remedy the conditions of the workers whose goods they consumed That means that we have had a great interest in all the laws governing labor, especially child labor and the minimum wage, and as one cannot study any group of working people without realizing how large a part sickness plays in their difficulties, we became interested early in compulsory health insurance and passed three resolutions which I will not read, but which I might just leave for the record

Why does the league take its stand in strong support of S 1606?

*(Dr Alice Hamilton favored 1606 in toto with Senator Pepper's amendments)*

*(To be continued)*

## Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St Chicago 10 Secretary

American Academy of Tuberculosis Physicians San Francisco June 30 Dr Oscar S Levin P O Box 7011 Denver 6 Colo Secretary

American Association for the Study of Goiter Chicago June 20-23 Dr Thomas C Davison 478 Peachtree St. N E Atlanta 3 Ga., Secretary

American Association for the Surgery of Trauma San Antonio Texas June 26-28 Dr Gordon M Morrison 520 Commonwealth Ave Boston Secretary

American Association of Genito Urinary Surgeons Stockbridge Mass June 20-22 Dr Charles C Higgins 2020 E 93d St. Cleveland 6 Secretary

American Association of Plastic Surgeons Toronto Canada June 3-4 Dr Frederick A Figi 102 Second Ave S W Rochester Minn Secretary

American College of Allergists San Francisco June 28-30 Dr Fred W Wittich 401 LaSalle Medical Bldg Minneapolis 2 Secretary

American College of Chest Physicians San Francisco June 27 30 Mr Murray Kornfeld 500 N Dearborn St Chicago 10 Executive Secretary

American College of Radiology San Francisco June 29 Mr Mac F Cahal 20 N Wacker Drive Chicago 6 Secretary

American Dermatological Association Hot Springs Va June 10 14 Dr Harry R Foerster 208 E Wisconsin Ave. Milwaukee Secretary

American Medical Women's Association San Francisco June 29 30 Dr Beulah Cushman 25 E Washington St. Chicago Secretary

American Neurological Association San Francisco June 26-28 Dr Henry Alsop Riley 117 E 72d St. New York 21 Secretary

American Ophthalmological Society San Francisco June 26-28 Dr Walter S Atkinson 129 Clinton St Watertown N Y Secretary

American Orthopedic Association Hot Springs Va., June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2 Secretary

American Physiotherapy Association Black Mountain N C June 16 22 Miss Margaret A O'Neill 1790 Broadway New York 19 Secretary

American Proctologic Society San Francisco June 30 Dr Harry E. Bacon 2031 Locust St Philadelphia 3 Secretary

American Radium Society San Francisco June 28 29 Dr Edward H. Skinner 1103 Grand Ave Kansas City 6 Mo Secretary

American Society of Clinical Pathologists San Francisco June 27 30 Dr A S Giordano 531 N Main St South Bend Ind Secretary

American Urological Association Cincinnati July 22 25 Dr Thomas D Moore 899 Madison Ave Memphis 3 Tenn Secretary

Association for the Study of Internal Secretions San Francisco June 28-29 Dr Henry H Turner 1200 N Walker St. Oklahoma City Secretary

Idaho State Medical Association Boise June 17 20 Dr T B Jeppesen 105 N 8th St Boise Secretary

Maine Medical Association Poland Spring June 23-25 Dr Frederick R Carter 142 High Street Portland 3 Secretary

Montana Medical Association of Great Falls July 18 20 Dr Raymond F Peterson 9 W Granite St. Butte Secretary

National Gastroenterological Association New York June 19 21 Dr G Randolph Manning 819 Broadway New York 23 Secretary

National Tuberculosis Association Buffalo N Y June 11 13 Dr Charles J Hatfield 1790 Broadway New York 19 Secretary

New Mexico Medical Society Santa Fe June 6-8 Dr L. B Cohenour 221 W Central Ave Albuquerque Secretary

South Dakota State Medical Association Aberdeen June 1-4 Dr Roland G Mayer 22½ S Main St Aberdeen Secretary

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION AND PUBLIC HEALTH)

## ALABAMA

**Change in Health Personnel**—Dr Sidney J Williams has been named health officer of Sumter and Greene counties with headquarters in Livingston, succeeding Dr Robert D Spratt, Livingston

## ARKANSAS

**State Medical Election**—Dr Lorenzo T Evans, Batesville, was chosen president-elect of the Arkansas Medical Society at its meeting in Little Rock April 15 17 and Dr Henry K Wade Hot Springs National Park was installed as president Other officers include Drs John Hayes Little Rock, Walter G Eberle, Fort Smith and Homer A Stroud Jonesboro, vice presidents, Dr William R Brooksher, Fort Smith secretary and Dr Paul L Mahoney Little Rock treasurer The 1947 session will be held in Little Rock in April

## CALIFORNIA

**Fellowship in Pharmacology** — The Winthrop Chemical Company has established a fellowship in pharmacology at Stanford University School of Medicine Stanford University, to be available to qualified medical graduates or those who have finished the fourth year in medical school for training in research and teaching in pharmacology in the department of pharmacology and therapeutics at Stanford University The Winthrop fellowship amounts to $1,800 a year Applications should be made to Dr Paul J Hanzlik Department of Pharmacology Stanford University School of Medicine 2398 Sacramento Street San Francisco 15

**Expansion of Permanente Foundation Hospital**—On May 10 the Permanente Foundation Hospital, sponsored by Mr and Mrs Henry J Kaiser announced that a $100,000 construction program had been started to increase the capacity of its hospital and outpatient facilities in Oakland Construction plans call for an entirely new obstetric and gynecologic department, consisting of waiting rooms, doctors offices and examining rooms, a new dental suite consisting of six dental rooms and x ray equipment and a new enlarged pharmacy These changes will also permit the development of a new pediatric outpatient department

**Personal**—Dr George H Houck on terminal leave, M C Army of the United States has been appointed director of student health services at Stanford University, Stanford University He will direct the student health program, which combines the present separate services for men and women into a complete medical care according to the Oakland *Tribune* —— Dr Cyril M MacBryde, formerly of St Louis, has been appointed assistant clinical professor of medicine at the University of Southern California School of Medicine, Los Angeles ——Dr Francis M Pottenger, Monrovia one of the founders of the first antituberculosis society in California, was named to the newly created office of president emeritus of the Los Angeles County Tuberculosis and Health Association at the recent meeting of the organization

## CONNECTICUT

**Institute of Occupational Medicine and Hygiene**—The proposed establishment of an Institute of Occupational Medicine and Hygiene at Yale University School of Medicine, New Haven is discussed in the *Connecticut State Medical Journal* Since a campaign was launched in 1945 to obtain funds for the project Connecticut industry has contributed about $100,000, assuring the development The plan calls for the organization of a division or institute in the medical school whose members should be drawn from or have liaison with several departments, including the departments of public health internal medicine and its section of preventive medicine, pharmacology and toxicology, and surgery In addition it is anticipated that the school of nursing and other departments and schools of the university will participate The committee on industrial medicine of the Connecticut State Medical Society is actively cooperating in the project, the immediate objectives including the training of medical students and industrial physicians based on the fact that occupational medicine and hygiene is now a specialty, special postgraduate instruction, research in occupational medicine and hygiene, and consultation

## DISTRICT OF COLUMBIA

**Charles Stanley White Retires**—Dr Charles Stanley White recently retired as professor of surgery at George Washington University School of Medicine, ending forty five years' service on the faculty He has been succeeded by Lieut Col Brian Blades, chief of the thoracic surgery section of Walter Reed General Hospital who is leaving the army Dr Blades graduated at Washington University School of Medicine, St Louis, in 1932 Dr White graduated at George Washington School of Medicine in 1898 and joined the faculty in 1901

**Diagnostic Clinic Planned**—Washington's first diagnostic clinic to be operated in conjunction with a hospital is planned as a part of the new George Washington University Hospital to be completed next year The proposed clinic, according to *Medical Annals,* will provide complete diagnostic services at reasonable cost to patients limited to the moderate income group, defined by Dr Walter A Bloedorn as $3,500 or less The clinic will be staffed by the faculty of the medical school in all the major departments of medicine and surgery It will accept only patients referred by the patient s private physician and will not give treatment. A standard fee will be charged for this service perhaps as low as $25 After diagnostic examination a complete report, accompanied if advisable by treatment recommendations, will be referred back to the patient s doctor

**Mental Hygiene Clinic for Adults**—The bureau of mental hygiene of the District Health Department opened a mental hygiene clinic for adults March 5 to give psychiatric examination and treatment to adult patients, other than alcoholic addicts who are unable to pay private physicians for such services Patients may apply directly to the bureau or they may be referred by any public or private agency In case of referral by a physician, the latter should submit a report on the physical examination and history After the first interview with the patient, the psychiatrist will decide whether or not he is suitable for treatment The psychiatrist will then notify the referring agency or physician of his opinion and his decision as to treatment Findings and diagnoses will be kept strictly confidential and will not be imparted to any one without the patient's consent The psychiatrist will give follow-up reports at reasonable intervals and notice about termination of treatment to the referring agency or physician Dr Leopold E Wexberg is director of the bureau of mental hygiene (THE JOURNAL, February 2, p 295)

## ILLINOIS

### Chicago

**Lecture Named for Dr Pusey**—Dr John H Stokes professor emeritus of dermatology and syphilology, University of Pennsylvania School of Medicine Philadelphia, and director Institute for the Study of Venereal Disease University of Pennsylvania, will deliver the first William Allen Pusey Memorial Lecture of the Institute of Medicine of Chicago at a meeting with the Chicago Society of Internal Medicine and the Chicago Dermatological Society, October 25, at the Palmer House His subject will be 'The Skin as a Field of Research" Dr Pusey, who once served as President of the American Medical Association, died Aug 29, 1940

## INDIANA

**Ray Smith Succeeds Thomas Hendricks**—Mr Ray E Smith, secretary of the Indianapolis Medical Society and part time assistant executive secretary of the Indiana State Medical Association, was on April 14 appointed executive secretary of the state medical association He succeeds Thomas A Hendricks, who had served as executive secretary for more than twenty one years and who resigned, effective May 1, to become full time secretary of the Council on Medical Service and Public Relations of the American Medical Association Mr Hendricks has been serving as part time secretary of the Council since March 1945 Mr Hendricks has sold his home in Indianapolis and is establishing permanent residence at Culver Dr Nesfen K Forster, Hammond, has been named associate editor of the *Journal of the Indiana State Medical Association* Mr Joseph E. Palmer Wabash has been named executive secretary of the Indianapolis Medical Society to succeed Mr Smith Mr Palmer has served on the staff of several Indiana newspapers and with the Chicago office of the Associated Press While in military service he served the European Theater of Operations in the field of public relations

## IOWA

**State Medical Election**—Dr Harold A Spilman, Ottumwa was named president elect of the Iowa State Medical Society at its annual meeting in Des Moines, April 18 19, and Dr Robert L Parker, Des Moines was inducted into the presidency Other officers include Drs John W Billingsley, Newton, and Howard I Down Sioux City, vice presidents, and Dr John C Parsons Des Moines secretary The 1947 meeting will be held in Des Moines April 16 19 The total registration at this year's session was 1,016, of whom 698 were members, 75 were guests 116 were exhibitors and 127 registered at the Woman's Auxiliary meeting

## MARYLAND

**Personal**—Frederick L Knowles Jr, Baltimore, senior biophysicist, National Institute of Health has been named editor of the *Journal of the National Malaria Society* succeeding Dr Robert B Watson formerly with the Tennessee Valley Authority, who has joined the staff of the International Health Division of the Rockefeller Foundation

**Research on Rheumatic Fever**—With the appointment of Dr Francis F Schwentker as professor of pediatrics at the Johns Hopkins University School of Medicine Baltimore and pediatrician in chief of the Johns Hopkins Hospital, effective July 1, an intensive program to study rheumatic fever will begin at the hospital The appointment of Dr Louis A Thomas as assistant professor of pediatrics also effective July 1 is under consideration Dr Helen B Taussig Baltimore, has been conducting clinical research in rheumatic fever at the Harriet Lane Home for Invalid Children an affiliate of Johns Hopkins The new program which will incorporate her work, will be carried out in two directions, the prevention of the underlying streptococcic infection and a study of the mechanism by which a streptococcic infection is concerned in the etiology of rheumatic fever

## MINNESOTA

**Academy of Medicine Incorporated**—On March 22 the Minnesota Academy of Medicine filed articles of incorporation The academy was established Oct. 12, 1887 by a group of physicians of St Paul and Minneapolis who were interested in the various specialties Apparently it was the outgrowth of the former Unity Club of Minneapolis which was organized Oct. 31, 1884 and at its meeting held Oct. 6 1887 voted to elect eight additional members from Minneapolis to its membership of eleven stating that it favored "associating with a similar club, if it be formed in St. Paul " At the first meeting of the academy the late Dr John F Fulton St Paul was elected president and monthly meetings have been held ever since except during the summer months Presidents are elected each year alternating between Minneapolis and St. Paul Each president presents an address at the close of his term of office Membership is limited to thirty-five members from St. Paul and thirty-five from Minneapolis ten from the faculty of the University of Minnesota Medical School who are teachers not engaged in private practice fifteen associate members who are residents of the state at large and honorary members who may be nonresidents of the state Past presidents automatically become fellows of the academy and are not included as active members. Officers are elected annually president vice president and secretary-treasurer The executive committee consists of the three most recent past presidents and the officers Dr William Davis St. Paul is the only remaining charter member Dr Thomas Roberts Minneapolis, having died April 19

## NEW YORK

**Director of Nutritional Research.**—Stefan Ansbacher, D Sc. Richmond Hill, formerly scientific director of the International Vitamin Corporation and scientific consultant of the American Home Products Corporation, has been appointed director of nutritional research of the research division of the Schenley Distillers Corporation

**Dr Schlesinger Named Acting Director of Maternal Health.**—Dr Edward R. Schlesinger, Syracuse, assistant director of the division of maternal and child health New York State Department of Health has been appointed acting director to succeed Dr Helen H Owen Albany, who had held the position since August 1944 and who retired on April 15 ending twenty three years service to the department of health

**Course in Rheumatic Fever**—St. Francis Sanatorium for Cardiac Children, Roslyn Long Island announces a postgraduate course in rheumatic fever and rheumatic heart disease, July 8 19 The course consists of informal lectures and discussions supplemented by examination and study of patients demonstrating all clinical phases of rheumatic disease Part of the time will be devoted to roentgenography and electrocardiography and other laboratory procedures, with special emphasis on their practical application The treatment of acute rheumatic disease will be studied in detail For further information address St Francis Sanatorium for Cardiac Children, Roslyn, Long Island

**John Murlin Honored**—The current volume of the *Journal of Nutrition* has been dedicated to John R Murlin, Sc D, who, it is said, more than any other one person, has been responsible for the establishment of both the journal and its supporting professional society of research workers in the science of nutrition the American Institute of Nutrition Dr Murlin served as the first editor of the journal but gave up the responsibilities of his office in 1939, when he reached the age of 65 years and thus became emeritus member of the American Institute of Nutrition. In 1944 Dr Murlin reached the age of 70 and under normal conditions would have retired from his position as professor of physiology at the University of Rochester On account of the war and the shortage of personnel however, he continued active for another year and definitely retired in June 1945

**Lectureship Created for Drs Reifenstein and Broad**—The Dr Edward C Reifenstein Lectureship in medicine has been established at Syracuse University College of Medicine by the family of Dr Ellery G Allen Syracuse to honor the many years of service of Dr Reifenstein to the university Dr Reifenstein became professor emeritus of medicine on July 1, 1940 but continued to serve as chairman of the department during the war period Dr Edgar V Allen associate professor of medicine University of Minnesota Medical School Rochester Minn., gave the first lecture April 8 on "The Challenge of Intravascular Thrombosis" The members of the department of gynecology have established the Dr George B Broad Lectureship in gynecology in honor of Dr Broad, who became professor emeritus of gynecology July 1, 1932 but who was active in the department during the war period

**Public Health Positions Available**—The New York State Department of Health plans ten or more appointments to the position of assistant district health officer at a beginning salary of $4 560 with annual increments to a maximum of $5 700 A competitive examination open to residents and nonresidents of New York State is to be held about July 1 Physicians who meet the qualifications can be given provisional appointments pending the results of the examination. After one year under permanent status the assistant district health officer having required professional qualifications is eligible for promotion to district health officer and to certain specialized central office positions salary range $5 928 to $7 353 and after experience in the higher position promotion to the next salary grade can be made he can be assigned at any time to the position of epidemiologist in the division of communicable diseases Benefits in state service include a one month vacation annually, liberal sick leave and participation in a state retirement plan Candidates must be citizens of the United States, graduates of an approved medical school licensed or eligible to enter examination for license in New York and must meet certain requirements concerning public health experience Additional information may be obtained from the New York State Department of Health Albany 1

### New York City

**Alumni Election**—Dr Hippolyte M Wertheim assistant clinical professor of surgery New York University College of Medicine has been elected president of the Alumni Association of New York University College of Medicine Other officers include Dr John M Lore vice president Dr Evan W McLave, Jackson Heights, N Y, secretary and Dr Sydney D Weston, Brooklyn treasurer

**Scholarships for Study of Eye Disease**—Four scholarships for the advanced study of eye diseases at New York University College of Medicine will be provided annually by the Lions Club of New York, it was announced May 14 The scholarships will be valued at $500 each and will be available to four graduate medical students to be selected by the department of ophthalmology of the medical school enabling them to have a year of advanced study

**The Blizzard Men of 1888**—The experiences of Dr Alfred Meyer who attended 3 patients during 'the blizzard of '88' were recounted during the seventeenth reunion of the Blizzard Men of 1888 in the Hotel Pennsylvania recently Dr Meyer's account won the silver cup given each year for the best story of the storm which blanketed New York on March 12 of that year It was read, in Dr Meyer's absence by Major Augustus Post a past president of the organization. Declaring that he stepped out of bed "into one foot of snow, Dr Meyer related that the heavy storm did not deter him from setting out 'in an

open buggy" to visit 3 patients Along the route from his residence on Madison Avenue at Sixty-Fifth Street he found street cars stalled on the tracks Noting the milk shortage resulting from trains blocked outside the city limits Dr Meyer explained that he joined in the search for cans of condensed milk for distribution to children and learned that 72 000 cans of this product had been sold by one store during the period of the storm Many men over 70 were present at the meeting, and sixteen were over 80 Charles F Southard of Maplewood, N J 90 was introduced by Walter P Gardner Jersey City, N J president as the oldest person present who witnessed the storm Frank H Waggoner, Ramsey, N J, a member of the board of directors, introduced a resolution of memorial tribute to Dr Samuel Meredith Strong, a past president and one of the charter members of the organization, who died February 2. Dr Meyer, who graduated at Columbia University College of Physicians and Surgeons in 1877, is 92 years old The Blizzard Men of 1888 was organized March 12 1929 to perpetuate the great storm of March 12, 1888 Memorabilia and reminiscences of the group are on file at the New York Historical Society

## OHIO

**Change in Executive Secretaries**—Robert W Elwell, Toledo, who has specialized in personnel work for a number of years, has been named executive secretary of the Academy of Medicine of Toledo to succeed Mr George W Cooley, who resigned to become a member of the staff of the Council on Medical Service and Public Relations of the American Medical Association

## OKLAHOMA

**School Clinic for Spastics**—A permanent school clinic for spastics will be opened at Lincoln School Tulsa, next September under the auspices of the Oklahoma Crippled Children s Commission and with the endorsement of the Tulsa County Medical Society The proposed school is an outgrowth of certain investigations of the spastic situation in the Tulsa area carried on by the Tulsa council of social agencies and the city schools health department These two groups are co-sponsors with the Crippled Children s Commission. It is proposed to offer a program of normal education, physical training, physical therapy occupational rehabilitation or training and specialized medical supervision and treatment A trained physical therapist will be employed for the school and it is hoped to employ later an occupational therapist. The medical supervision of the clinic is to be under local Tulsa physicians who are interested in spastic problems, such physicians either to donate their service or to receive only a nominal fee.

## OREGON

**New Medical Administrator**—In March Dr Charles N Holman, medical director of hospitals and clinics at the University of Oregon Medical School Portland, was named to succeed the late Mr Ralph Couch as administrator of the University of Oregon hospitals and clinics Dr Holman graduated at the medical school in 1936 and has been associated with the Multnomah Hospital since 1940

**Clinical Studies Foundation Joins with Medical School.**—The research activities of the Clinical Studies Foundation are now a joint venture with the biochemistry department of the University of Oregon Medical School, Portland, according to a brochure recently made available The foundation was incorporated soon after the observation in 1937 by Dr John V Straumfjord, Astoria, of certain skin changes in patients who were taking a daily supplement of 100,000 units of vitamin A. The purpose of the corporation was to engage in "research work to ascertain the properties of vitamins and allied substances and their therapeutic value' and to raise funds for this work. A small laboratory was subsequently established. Since July 1945 the biochemical research has been under the direction of John T Van Bruggen, Ph.D, research associate department of biochemistry, University of Oregon Medical School Under the new joint arrangement the medical school agrees to extend the services of the staff of the department of biochemistry in joint administration and operation of a continuation of the study of the metabolism and function of vitamin A as well as into any other phase to which this study may lead. The work will be carried on in the Astoria Foundation laboratory, which is to be known as the Astoria Extension Research Laboratory Dr Straumfjord, president of the Clinical Studies Foundation, was given an appointment as research associate in the department of biochemistry at the medical school and director of the Astoria Extension Research Laboratory the appointment to terminate on severance of the association between the Astoria Laboratory and the department of biochemistry The foundation will make available supplies and equipment so long as the association shall continue, should it be discontinued these physical assets will revert to the Clinical Studies Foundation. The medical school will not assume any responsibility of raising funds for the project

## SOUTH CAROLINA

**Changes in Health Personnel**—Dr Clarence L Guyton, Columbia, who recently received his discharge from the Army Medical Corps, has resumed his position as director of the division of cancer control, South Carolina State Board of Public Health, and has been appointed director of the division of venereal disease control, effective February 1 Dr Joseph M Chisolm, Columbia who has been directing the venereal disease division during the war emergency on assignment from the U S Public Health Service, will continue as assistant director pending a new assignment from the U S Public Health Service——Dr Robert Wilson Ball, Columbia, has resigned as director of the division of maternal and child health of the state board of health to enter private practice in Columbia Dr Ball, who graduated at the Medical College of the State of South Carolina Charleston, in 1927, has been serving as director of the division of maternal and child health since 1936 He entered military service in 1941, returning to his position in November 1945

## TENNESSEE

**State Medical Election**—Dr Franklin B Bogart, Chattanooga, was named president elect of the Tennessee State Medical Association at its meeting in Knoxville, April 11, and Dr Charles M Hamilton, Nashville, was installed as president. Other officers include Drs. Lea Callaway, Marvville, Jesse P Baird Dyersburg, and William A Howard Cookeville, regional vice president. Dr William M Hardy, Nashville, was reelected secretary

## WASHINGTON

**Physician's "Past Record" Cause for Consideration**—On April 11 Presiding Superior Judge Matthew Hill deferred sentencing Dr Earle F Ristine, Seattle, to a term in prison for five years on condition that he pay a total fine of $7,000 according to the Seattle *Times* The physician was said to have pleaded guilty to two charges of abortion "Unlike most cases of this kind," Judge Hill said, 'there has been no death I think your past record entitles you to a deferment. However I'm going to make a condition you pay a fine of $3,500 on each count"

**Progress of New Medical School**—*Northwest Medicine* for April announces that four of the basic science departmental heads of the new University of Washington School of Medicine have been appointed. William F Windle, Ph D, professor of neurology Northwestern University Medical School Chicago, has been appointed professor of anatomy and executive officer of the department Richard A Groat, Ph.D., and Roland F Becker, Ph D, both of Northwestern, and William W Chambers, B.S Vanderbilt University School of Medicine, Nashville, Tenn., have also been named to the department of anatomy at Washington Dr Stuart W Lippincott, recently released from military service, Army Institute of Pathology, has been named professor of pathology and executive officer of the department. His appointment began on March 15, but he will remain at the Army Institute of Pathology for some months where he will select and supervise the preparation of pathologic, microscopic and projection slides for the department of pathology at the university Dr Robert F Pitts associate professor of physiology Cornell University Medical College, New York, has been appointed professor of physiology and executive officer of the department effective about July 1 and James M Dille, Ph.D formerly professor of pharmacology at the University of Washington School of Pharmacy and recently associate in physiology at the University of Illinois College of Medicine, has been named professor of pharmacology and executive officer of the department, effective about July 1 *Northwest Medicine* reported that the selection of clinical department heads and organization and development of clinical departments will be initiated as soon as the basic organization of the preclinic divisions has been satisfactorily completed. Preparatory to construction of a suitable building an architectural survey of a number of universities was made the results of which are now being considered to develop plans for the University of Washington schools of medicine and dentistry Dr Edward L. Turner is dean of the new medical school which was approved in the enactment of a bill calling for an appropriation of $450,000 to expand the premedical school and $3,750 000 to construct a medical school and hospital (THE JOURNAL, Feb 3, 1945 p 288, April 21, 1945, p 1067, Oct. 13, 1945, p 524)

## WISCONSIN

**Dinner to Dr Carey**—Dr Eben J Carey was guest of honor at a dinner May 1 given in recognition of his completion of twenty-five years service to Marquette University School of Medicine Milwaukee Dr Carey who graduated at the University of Chicago School of Medicine in 1925, joined the university as professor and director of the department of anatomy becoming dean in 1933

**One Hundred Years of Medicine**—A centennial hall of health, April 27-May 3, marked the 100th anniversary of the founding of the Medical Society of Milwaukee County and the city of Milwaukee (THE JOURNAL, April 20, p 1183) The program was officially opened the first night by John L Bohn, mayor of the city Speakers in the week's program included

Dr Edward R Krumbiegel Milwaukee One Hundred Years of Progress of Medicine in Milwaukee
Dr Morris Fishbein Chicago, Health of the Nation
Dr Walter C Alvarez Rochester Minn How Women Make Themselves Ill
Dr W W Bauer Chicago There are No Problem Children
Dr Harry M Hedge, Chicago Care of the Skin and Cosmetics.
Dr David Slight Chicago Health and the Emotions
Dr Edward A Piszczek Chicago Infantile Paralysis
Dr Josiah J Moore Chicago moderator

Local societies cooperated in sponsoring lectures, and various exhibits and demonstrations were included Marquette University School of Medicine Milwaukee supplied 110 guides in rotation during the seven days the exhibit was open, and school children were taken on scheduled two hour tours

## GENERAL

**Maternal Welfare Committee Moves**—On April 15 the American Committee on Maternal Welfare, Inc moved to a new office at 24 West Ohio Street Chicago 10 All correspondence concerning the affairs of the committee, the American Congress on Obstetrics and Gynecology *the Mother* or the National Federation of Obstetric-Gynecologic Societies should be sent to this new street address and postal zone

**Cerebral Palsy Division Created**—The National Society for Crippled Children and Adults Inc will create a special cerebral palsy division to carry out its national program to assist persons afflicted with this condition. A director will be appointed for the division which will project a six point plan aimed to insure the cerebral palsy health and medical care social welfare and security recreational educational and employment opportunities as well as foster and extend research in the care and prevention of the disease The National Society for Crippled Children and Adults will establish a special fund to extend the program for the training of personnel and research

**New Members of Academy of Sciences**—Included among twenty nine leaders in American science who were elected to membership in the National Academy of Sciences recently are

Dr Paul Roberts Cannon professor of pathology University of Chicago School of Medicine
Karl Paul Link Ph D professor of biochemistry University of Wisconsin Medical School Madison
Dr Robert F Loeb Lambert professor of medicine Columbia University College of Physicians and Surgeons New York
Dr Esmond Ray Long professor of pathology University of Pennsylvania School of Medicine, Philadelphia, director of laboratories Henry Phipps Institute
Stanley Smith Stevens Ph D associate professor of physiology Harvard University

**Grants to Aid Survey of Child Health**—The American Academy of Pediatrics on May 13 announced the following grants totaling $237,500 which have been either received or pledged on a two year basis to support its study of child health services

National Foundation for Infantile Paralysis $116 000
Field Foundation $10 000
American Academy of Pediatrics $18 000
New England Pediatric Society $500
Mead Johnson and Company $28 000
M and R. Dietetic Laboratories $20 000
Carnation Company $20 000
Pet Milk Company $20 000
Lederle Laboratories $5 000

Dr John P Hubbard instructor of pediatrics (on leave) Harvard Medical School Boston, is the executive director of the study under the auspices of a specially appointed committee (THE JOURNAL, February 2 p 298)

**William White Resigns as Tuberculosis Chairman**—Dr William C White Washington, D C. chairman of the committee on medical research National Tuberculosis Association since 1921 resigned, effective March 1 ending more than twenty-five years service to the organization Dr White has been succeeded by Dr Henry S K. Willis, superintendent and medical director of the William H. Maybury Sanatorium at Northville Mich who will act as interim director pending the selection of a permanent director The association's first committee on research was formed prior to 1916 with Dr Edward R Baldwin, Saranac Lake N Y, as chairman, but, partly owing to America's entry into the first world war, did not function In 1921 Dr Gerald B Webb Colorado Springs, Colo, at that time National Tuberculosis Association president, appointed a new committee headed by Dr White, which was given the responsibility of developing research in the tuberculosis field Under Dr White's leadership the committee made its first grant of $500 the same year to William Snow Miller for a study of the anatomy of the lungs and has granted more than $600 000 since that time for the carrying on of approximately fifty studies

**Meeting on Research in Ophthalmology**—The fifteenth scientific meeting of the Association for Research in Ophthalmology will be held at the Mark Hopkins Hotel, San Francisco, July 2 Included among the speakers will be

Dr Phillips Thygeson Menlo Park Calif, The Cytology of Conjunctival Exudates
Dr Arthur J Bedell Albany N Y Macular Edema.
Dr Jerome W Bettman San Francisco Experimental Dinitrophenol Cataract Effects of Obesity Age and Environmental Temperature
Dr Austin I Fink Brooklyn Changes in the Angioscotomas Associated with the Oral Administration of Evipal
V Everett Kinsey Ph D Blanche Jackson Ph D, and Dr Theodore L Terry Boston Relation Between Maternal Vitamin A Blood Level and Ocular Abnormalities in the Offspring
Dr Maurice J Drell Marjorie Bohnhoff B S and Dr Charles P Miller all of Chicago Experimental Gonorrheal Iritis The Role of the Lens in Growth of the Gonococcus
Drs Alston Callahan and Frederick C Redlich Birmingham Electroencephalography and Ophthalmology
Dr Charles W Ascher Cincinnati Further Observations on Aqueous Veins

**New Research Institute**—Formation of the Sterling-Winthrop Research Institute as a new division of Sterling Drug, Inc. to expand its research and coordinate that of its divisions and subsidiaries was announced May 6 The institute will be housed in new research laboratories to be erected at Rensselaer N Y, when building materials are available Dr Maurice L Tainter Rensselaer N Y, at present research director of Winthrop Chemical Company, Inc., a subsidiary, has been named director of the Sterling-Winthrop Research Institute Its administrative board consists of Edward S Rogers, chairman of the board of Sterling Mr Hill, Dr Theodore G Klumpp, New York Winthrop president Dr John M Hiebert, Sterling vice president and general manager of the Frederick Stearns and Company division Detroit and Dr Tainter Situated on a 70 acre site near the Winthrop plant and laboratories the institute will employ 350 scientists and assistants The structure will consist of three wings built in the general form of the letter U In addition to offices the administrative wing of the new structure will have lecture rooms and space for a complete technical library The east wing will contain, in addition to biologic laboratory units rooms for photography X-ray and extreme temperature testing The west wing will house pharmaceutical and chemical research laboratory units, together with special chemical development facilities and a pilot plant

**Mental Health Foundation**—Formation of the National Mental Health Foundation is announced Headquarters are at 3500 Lancaster Avenue Philadelphia, and officers include Leonard Edelstein, executive secretary Harold Barton education director and Alex Sareyan, public relations manager The foundation is a nonprofit corporation which according to its charter has been developed to help interpret to the public the nature of mental illness and mental deficiency to cooperate with others in the promotion of mental health and to seek higher standards of care and treatment in mental hospitals In a statement to the press it was stated that instead of censuring those who strive to succeed in spite of their limitations the National Mental Health Foundation will endeavor to enlighten and aid rather than to censure and condemn." Thus far the foundation has procured descriptions of conditions in approximately one fifth of all state mental hospitals from more than 1 400 reports from institutional employees Training material for hospital personnel is being prepared and distributed Several series of leaflets and pamphlets interpreting mental illness in simple graphic style are in preparation The first draft of a model mental health law based on a survey of laws pertaining to mental illness in more than thirty states is being prepared and is to be made available to legislators and health administrators when completed The program is under the advisory guidance of prominent psychiatrists hospital administrators and lawyers Among those who have served or are serving in this capacity are Dr Earl D Bond Philadelphia director of Research Institute of Pennsylvania Hospital Dr Robert H Felix Baltimore, general chief mental hygiene division, U S Public Health Service Dr Samuel W Hamilton, Washington D C. president-elect of the American Psychiatric Association,

Dr James Lewald superintendent of the District Training School, Laurel, Md., Dr George S Stevenson New York, medical director of the National Committee for Mental Hygiene, Dr Edward A Strecker, professor of psychiatry, University of Pennsylvania School of Medicine Philadelphia, Dr Charles A Zeller, director of the department of mental health of the state of Michigan and William D Lewis, director of the American Law Institute

**Social Welfare Assembly**—Mr Charles P Taft, Cincinnati lawyer and son of former President William Howard Taft has been nominated for the presidency of the newly formed National Social Welfare Assembly, which was officially launched at a luncheon April 29 at the Hotel Commodore, New York The National Social Welfare Assembly marks the joining of forces on the part of thirty five leading national organizations including the American Red Cross Y M C A National Tuberculosis Association, Boy Scouts Salvation Army Family Welfare Association of America Child Welfare League the Federal Housing Agency and other large nationwide services, including health, social welfare labor and government agencies The purpose of the assembly is said 'to fill the long felt need for more coordinated and effective national planning to meet the urgent social and health problems of the country" Under the new organization each of the affiliate organizations will nominate members to the assembly but will retain its own autonomy, with members serving as individuals Robert E Bondy, formerly administrator of services to the armed forces and veterans' affairs of the American Red Cross has been engaged as executive director Headquarters of the new assembly will be located at 1790 Broadway New York The assembly is an outgrowth of the National Social Work Council twenty-five year old forum group of organization workers whose members, "recognizing the need for a more aggressive and centralized attack on the health and welfare problems of the country,' have created the new agency

**Orthopedic Meeting**—The 1946 session of the American Orthopaedic Association will be held at the Homestead Hotel Hot Springs Va June 27 29, under the presidency of Dr James A Key Cardston Alta Among the speakers will be

Dr James E. M Thomson Lincoln Neb The Calcaneovalgus Foot of Infancy
Dr Russell P Schwartz Rochester N Y The Definition of Human Locomotion on the Basis of Measurement with Description of Oscillographic Method
Dr Robert I Harris Toronto Ontario Canada Hypermobile Flat Foot with Short Tendo Achillis From Observations in the Canadian Army
Dr Steele F Stewart Honolulu Hawaii Preemployment Back Examinations and Their Significance
Dr Sterling Bunnell San Francisco A System for Splinting Hands for Radial Ulnar and Median Paralyses
Dr Ralph K Ghormley Rochester Minn Postgraduate Teaching in Orthopedic Surgery
Dr Arthur Steindler Iowa City Newer Observations on the Experimental Contributions in Infantile Paralysis and Their Correlation to Pathologic Facts The Rationalization of Treatment of Infantile Paralysis on These Grounds
Dr Donald A G Murray Toronto Ont Canada End Results of Bone Grafting for Nonunion of the Carpal Navicular Based on the Study of 100 Cases
Dr LeRoy C Abbott San Francisco The Evaluation of Cortical and Cancellous Bone as a Grafting Material A Clinical and Experimental Study
Mr Harry Platt, Manchester England subject not announced
Drs Allen E Voshell Charles J Basile William I Waldrop and Moses Gellman all of Baltimore Subtalar Arthrodesis for Certain Types of Flat Feet
Dr David M Bosworth New York Fracture Dislocation of the Ankle with Fixed Displacement of the Fibula Behind the Tibia
Dr Nicholas S Ransohoff New York Medical Electronics Electromyographic Studies of Muscle Action Currents

**Atlas of Disease**—The American Geographical Society is considering the publication of an Atlas of Disease to be compiled by cooperating medical scientists and geographers As a preliminary step in the project the *Geographical Review* will publish from time to time results of certain surveys, the first of which appeared recently on the fluorine conditions in United States water supplies According to the New York *Times* through the pilot project the geographers hope to demonstrate how modern geographic technics can contribute toward understanding and control of some diseases and discover the lines along which more elaborate studies can be made of more difficult relationships between environment and public health At a meeting March 20 Roland L Redmond, president of the society said 'We want the atlas to be a pathfinder an instrument that will develop the technics and allow other people to go forward in their particular field" It was brought out that there are three broad divisions of medical geography the distribution of diseases over the earth the influence of environment on disease and the influence of disease on human geography, for example, settlement patterns and exploration The conference agreed that the atlas should deal primarily with the second of the divisions, the correlation of disease with the natural and social environment The conference, after considerable discussion, selected ten diseases for study and representation on the Atlas of Diseases The order of preference was cholera the typhus group malaria, yellow fever, goiter, plague, beriberi and pellagra, filariasis (parasitic worm infestation), encephalitis and schistosomiasis One of the conclusions reached at the discussion was that, as to the general purpose the atlas was to be designed primarily as a tool of research rather than as a textbook It was decided that certain parts, however, might well be adapted to the practical needs of individuals and institutions coping with the control of diseases under special conditions, for example those of air transport. The mode of publication will preferably be loose leaf or in parts If medical data on any particular disease cannot be assembled for a considerable time, certain basic geographic maps may be issued first. As significant new data become available, certain parts are to be revised concurrently with the publication of other parts, possibly with advance publication through medical or geographic journals

# Government Services

## New Appointment for Dr Axelrod

Dr Solomon J Axelrod surgeon (R), U S Public Health Service, has been appointed chief, health services division labor branch, United States Department of Agriculture Dr Axelrod, who has been on detail to the department of agriculture since December 1943, was formerly with the Chattanooga-Hamilton County (Tenn) Health Department and graduated at Jefferson Medical College Philadelphia in 1938

## Albert Hunter Dies

Albert C Hunter, Ph D, chief of the division of bacteriology, Federal Security Agency, since 1939 died on April 13 at his home in Hillendale, Md, of heart disease Dr Hunter, who received his Ph D degree at Brown University, Providence, R I, in 1918, was associated with the bureau of chemistry of the U S Department of Agriculture from 1918 to 1927 and with the food and drug administration from 1927 to 1939, when he became chief of the division of bacteriology

## Rehabilitation Appointments

Dr Victor H Vogel, Denver, has been named chief medical officer of the Office of Vocational Rehabilitation, Federal Security Agency, succeeding Dr Jack Masur, who has become hospital consultant for the Federation of Jewish Philanthropies, New York To advance an expanding physical restoration program the Office of Vocational Rehabilitation has acquired the services of five new medical officers and contemplates filling additional full time posts in the fields of ophthalmology, hospital administration, tuberculosis and psychiatric social work The new medical officers are Dr Thomas B McKneely New Orleans, also a senior surgeon in the U S Public Health Service, assistant chief medical officer of the Office of Vocation Rehabilitation, Dr Charles L Newberry, Milwaukee, a surgeon in the U S Public Health Service, recently with UNRRA in Egypt and Austria now assistant medical officer of the Office of Vocational Rehabilitation Dr Henry H Kessler, Newark, N J authority on amputation and cineplasty and consultant in orthopedics and prosthetic devices to the Office of Vocational Rehabilitation, Dr Hewitt I Varney, a surgeon in the U S Public Health Service, currently assigned to the U S Maritime Training Station at Sheepshead Bay, N Y, consultant in psychiatry to the Office of Vocational Rehabilitation, and Dr Ward L Mould, a surgeon in the U S Public Health Service, assistant regional representative of region VI of the Office of Vocational Rehabilitation embracing Missouri, Arkansas, Louisiana, Texas Oklahoma, New Mexico and Kansas with headquarters in Kansas City It was also announced that the services of Dr Norvin C Kiefer, surgeon, U S Public Health Service, have been obtained on a liaison assignment from the division of tuberculosis control of the U S Public Health Service to serve part time with the Office of Vocational Rehabilitation The Office of Vocational Rehabilitation has recently completed its first full year of operation under congressional amendments which permit it to offer comprehensive medical, surgical and psychiatric services to disabled persons In addition to the five appointments mentioned, full time appointments in the fields of ophthalmology, hospital administration, tuberculosis and psychiatric social work are contemplated

# Deaths

**Jacob Sergi Kasanin** ⊕ San Francisco, University of Michigan Department of Medicine and Surgery Ann Arbor, 1921, born in Novgorod, Russia May 11 1897, since 1940 assistant clinical professor of psychiatry at the University of California Medical School specialist certified by the American Board of Psychiatry and Neurology, Inc member of the American Psychoanalytic Association American Psychiatric Association, Central Neuropsychiatric Association New England Society of Neurology and Psychiatry, Chicago Psychoanalytic Society, Chicago Neurological Society, Northern California Society of Neurology and Psychiatry and the California Academy of Medicine past president of the American Orthopsychiatric Association in 1927 placed in charge of a new department of mental hygiene of the Federated Jewish Charities of Boston senior research associate of the Rockefeller Foundation at the Boston Psychopathic Hospital from 1927 to 1931 member of the staff of the Evans Memorial and Beth Israel hospitals and Boston Dispensary from 1929 to 1931 formerly lecturer in social psychiatry at Brown University and the Smith College School of Social Work clinical director of the Rhode Island State Hospital for Mental Disease, Howard from 1932 to 1936 when he became director of the psychiatric department at the Michael Reese Hospital in Chicago where he had been assistant clinical professor in psychiatry at Rush Medical College psychiatric consultant to the Army's Ninth Service Command during World War II active in setting up a rehabilitation clinic for veterans associate editor of Diseases of the Nervous System author of Language and Thought in Schizophrenia', chief of the neurologic and psychiatric service at the Mount Zion Hospital, where he established a child guidance clinic and where he died May 4, aged 48 of cerebral hemorrhage.

**Arthur Duke Ferguson,** Benton Mo, Barnes Medical College, St Louis 1906, born in Osage County, Mo June 12 1874, member of the American Medical Association past president of the Shelby County Medical Society, past president and secretary of the Callaway County Medical Society, served during World War I, at one time practiced in Hunnewell, where he was mayor and president of the board of education formerly on the staff of the State Hospital in Fulton, recently received a citation from the government for his four years of service as medical examiner for the Scott County draft board died in the Southeast Missouri Hospital, Cape Girardeau January 14, aged 71, of carcinoma.

**William Byron Agan** ⊕ Brooklyn Columbia University College of Physicians and Surgeons, New York, 1912, specialist certified by the American Board of Ophthalmology member of the American Academy of Ophthalmology and Otolaryngology fellow of the American College of Surgeons, past president of the Brooklyn Ophthalmological Society, member of the staffs of the Brooklyn Eye and Ear Hospital, St. John's Hospital and the House of St. Giles the Cripple died in the Methodist Hospital February 5 aged 58, of myocardial infarction

**Charles Crawford Allen** ⊕ Austin Minn. University of Minnesota College of Medicine and Surgery Minneapolis 1910, president of the Mower County Public Health Association past president of the Southern Medical Association and the Mower County Medical Society formerly city health officer, county physician and chief of staff of the St. Olaf Hospital served during World War I trustee of the Carleton College died February 20 aged 60, of coronary thrombosis

**Charles Howard Aufhammer,** Coatesville Pa University of Pennsylvania Department of Medicine Philadelphia, 1906, fellow of the American College of Surgeons for many years on the staff of the Allegheny General Hospital, Pittsburgh, died in Thorndale February 14 aged 65

**John H Beavers,** Wesson Miss Medical Department of Tulane University of Louisiana, New Orleans 1895 member of the American Medical Association died January 1, aged 74

**Wesley Jackson Breeding,** Lakeland Fla. University of Tennessee Medical Department Nashville, 1893, member of the American Medical Association honorary member of the Tennessee State Medical Association formerly member of the state board of health of Tennessee died February 19 aged 76 of coronary thrombosis and generalized arteriosclerosis

**Harvey Elmer Corl,** Middlebranch Ohio Jefferson Medical College of Philadelphia 1893, past president of the Stark County Medical Society, died January 3 aged 77 of heart disease

**Albert Schuyler Fountain** ⊕ Colorado Springs, Colo, Keokuk (Iowa) Medical College, College of Physicians and Surgeons, 1906, died in St Francis Hospital February 4, aged 76, of coronary thrombosis

**John Christian Germann,** Valhalla, N Y, University of the City of New York Medical Department, New York, 1893, member of the American Medical Association, formerly president of the North Brooklyn Medical Society, died February 6, aged 74, of carcinoma of the esophagus

**Carl Victor Green Jr,** Los Angeles, University of Southern California School of Medicine, Los Angeles, 1933, member of the American Medical Association, served as a medical officer in the regular U S Navy, died December 18, aged 45

**David Milton Greene,** Detroit, University of Michigan Department of Medicine and Surgery, Ann Arbor, 1881 one of the founders of the Highland Park (Mich) General Hospital where he was a member of the board of managers, chief of the surgical staff and chairman of the executive committee, died December 30, aged 92.

**Stephen Greenfield** ⊕ Akron Ohio, University and Bellevue Hospital Medical College, New York, 1909, head of the medical examining committee of Selective Service Board number 5 during World War II, died in the City Hospital February 19, aged 58, of coronary thrombosis

**Hunter Lee Gregory** ⊕ Stockton, Calif, Medical College of Virginia, Richmond, 1915, fellow of the American College of Surgeons, on the staff of the San Joaquin General Hospital, French Camp St Joseph's Home and Hospital and the Dameron Hospital, died recently, aged 56

**Robert Lawson Hargrave,** Wichita Falls, Texas, Medical Department of Tulane University of Louisiana, New Orleans 1906, specialist certified by the American Board of Surgery, fellow of the American College of Surgeons attending surgeon Bethania and Wichita General hospitals, died January 29, of angina pectoris and cirrhosis of the liver

**August Frederick Henke** ⊕ St. Louis Missouri Medical College, St Louis, 1896 at one time assistant in internal medicine at his alma mater and instructor in medicine at the Washington University School of Medicine, member of the staffs of the De Paul and Deaconess hospitals member of the William Beaumont Memorial Committee of the St. Louis Medical Society, died December 19 aged 72, of carcinoma

**Charles Bernard Herman** ⊕ Statesville, N C, Jefferson Medical College of Philadelphia 1923, died January 18 apparently of heart disease after he had reached shore following the capsizing of his boat, aged 46

**George E Holtzapple** ⊕ York, Pa Bellevue Hospital Medical College, New York, 1884 specialist certified by the American Board of Internal Medicine fellow of the American College of Physicians for many years on the staff of the York Hospital, early in his career prominently identified for his successful use of oxygen in the treatment of pneumonia died February 22, aged 83 of chronic myocarditis

**Fred Henry Howard,** Strawberry Point Iowa the Hahnemann Medical College and Hospital, Chicago 1885 member of the American Medical Association, died February 4 aged 86, of carcinoma

**Charles Oliver Johnston,** Claysburg, Pa., Medico-Chirurgical College of Philadelphia 1897, member of the American Medical Association on the staff of the Nason Hospital Roaring Spring since 1912 president of the First National Bank, died January 21, aged 73, following an operation for mesenteric cyst

**Hiram Truman Jones** ⊕ Lawrence Kan, University Medical College of Kansas City Mo, 1899 member of the Radiological Society of North America Inc. past president of the Douglas County Medical Society, for many years county coroner team physician for the university athletic department from 1905 to 1919 captain in the medical corps of the state National Guard on the staff of the Lawrence Memorial Hospital where he died February 6 aged 72 of arteriosclerotic heart disease

**Norwin Lester Kerr** ⊕ Scottdale, Pa., College of Physicians and Surgeons Baltimore 1913, served during World War I on the staff of the Connellsville (Pa.) State Hospital, died January 22, aged 62 of angina pectoris

**Cora Irene Kipp,** Bareilly United Provinces India College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1909 for many years a medical missionary in India died February 20 aged 65 of heart disease, aboard ship en route to her home in this country

**Emil Koffler** ⊕ New York Universitatea din Bucuresti Facultatea de Medicina Rumania 1905 specialist certified by the American Board of Internal Medicine past president of the Bronx County Medical Association, fellow of the New York Academy of Medicine, at various times on the staffs of the Beth Israel and Montefiore hospitals for many years on the staff of the Bronx Hospital where he died February 14 aged 65, of meningitis

**Claude Clay Leaverton,** Tacoma, Wash University of Texas *School of Medicine, Galveston 1917, member of the* American Medical Association fellow of the American College of Surgeons on the staffs of the Tacoma General and St. *Joseph's hospitals, died recently, aged 57*

**Emily Lewi** ⊕ New York, Woman's Medical College of the New York Infirmary for Women and Children New York, 1891 affiliated with the New York Infirmary for Women and Children where she died February 28, aged 79, of atypical virus pneumonia

**John James McNamara** ⊕ Brockton Mass Tufts College Medical School Boston 1900 past president of the Plymouth District Medical Society, served during World War I on the staff of the Brockton Hospital, died in the Palmer Memorial Hospital, Boston, January 3, aged 73 of coronary thrombosis and lymphatic leukemia

**Alvah Londus Parsons,** Putney W Va, University of Louisville Medical Department 1909, served in the medical corps of the U S Army overseas for eighteen months during World War I, died May 8, aged 63, of heart disease

**Robert Quincy Patterson** ⊕ Little Rock Ark, Vanderbilt University School of Medicine, Nashville, Tenn, 1900, professor of dermatology and syphilology at the University of Arkansas School of Medicine, specialist certified by the American Board of Dermatology and Syphilology on the staffs of the Arkansas Children's Home and Hospital Baptist State Hospital St. Vincent's Infirmary, University Hospital and the Veterans Administration Facility, died January 23, aged 75, of hypertensive heart disease

**John Francis Russell,** New York, Columbian University Medical Department, Washington, D C, 1879, College of Physicians and Surgeons, medical department of Columbia College, New York, 1880, died in the New York Hospital January 8, aged 90

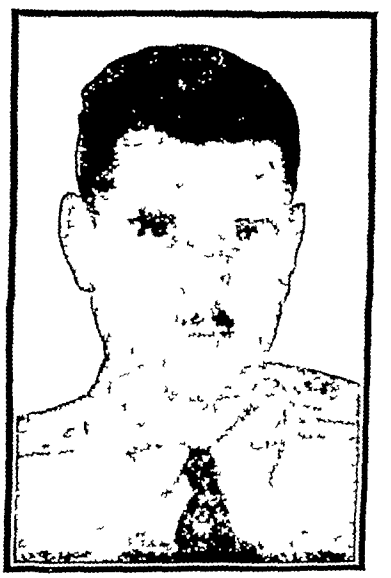
**Melchior Francis R. Savarese,** Orange, Conn., Long Island College Hospital, Brooklyn, 1911, member of the American Medical Association, on the staff of the New Haven Hospital, died in the Hospital of St Raphael, New Haven January 10, aged 64 of heart disease.



CAPT HARRY S HICKMAN
M C, A U S 1914-1944



LIEUT GORDON K. LAMBERT
(MC), U S N, 1909-1944



COL. ARMIN WALTER LEUSCHNER
M C, U S Army, 1905-1944

**Rufus Ingalls Newell,** Oakland Calif, College of Physicians and Surgeons Baltimore 1902 served during World War I formerly city physician and member of the Alameda County Charities Commission died in the Providence Hospital January 26 aged 65, of abdominal cancer and arteriosclerosis

**Herman H Schultz** ⊕ Ingleside, Neb Cotner University Medical Department Lincoln, 1893, *member of the Colorado* State Medical Society and the American Trudeau Society, served on the staff of the Modern Woodmen of America Hospital, Woodmen, Colo, assistant superintendent in charge

## KILLED IN ACTION

**Harry Samuel Hickman,** Grants Pass, Ore College of Medical Evangelists Los Angeles, 1940, interned at the Sacred Heart Hospital in Spokane, Wash diplomate of the National Board of Medical Examiners, began active duty in the medical reserve corps of the U S Army on Oct 14 1940 promoted to captain in the medical corps, Army of the United States on March 11 1942, died in the South China Sea Oct. 24 1944 aged 30, when the ship on which he was being transported to Japan was sunk by submarine action

**Gordon Kenneth Lambert** ⊕ Passed Assistant Surgeon Lieutenant, U S Navy Rochester, N Y, University of Rochester *School of Medicine and Dentistry* 1935 interned at the Highland Hospital in Rochester and the U S Naval Hospital in Washington D C, entered the U S Navy as an assistant surgeon lieutenant (jg) in August 1936 later promoted to lieutenant served as ship's doctor on the battleship *Arkansas* for three years sent overseas in September 1941 first stationed at Cavite and later transferred to Manila, where he was captured in January 1942, posthumously awarded the Bronze Star Medal for heroism during a Jap bombing attack, died in Bilibid Prison in the Philippines, Dec. 15, 1944 aged 35

**Armin Walter Leuschner** ⊕ Colonel M C U S Army Belleville, Ill Washington University School of Medicine, St Louis 1929 U S Army Medical School in 1932 interned at the Research Hospital in Kansas City, Mo entered the medical corps of the U S Army as a first lieutenant on Sept. 1, 1930 later promoted to captain major, lieutenant colonel and colonel died in Leyte, P I., Oct. 26 1944 aged 39, of battle wounds

of tuberculosis work at the Hastings State Hospital, died in the Mary Lanning Hospital, Hastings, January 10, aged 77, of embolism following an appendectomy and cholecystotomy

**Nathaniel Harvey Scott,** Wolfeboro, N H , Medical School of Maine, Portland, 1874, member of the American Medical Association, formerly member of the state legislature, died January 25, aged 94, of arteriosclerosis

**Charles A Shirey,** Manor, Pa University of Pennsylvania Department of Medicine, Philadelphia, 1893, member of the American Medical Association, served as bank director, died January 1, aged 83, of senility

**Charles Edward Smith,** Oklahoma City, Dallas Medical College, 1903, died January 21, aged 72, of influenza and pneumonia

**Charles G Smith,** Red Bud, Ill Marion-Sims College of Medicine, St Louis, 1892, Hospital College of Medicine, Louisville, 1892, also a pharmacist, served as a member of the school board and health officer, died in Kensington Md., April 19 aged 77, of coronary thrombosis

**Robert Leslie Spencer,** Dayton Pa., Medical Department of the Western University of Pennsylvania Pittsburgh, 1892, also a dentist died in Franklin December 16 aged 74 of cerebral hemorrhage

**Louis George Stuhler,** Rochester, Minn , State University of Iowa College of Medicine, Iowa City 1906 member of the American Medical Association, assistant professor of urology at the University of Minnesota Graduate School, served as a medical officer during World War I, died January 9, aged 62, of heart disease

**Percy Lee Templeton,** Montpelier, Vt , United States Medical College New York, 1882 past president of the state board of medical registration, honorary member of the Vermont State Medical Society member of the American Medical Association died January 1, aged 87, of senility

**William Anthony Terheyden** ⊕ Pittsburgh, Western Pennsylvania Medical College Pittsburgh 1901 served as a member of the visiting staff of St. Francis Hospital and physician to the Little Sisters of the Poor Home for the Aged, died January 6, aged 77, of rheumatic heart disease

**Curtis Wade Welch,** Santa Barbara, Calif , University of Southern California College of Medicine, Los Angeles, 1898, died recently, aged 70, of cerebral hemorrhage

**Henry C Werner,** Meta, Mo Missouri Medical College, St Louis, 1894, died January 14

**Frank A Winship,** Eagle Mills N Y , Albany Medical College 1888, member of the American Medical Association



CAPT LEONARD JOSEPH MCGEE
M C, A U S, 1917-1945



LIEUT ALBERT JOHN PORPORATO
(MC), U S N R., 1906-1945



LIEUT PAUL GERHARDT SCHROEDER
(MC) U S Navy, 1914-1945

**Walter Sherman Stuckey,** Wapakoneta Ohio Fort Wayne College of Medicine, 1892 past president of the Auglaize County Medical Society formerly the coroner of Auglaize County and president of the city council died January 21 aged 79, of carcinoma

honorary member of the Samaritan and Leonard hospitals in Troy recently awarded a medal by the Alumni Association of the Albany Medical College for "fifty years meritorious service to humanity" died December 3, aged 82, of bronchopneumonia and arteriosclerosis

## KILLED IN ACTION

**Leonard Joseph McGee,** Bristol Pa Jefferson Medical College of Philadelphia 1943 interned at the Nazareth Hospital in Philadelphia which dedicated its newly formed blood bank in his memory began active duty as a first lieutenant in the medical corps Army of the United States in December 1943 promoted to captain battalion surgeon of the 194th Glider Infantry 17th Airborne Division killed in action in Germany March 24, 1945 aged 27

**Albert John Porporato,** San Francisco, Creighton University School of Medicine Omaha 1932 member of the American Medical Association interned at the Southern Pacific General Hospital began active duty as a lieutenant in the medical corps U S Naval Reserve, on Sept 15 1942 assigned as naval officer on the procurement board in Seattle in February 1944 assigned to overseas duty actively participated in the invasion of Saipan, Leyte, Luzon Palau Tarawa Iwo Jima and Okinawa killed in action in the Asiatic area on the U S S *Pinckney* April 28, 1945 aged 38

**Paul Gerhardt Schroeder** ⊕ Passed Assistant Surgeon Lieutenant, U S Navy, Reading, Pa Syracuse University College of Medicine 1940, served an internship at the Reading (Pa ) Hospital and a residency at the Wernersville (Pa ) State Hospital, entered the medical corps of the U S Navy as a lieutenant (jg) in September 1942 a flight surgeon sent to the Pacific in 1944, while stationed at Glenview, Ill was cited by the Secretary of the Navy and awarded the Commendation ribbon following his saving the life of a flier whom he pulled out of a burning plane after a crash died in the Asiatic area May 11, 1945, aged 30

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

April 30, 1946

### Test Home for the War Paraplegic

During the war much progress was made in the treatment of paraplegia It is estimated that there are now 500 and that 40 per cent are young married men of an average age of 26 years The problem of their future has engaged the attention of the British Legion Much thought has been given to their rehabilitation, so that they will be kept fit and the feeling of uselessness removed, and that they can live as normally as possible with their families and be provided with a type of work in which they can interest themselves Much excellent work has been done at the Ministry of Pensions Paraplegic Hospital at Stoke Mandeville A new step is the taking over of Walton House by the British Legion as a test home for giving the paraplegic and their families an opportunity to rebuild family life. Wives are given instructions on how to treat husbands and during the month's stay will have the experience of looking after them If at the end of the time the wives find that they cannot undertake the responsibility, the British Legion will consider how further help can be given

At the ceremony of opening the House Major Gen H H Blake, superintendent of the Paraplegic Hospital and Dr Prideaux of the Ministry of Pensions expressed confidence in the plan Sir Brunel Cohen, treasurer of the British Legion, spoke of the difficult part that has to be played in this form of rehabilitation by the wives

### British Medical Journal to Reestablish Abstract Service

For many years the *British Medical Journal* published an epitome of current medical literature and then abandoned it as not sufficiently useful to its readers The *Journal* now proposes to reestablish the epitome, suitably modified The aim will be to supply abstracts through three different channels by publication of two monthly abstracting journals, one for medicine and the other for surgery, gynecology and obstetrics, by publication in each of the association's quarterly journals of abstract sections in the services covered by them, and by the reestablishment of the epitome mentioned. It will be necessary to cover about twelve hundred journals for a comprehensive abstract service. The proposed date of starting publication is January 1947, which means that the abstracting staff, including a medically qualified editor and assistant editor, lay subeditor, medical librarian, linguist and clinical assistants will have to begin work next July

At the meeting of the council of the association, which approved the plan unanimously, it was argued that nothing could be more inspiring than an English abstracting service for world medicine. It was also a good business proposition and even if it entailed a loss of $4,000 a year it should be undertaken It was also agreed that the association should undertake the publication of another special journal—a quarterly journal of clinical pathology

### Appendicitis in the Newborn

At the Royal Society of Medicine Mr W Etherington-Wilson reported a rare case of appendicitis in a newborn infant. A premature boy weighing 3½ pounds (1,588 Gm ) at birth did well until the fourteenth day, when he ceased feeding, vomited and appeared to be in pain, with a rise of temperature. The condition progressed until the sixteenth day, when the author was consulted The condition of the infant was grave, with pinched facies and signs of dehydration. Vomiting of small amounts of clear fluid continued, and there was constipation The abdomen was distended, tympanitic and tender all over The temperature was not elevated and the pulse was difficult to count. Much weight had been lost An exact diagnosis was not made, although peritonitis was suspected. Preoperative infusions were given with considerable improvement Operation was performed under spinal analgesia A right paramedial incision was made. A retrocecal appendix, an immobile cecum and diffuse peritonitis were found. The incision had been placed too high for a difficult appendectomy, and it was considered unjustifiable to enlarge it. The pelvis was drained and the incision sutured For twelve hours the child improved, probably because of the compensated dehydration, but death occurred forty eight hours later Necropsy showed the distal half of the appendix to be gangrenous, with adherent and enlarged lymph nodes visible The specimen was presented to the Museum of the Royal College of Surgeons

## PARIS

*(From Our Regular Correspondent)*

April 29, 1946

### Chronaximetric Test of Pregnancy

Paul Chauchard has investigated the chronaxia of muscles in the Neurophysiology Laboratory of the Sorbonne He has found that the chronaxia of the uterine muscle varies a great deal under the influence of endocrine action A diminution of chronaxia time is caused by estrogens and an increase by progesterone or gonadotropic substance. He has measured by the chronaximetric method the inhibitory action of the urine of pregnant women on uterine contractility and has established a new test of pregnancy The technic is as follows Two electrodes are applied to the uterus, exposed by laparotomy, of a nonpregnant guinea pig, a vaginal silver torsade being used as anode and a fine silver plated needle as cathode, which is fixed in the cornu uteri The normal chronaxia of non-pregnant uterine muscle is measured by known processes A drop of the urine or serum to be examined is then applied to the cornu at the level of the cathode, and after one or two minutes the chronaxia is measured again If the woman is pregnant, the chronaxia increases, the diagnosis is established within fifteen minutes After the cornu uteri has been washed with isotonic solution of three chlorides the chronaxia becomes normal again It is therefore possible to do repeated examinations The animal can be used again if the operation has been aseptically conducted Chauchard has found that only the urine of a subject under glandular treatment will give this result The biologic test of pregnancy can be obtained early In a three weeks pregnancy there is two and one half times the normal chronaxia, from two to seven months it is ten to twenty times greater, it then diminishes until two or three days before delivery when it becomes almost normal Therefore, by this method, it is possible to foretell delivery forty-eight hours in advance. The author has never had a misleading result. Correct reading of the chronaximeter is absolutely necessary A portable chronaximeter has been built

### Health of Former Prisoners of War and Deported

At a recent meeting of the Medical Society of the Paris Hospitals, Pierre Bourgeois former chief of the Sanitary Service of the Ministry for Prisoners and Deported made a report on the results of x-ray studies for tuberculosis performed during repatriation Of 833,410 roentgenograms 2 per cent of suspected active tuberculosis and 1 per cent of nonevolutive pulmonary sequelae were found The highest rate of tuberculosis was found in the political deported, 10 per cent, in deported workmen, 2 to 3 per cent, in prisoners of war, 1 5 per cent At a recent meeting of the Society for Scientific Studies on Tuberculosis, Tourestier pointed out that 0 64 per cent was the rate of detected tuberculosis in the whole civil population of Montreuil (32,823 persons) in May 1945 At a meeting of the Medical Society of the Paris Hospitals Etienne Bernard empha-

sized that the morbidity in prisoners of war was much larger than that shown during repatriation A large number of the tuberculous, especially those seriously affected, were sent back by the Germans during the years previous to the liberation since they were unfit for work On the other hand, as pointed out by Professor Richet at the same meeting, most of the tuberculous deported died in the camps, 100 necropsies at Buchenwald showed that 40 per cent of the deaths were due to tuberculosis

### Metrazol in Dermatology

J Charpy and A Grapin report in the *Lyon Médical* the results they have obtained with metrazol in 200 dermatologic cases The authors found that there was no danger of shock if metrazol was given by mouth or intramuscularly Two types of treatment were employed 1 Short intensive therapy was employed in cases of localized pruritus, such as anoscrotal pruritus, anovulvar pruritus, neurodermatitis and lichen For three to five days one injection of 100 to 200 mg of metrazol is given intramuscularly with 100 to 300 mg every two to three hours orally—a total of 700 mg to 2 Gm daily Nurslings over 6 months, who tolerate metrazol better than adults, are given 100 to 200 mg every two to three hours There was immediate relief of pruritus or rapid sedation within twenty-four to forty-eight hours Pains due to zona and herpes were also relieved Improvement occurred in 10 cases of chronic urticaria, although the disease had resisted antihistaminic medication 2 A longer type of treatment was used for ulcer of the leg, ten to fifteen injections of 100 to 200 mg each day or every other day Five to 10 per cent of patients treated with metrazol show slight excitation and cerebral exaltation of a few minutes duration Treatment is discontinued two hours before bedtime so as not to interfere with sleep

## THE NETHERLANDS

*(From Our Regular Correspondent)*

AMSTERDAM, April 30, 1946

### Penicillium Expansum

Before the war van Luyke investigated the influence of extracts of Penicillium expansum on the development of some diseases of plants He found that extracts of special types of Penicillium expansum (Link) Thom produced antibiotics which he named mycomes The growth of Pythium de Baranyum Hesse could be hampered by an extract of Penicillium expansum in a dilution of 1 1 280 after five days

During the war the research was continued at the University of Utrecht in the Botany Department of Professor V J Koningsberger Penicillium expansum was raised in considerable quantities Chemical studies were made at the University of Amsterdam under the direction of Professor B C P Janden.

In February 1944 crystals of Penicillium expansum were isolated which acted on Pythium de Baranyum in a dilution of 1 16,000,000 It was called expansine and was the first Dutch antibiotic The chemical composition, as defined by Oosterhuis and Nauta, was anhydro-3-oxymethyl-4-pyron-carbonacide. After the war it was learned that Professor Raistrick in England had isolated a product called patulin from Penicillium patulum with the same chemical composition as expansine.

Expansine is very toxic and can be used only in unquents on external bacterial and mycotic diseases, such as impetigo, eczema and ringworm. Expansine is effective in infections caused by gram positive and gram negative micro-organisms Penicillin from Penicillium notatum produces therapeutic effects only on gram positive micro-organisms Research is in progress on the therapeutic effects of expansine on gram-negative organisms, such as diphtheria and tuberculosis, by reducing its toxicity for human beings

### Netherlands Society of Physiologists

The first postwar meeting of the Netherlands Society of Physiologists was held at Amsterdam on January 12. Research on the rat growth factor in butter (Boer), electrical excitability (Duyff), starvation diseases (Pompen, Groen, Merckx), alloxan diabetes (de Jongh), histamine toxicity in relation to the thymus (Overbeek), resorption of iron compounds from the intestine (Groen) and responsiveness of snail muscle (Postma) were among the subjects presented Endocrinologic interest is attached to three reports of Amsterdam workers Experiments on rats conducted for more than a year have shown that ovaries are protected from damage by exhaustion caused by the prolonged action of gonadotropins by intrinsic refractoriness against the agent limiting its action, inhibition of the occurrence of new follicles and corpora lutea in the presence of persisting structures, and transferable refractoriness, developing in the course of four weeks treatment with a gonadotropin and persisting against the same antigen for weeks afterward More than the total fertile life would be needed, according to estimates based on these experiments, to approach the goal of irreversible damage from excessive doses (Uyldert, Freud) Treatment of young male rats with old rat serum, compared with adequate controls, shows significant testicle growth inhibition This, explained on the basis of transferable refractoriness to autogenic gonadotropin, is claimed to indicate that senility in the "endocrinologic sense' might be explained by a slow development during life of refractoriness to antigenic, hypophysial and allied hormones (Freud, Uyldert) The most portentous results in mice were reported by De Vaal, who consistently showed that single injections of testosterone propionate in late pregnancy produces a female offspring with urogenital developmental anomalies (as already known) and that in this condition pubertas precox followed by pseudopregnancy regularly occurs, indicating that intersexuality and the other two phenomena are interrelated.

### Shortage of Nurses

A great shortage of nursing staff constitutes a serious handicap to our hospitals Education of nurses was impossible during German occupation in the last years of the war In addition many trained nurses left the service owing to nazi measures Thousands of patients wait for hospitalization owing to this shortage, although there is unused space in the hospitals and clinics

### Reorganization of Higher Education

During the last month the following medical appointments have been made At Leiden University G G J Rademaker professor of neurology, J Mulder professor of internal medicine, at Utrecht University A A J van Egmond became otorhinolaryngologist and J J Zoon dermatologist, at Groningen University T P van Buchem professor of internal medicine and J Ariëns Kappers professor of anatomy and embryology

### Foreign Students in The Netherlands

During the last week of March 400 foreign students are expected from various countries Some have already arrived at Amsterdam and were received by their fellow students and by state, municipal and university authorities Close contact among young intellectuals of civilized countries is a desirable contribution to spiritual and material intercourse

### Artificial Kidney

Dr W J Kolff has constructed an "artificial kidney" that may be of aid in the treatment of uremia. The apparatus maintains life until the patient's kidneys again function The patient's heparinized blood is dialyzed outside the body to remove retention products The dialyzing surface comprises 24,000 square centimeters, and the blood of a patient can be washed in one dialysis In fourteen hours 120 liters of blood can be passed through the artificial kidney, and 250

Gm. of urea washed out of the blood Creatinine, indoxyl and other azotemic products also are removed at the same time. The patient's kidneys may resume function in the five or six days after washing before uremic intoxication again threatens the patient's life. The artificial kidney has already been useful in cases of chronic uremia acute uremia and other anuric conditions

## AUSTRALIA

*(From Our Regular Correspondent)*

April 8 1946

### Elizabeth Kenny in Australia Again

Miss Elizabeth Kenny arrived in Brisbane on the *Mariposa*, April 6 She claims that her methods have been adopted and have been proved successful in Britain, America, Russia, Greece, Sweden and Spain She fears that doctors in Australia have been influenced by inaccurate reports from medical men who were in no way connected with her work. She denies that her methods are orthodox. She wants the Sister Kenny Paralysis Clinics in Queensland closed down because they are not carrying on her work. She considers that it is a farce for her name to be attached to such institutions

Miss Kenny states that she is on four months' leave of absence from the Kenny Institute in Minneapolis Three years ago she had made it known that she would return to Australia if she was invited but she never was "Anybody who doubts my treatment should produce their proof," she said

The Queensland government is sympathetic to her requests Sister Kenny Clinics had been established in Brisbane, Rockhampton, Townsville, Cairns and Toowoomba and were open to people who applied for her treatment These clinics have so far cost about £65,000 for equipment, training of nurses, rent, staff and upkeep During the last epidemic of poliomyelitis only six applications had been received for her treatment. Mr Foley, health minister of Queensland, said that "if Sister Kenny has anything to give which will help to assist sufferers, the government will be only too pleased to help her" Miss Kenny has brought back movie films of her treatment which she will release to any organization or public theater She is anxious to present her evidence to medical men in Queensland and wishes the health department to investigate her reports "in the interests of humanity" Actually, orthopedic surgeons in Australia are well informed on the results of the careful and thorough evaluations of her methods made in America These studies have amply confirmed their own conclusions

### Wartime Control of Medical Men Lifted

In the interests of national security, regulations were made during the war to provide for the allocation of medical men to the services, hospitals and civil practice Even in private practice the location was determined. Medical coordination committees were established in each state, and a central committee laid down policy and established quotas needed for each field of duty Although the powers of compulsion were limited, the committees achieved an effective and equitable distribution under great difficulties, although there were inevitable deficiencies of medical men in some areas Willing cooperation of nearly all doctors and careful consideration of each case by the committees resulted in smoothness and efficiency These controls cease April 8 Control of medical equipment and drugs continues

### Shortage of Cadavers

There is a serious shortage of cadavers for dissection at the department of anatomy of Sydney University The increased numbers of students have accentuated this deficit. There were no female subjects available Professor Burkit is announcing this difficulty in the hope that voluntary action will be taken by testamentary arrangement to supplement the meager supply made available by the health department.

## BELGIUM

*(From Our Regular Correspondent)*

April 11, 1946

### Temporary Ileac Transcecal Anus

Professor Hustin describes in the *Scalpel* an interesting technic of a temporary ileac transcecal anus which presents many advantages It is easy and safe to establish since it is really an enlarged cecal fistula, it insures a total shunting of the fecal current, it passes only formed feces not irritating to the skin, it utilizes the action of the sphincter of Bauhin's valve, thereby pooling the intestinal fluids in the terminal portion of the ileum, it does not lead to malnutrition or dehydration of the patient, the fecal current can be reestablished by a simple and safe procedure, constriction or kinking of the intestine cannot supervene. The ileac transcecal anus is to be regarded as a preliminary measure in operations on the rectum and on all parts of the large intestine with the exception of the cecum

### Professor Fleming in Brussels

The administrative council of Universite libre de Bruxelles conferred the doctorate *honoris causa* of the Faculty of Medicine on Sir Alexander Fleming, M D, F R S, at a solemn academic meeting held in the grand hall of the university on November 29 At this impressive session Professor Bordet gave an account of the work of the great British scientist. He stressed the responsibility of scientists toward humanity and pointed out that it is medicine among all the sciences which exerts the most beneficent role, ignoring boundaries and special interests in order to serve humanity without distinction of nationality

### Convention of Nurses

More than a thousand nurses from all parts of Belgium met in Brussels in a congress which discussed important and interesting questions The first session was held in the great hall of the Academic Palace Papers were read on the profession of nursing as it exists today and its function as a factor in national recovery, on the superior council of schools of nursing, on the foundation of a college of nursing and on the program of study

## Marriages

FRANK RUSSELL REYNOLDS, Wilmington, N C to Miss Marguerite Murchison Crow of Masonboro Sound, March 30

HUGH HAYNESWORTH WELLS, Holly Hill, S C, to Miss Beverly Jane Carey of Oxford, N C., in Columbia, April 9

LA RUE MERIDA MEDLIN, Bennettsville, S C., to Miss Marie Elizabeth Hammond of Fairfax in Florence, April 6

FRANKLIN P REULBACH, St. Louis, to Miss Hazel Gene Farrow of Crystal City, Mo, at Festus, March 2

JOHN RICHARD SAUNDERS JR., Richmond, Va., to Miss Caroline Virginia Doyle of McKenney, March 30

GEORGE WARREN PRATHER, New Orleans, to Miss Kathleen Elaine Halphen of Opelousas, La., March 20

LAURENCE EDWIN FLEMING to Miss Dorothy Hutchison Sarratt, both of Charlotte, N C., April 16

CHARLES MELVERN KRATOCHVIL to Miss Mary Elizabeth Pirie, both of Omaha, Sept. 3, 1945

LYON STEINE, Valley Stream, N Y, to Miss Hazel McGinnis of Altamont, Tenn., April 18.

LEO V MULLIGAN, St Louis, to Miss Elizabeth Leyse of Decatur, Ind, February 28

ROBERT B ALLENDER, Boone, Iowa, to Miss Joan Balster in Iowa City, March 24

WALDEMAR B HARTMANN to Miss Clara Zenke, both of Detroit, February 2

# Correspondence

## MEDICAL SERVICE OF THE MERCHANT MARINE

*To the Editor* —In the April 13 issue of THE JOURNAL I note a statement made by Senator Pepper (page 1027) concerning the origin and operation of the United States Marine Hospitals that deserves some examination and comment

While the Senator's statement is somewhat sketchy, it is definitely misleading in that it creates the impression that the system devised by Congress in 1798 has continued throughout the years without change.

The facts are that in 1798 Congress did provide for the establishment of Marine Hospitals for the "temporary relief and maintenance of sick or disabled seaman" and that 20 cents should be deducted from their monthly pay The term "seamen" included men of the Navy as well as of the Merchant Marine In about 1812 naval hospitals were established for navy personnel The sum so collected went into the Marine Hospital fund and was disbursed by the various collectors of customs

In 1870 the assessment was increased to 40 cents monthly, but in 1884 Congress abolished the collection of assessments entirely and provided that the cost of maintaining the Marine Hospital Service be paid out of tonnage taxes

According to the reports of the Marine Hospital Service, the sums collected from sailors throughout the period 1798-1884 was substantially less than the cost of hospital administration—furthermore, the cost of hospital construction from the very first was provided by special acts from government funds

It will therefore be evident that the system from 1798 to 1884 was only partially supported by the beneficiaries and that subsequently the latter group was wholly relieved of any contribution and the employer group taxed for the support of the Marine Hospitals

With the passing of years, an ever increasing proportion of the maintenance charge has been from the government treasury

Senator Pepper's statement that "ever since 1798 our merchant seamen have received their medical care through services supported by social insurance and tax funds etc." is somewhat erroneous

If the record should be available the argument in Congress and discussion of the legislation in 1798 would no doubt be enlightening and interesting

RICHARD H CREEL, M D, San Francisco

## OTOGENIC BRAIN ABSCESS

*To the Editor* —I was interested to read in the issue of March 9 the report on visualization of otogenic brain abscess My interest is aroused because of my use of this method in June 1935

A man aged 55 had a slowly developing neurologic ailment which eventually resulted in right sided paresis and speech difficulty The condition was considered to be due to cerebral arteriosclerosis with probable thrombosis This opinion was concurred in by a consulting neurologist from a neighboring city, and a gloomy outlook was predicted The patient s ears showed only the scarring of old middle ear disease, the drums were not inflamed, and there was no discharge nor history of recent infection

Some days later a bloody discharge from the left ear commenced Insufficient thought was given to this development, so it was some time later before the diagnosis of brain abscess was considered. On June 26, 1935 lipiodol was introduced into the left auditory meatus, as much as would slowly flow in X-rays then were made in the anteroposterior and lateral positions An abscess cavity 2½ by 1¼ inches in diameter over the left temporal area was shown

Operation was performed on June 28 by Dr John W Holloway of Lakeside Hospital, Cleveland, and Dr C B Pride of Morgantown, W Va The skull was trephined and 3 ounces of odorless pus aspirated The cavity seemed well walled off, and a rubber drain was inserted

Convalescence was slow and the outcome much in doubt, but eventually the patient got well, physically active and with full use of his faculties, save for some deafness A year later recurrent central nervous system disturbance with coma took place. There were no localizing signs Dr Holloway again saw the patient and performed several exploratory brain punctures, but with no certain feeling that an abscess was present None was found, the patient eventually came out of coma, got well and lived a comfortable life for five more years, dying at last in a California hospital of what was possibly a recurrence of his malady

This case was not reported at the time because it seemed likely to me that lipiodol had been frequently used for such a purpose.

F R WHITTLESEY, M D, Morgantown, W Va.

## RESTLESS LEGS

*To the Editor* —In the January 5 issue of THE JOURNAL there were two communications concerning the syndrome of 'restless legs," recently described by me (*Acta med Scandinav*, 1945, supp 158) Dr Hyman I Goldstein writes that restless legs are similar to meralgia paresthetica and states that "perhaps Ekbom has only revived previously described syndromes" There is no need, however, to revive meralgia paresthetica This syndrome is well known, and a description can be found in every textbook of neurology The diagnosis is simple. It should not be possible to confuse it with restless legs In meralgia paresthetica the discomfort is described as pins and needles, burning, numbness and even pain It is felt superficially in a distinct area on the lateral aspect of one thigh, sometimes bilaterally A certain amount of sensory loss is often found at examination. The paresthesia is aggravated by standing and walking In restless legs there is an indescribable, very disagreeable, creeping, irritating feeling deep inside both legs (seldom unilaterally) between the knee and the ankle, sometimes in the thighs too The arms may be affected In some cases there is real pain The creeping sensations appear only when the legs are at rest, e. g at the cinema or in bed The victims are forced to keep their legs moving or walk about to obtain relief They may be unable to sleep for many hours No signs are found at examination Four other conditions mentioned by Dr Goldstein (akinesia algera, dysbasia angiosclerotica, Solis-Cohen's vasomotor ataxia and Osler s paresthetic meralgia) are also distinctly different from restless legs

Dr J A Winter is convinced that restless legs are "associated with either chronic nonspecific prostatitis or testosterone deficiency or a combination of the two" About half of his patients with prostatitis had restless legs This is a very interesting observation but it does not entirely explain the syndrome, for the victims are of both sexes and children also are afflicted In my normal series of healthy people 5 per cent had a mild form of restless legs Among pregnant women I found a frequency of 11 per cent, the symptoms disappearing after parturition.

K. A EKBOM, M D,
Serafimer Hospital,
Stockholm, Sweden

# Council on Medical Education and Hospitals

## ADDITIONAL RESIDENCIES APPROVED

The following residency training programs have recently been approved by the Council on Medical Education and Hospitals. Those designated with an asterisk (*) have been granted temporary approval in accordance with the plan announced in THE JOURNAL, March 2, 1946, p. 586. Previous lists were published in THE JOURNAL Sept. 29, 1945 and April 20, 1946.

| | |
|---|---|
| **Medicine** | |
| *Corwin Hospital | Pueblo, Colo. |
| Wesley Hospital | Wichita, Kan. |
| *Dr. W. H. Groves Latter Day Saints Hospital | Salt Lake City |
| **Neurology** | |
| *University Hospitals | Minneapolis |
| *Rochester General Hospital | Rochester, N. Y. |
| **Neurosurgery** | |
| St. Vincent's Hospital | Jacksonville, Fla. |
| Mercy Hospital | Chicago |
| *University of Kansas Hospitals | Kansas City, Kan. |
| University of Nebraska Hospital | Omaha |
| *University Hospitals | Oklahoma City |
| Baptist Memorial Hospital | Memphis, Tenn. |
| **Orthopedic Surgery** | |
| *James M. Jackson Memorial Hospital | Miami, Fla. |
| *Methodist Hospital | Indianapolis |
| *Lakeville State Sanatorium | Middleboro, Mass. |
| *University Hospitals | Minneapolis |
| *St. Charles Hospital Orthopedic Clinic | Brooklyn |
| *Meadowbrook Hospital | Hempstead, N. Y. |
| *St. Vincent's Hospital | Staten Island, N. Y. |
| *North Carolina Baptist Hospital | Winston-Salem, N. C. |
| *William Beaumont General Hospital | El Paso, Texas |
| *U. S. Marine Hospital | Staten Island, N. Y. |
| **Pathology** | |
| Beth Israel Hospital | Boston |
| Williamsport Hospital | Williamsport, Pa. |
| Deaconess Hospital | Spokane, Wash. |
| U. S. Naval Hospital | Brooklyn |
| U. S. Naval Hospital | St. Albans, N. Y. |
| **Pediatrics** | |
| *Mount Sinai Hospital | Chicago |
| *Harper Hospital | Detroit |
| *Creighton Memorial St. Joseph Hospital | Omaha |
| *Brooklyn Hospital | Brooklyn |
| *Beth Israel Hospital | New York City |
| *Hermann Hospital | Houston, Texas |
| **Physical Medicine** | |
| *Los Angeles County Hospital | Los Angeles |
| *University of California Hospital | San Francisco |
| *Mount Sinai Hospital | New York City |
| *Presbyterian Hospital | New York City |
| **Plastic Surgery** | |
| *University of Kansas Hospitals | Kansas City, Kan. |
| *Blodgett Memorial Hospital | Grand Rapids, Mich. |
| *University Hospitals | Oklahoma City |
| *Jefferson Medical College Hospital | Philadelphia |
| **Psychiatry** | |
| *Fairfield State Hospital | Newton, Conn. |
| *Kankakee State Hospital | Kankakee, Ill. |
| *Cleveland State Hospital | Cleveland |
| *Philadelphia Psychiatric Hospital | Philadelphia |
| *Vermont State Hospital | Waterbury, Vt. |
| **Radiology** | |
| *Hospital of St. Raphael (Roent.) | New Haven, Conn. |
| *Edgewater Hospital (Roent.) | Chicago |
| *Ellis Fischel State Cancer Hospital (Rad.) | Columbia, Mo. |
| *Memorial Hospital (D. R.) | New York City |
| *Lutheran Hospital (Rad.) | Cleveland |
| *Rhode Island Hospital (Rad.) | Providence, R. I. |
| **Urology** | |
| Wesley Memorial Hospital | Chicago |
| *Methodist Hospital | Indianapolis |
| *University of Kansas Hospitals | Kansas City, Kan. |
| Peter Bent Brigham Hospital | Boston |
| Minneapolis General Hospital | Minneapolis |
| *St. Mary's Hospital | Minneapolis |
| Research Hospital | Kansas City, Mo. |
| *Millard Fillmore Hospital | Buffalo |
| **Urology—Continued** | |
| *Beth Israel Hospital | New York City |
| Charlotte Memorial Hospital | Charlotte, N. C. |
| *University Hospitals | Oklahoma City |
| St. Vincent's Hospital | Erie, Pa. |
| *Mount Sinai Hospital | Philadelphia |
| *Roper Hospital | Charleston, S. C. |
| *La Crosse Lutheran Hospital | La Crosse, Wis. |
| *U. S. Naval Hospital | Bethesda, Md. |
| *U. S. Naval Hospital | St. Albans, N. Y. |
| *U. S. Naval Hospital | Philadelphia |
| *U. S. Naval Hospital | Portsmouth, Va. |

*Indicates temporary approval.

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Malpractice—Volkmann's Contracture, Negligence Following Reduction of Fracture.**—The plaintiff sued for *damages to his arm allegedly caused by the malpractice of the* defendant physician. At the close of the plaintiff's evidence, the court entered a directed verdict in favor of the defendant from which the plaintiff appealed to the Supreme Court of Iowa.

The plaintiff, a 9 year old boy, fractured his right arm above the elbow and was immediately taken to a hospital, where he was treated by one of the defendant physicians, partners in the practice of medicine. The fracture was reduced, the arm immobilized in a position of acute flexion and the plaintiff's parents told that the arm would be all right, that there was nothing to worry about and that they should take the boy to the defendant's office only if the arm hurt or bothered him. The *injury occurred on a Saturday. By the next Friday morning* his arm and hand were so puffed up and swollen that the tape was cutting into his flesh and causing it to bleed, his finger nails were blue and "his elbow was swollen as big as his knee." He was then taken to the defendants' office, where more tape was put on and the mother told to put ice packs on the plaintiff's arm for three days. Three days later, when the plaintiff returned to the defendants' office, the plaintiff's mother was told that the boy "had a slight contracture" but that "there was nothing much a person could do, just let it heal and wait until the swelling went down." He did add more tape, however. During the next month or so the plaintiff was taken to the defendants' office about twice a week but no tape was ever loosened or removed, in fact more was added on almost every visit. Prior to the removal of the tape the plaintiff's hands, according to his mother, "began to take a funny shape, didn't look like a hand, began to draw down, and some of his nails came off." She asked the defendant about this condition and was told that the boy would have to go to the University Hospital at Iowa City "for a little correction." Five weeks after the fracture occurred, the tape holding the arm in acute flexion was removed. Much of the skin and flesh came off with the bandage, 'great gobs of pus was laying there on the tape, and his arm was just one mass of it." The doctor took gauze and cleaned off the worst of it and told the mother to take Ivan home and wash the arm off with soap and water. He put no dressing on the arm at this time. It was not until January that the sores caused by the bandages had healed sufficiently for the plaintiff to be taken to the hospital at Iowa City, where he underwent an operation and remained hospitalized for six months. During the next two and a half years the plaintiff returned to the hospital nine times, once for four months, again for three months, for five weeks and for shorter periods. Three serious operations were performed on these visits to the hospital, and for more than two years the plaintiff wore a brace or corrective apparatus day and night.

The defendants conceded that the plaintiff was suffering from a deformity known as Volkmann's contracture, a condition in which the muscles of the forearm are lost to further use and are replaced by fibrous tissue, resulting in a permanent *deformity sometimes* called a claw hand. It was the plaintiff's theory that, when his arm and hand became swollen, the exercise

of reasonable care required the defendant physicians to remove or at least loosen the bandage, or widen the acute angle of flexion in which the arm was held, and that their failure to do so was negligence which was the proximate cause of his deformity The court said that the jury could have found from the evidence that the plaintiff was obviously in danger of suffering a Volkmann's contracture when he was taken to the defendants' office on the Friday morning following the accident One of the plaintiff's experts testified that 'the symptoms (of Volkmann's contracture) are puffing, swelling, blue finger nails, which would indicate the arterial blood supply is going down and not coming back," and another said that "swelling puffed hand and blue fingernails" were symptoms of the Volkmann's contracture which followed These are the symptoms, said the court, which according to the undisputed evidence the plaintiff exhibited to the defendants on Friday morning Furthermore, the testimony showed the imperative need for prompt treatment when the aforementioned symptoms were present The medical witnesses substantially agreed that forty-eight hours after the circulation is obstructed is ordinarily about the maximum time that a Volkmann's contracture could result, with six hours about the minimum The court said that there was thus substantial evidence to support the plaintiff's theory and that the trial court should have submitted the case to the jury

The medical testimony on which the plaintiff most relied was given by a witness from a town about 25 miles from Waterloo This witness, said the court, was not disqualified from testifying as an expert merely because he did not live in Waterloo since the evidence showed that he knew the degree of skill and care exercised by physicians in Waterloo and similar localities On the issue of negligence, this witness stated " I would say the standard in that case would be to take the arm loose and re-x-ray it and see what was wrong loosen the bandage and change the degree of flexion, possibly extend it. " In this he was corroborated, at least in part, by another expert witness whom the defendants conceded to be a qualified practitioner in Waterloo When asked as to the proper and average practice in that locality, this witness said "They would probably alter his bandage sufficiently to lessen the acuteness of the flexion, and place the arm at rest, and probably apply ice or cold packs of some nature, in order to cut down on the swelling The recognized treatment, if the radial pulse is diminished any appreciable amount, *or* there is cianosis [cyanosis], bluish discoloration of the hand, *or* marked swelling, is to reduce the flexion the acute flexion, to a point where the radial pulse becomes somewhere near normal" In other words, the court indicated, this plaintiff's expert witness said, in substance, that the flexion should have been widened if there was bluish discoloration of the hand or marked swelling two symptoms which the plaintiff exhibited on Friday morning The only treatment administered on that day however, was the application of more tape to hold the arm in place, even though the original bandage was cutting into the flesh until it bled, and the suggestion that the mother apply ice packs for three days By clear implication if not expressly, the defendant told the plaintiff's mother that it would not be necessary to see the boy again until the end of the three day period On the following Tuesday, after ice packs had been applied for three days, the boy was taken to the doctor, who then admitted 'that Ivan had a slight contracture He said there was nothing much that a person could do just let it heal and wait until the swelling went down. This is consistent, said the court, with the testimony of one of the plaintiff's experts that "it can be a permanent disability when it isn't taken care of right away" and with the plaintiff's contention that it was then too late to remedy the condition by cutting the tape so that the hand could be lowered 2 inches Accordingly the court concluded that there was sufficient evidence not only that it was negligent for the defendants not to relieve the flexion in which the arm was held or remove or loosen the bandage but that such negligence was the proximate cause of the plaintiff's unfortunate deformity

Accordingly the court concluded that the trial court erred in not submitting the case to the jury reversed the judgment for the defendant and remanded the case to the trial court.—*Bartholomew v Butts 5 N W (2d) 7 (Iowa 1942)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL May 25 Page 355

### BOARDS OF MEDICAL EXAMINERS

ALABAMA Montgomery, Jan 21 23 Sec Dr B F Austin 519 Dexter Ave. Montgomery 4

ARIZONA * Phoenix 1st week in July Sec Dr J H Patterson 826 Security Bldg Phoenix.

ARKANSAS * *Medical* Little Rock, June 6-7 Sec, Medical Board of the Arkansas Medical Society Dr L J Kosminsky, Texarkana *Eclectic* Little Rock June 6 Sec. Dr C. H Young 1415 Main St Little Rock

CALIFORNIA *Examination* San Francisco June 11 13 Sec. Dr Frederick A Scatena 1020 N St Sacramento 14

COLORADO * *Endorsement* Denver July 2 Final date for filing application is June 17 Sec Dr J B Davis 831 Republic Bldg Denver 2

CONNECTICUT * *Medical* Hartford July 9 10 Sec to the Board Dr Creighton Barker P O Box 1438 New Haven *Homeopathic* Derby July 9 10 Sec. Dr Joseph H Evans 1488 Chapel St New Haven

DELAWARE *Examination* Dover, July 9 11 *Reciprocity* Dover July 16 Sec Medical Council of Delaware Dr J S McDaniel 229 S State St Dover

DISTRICT OF COLUMBIA * *Reciprocity* Washington June 10 Sec Commission on Licensure Dr G C Ruhland 6150 E Municipal Bldg Washington

FLORIDA * Jacksonville June 24-25 Sec. Dr Harold D Van Schaick 2736 S W Seventh Ave Miami 36

GEORGIA Atlanta Oct 8-10 Sec State Examining Boards Mr R C Coleman 111 State Capitol Atlanta 3

HAWAII Honolulu July 8-11 Sec Dr S E Doolittle 881 S Hotel St, Honolulu 53

IDAHO Boise July 9 Dir Bureau of Occupational Licenses Miss Agnes Barnhart, 355 State Capitol Bldg Boise

ILLINOIS Chicago June 25 27 Sec. Department of Registration & Education Mr Philip Harman Springfield.

INDIANA *Examination* Indianapolis June 1947 Exec Sec Board of Medical Registration & Examination Miss Ruth V Kirk 627 K. of P Bldg Indianapolis 4

KANSAS *Reciprocity* Topeka, June 6 Sec. Board of Medical Registration & Examination Dr J F Hassig 905 N Seventh St Kansas City 10

MAINE Augusta, July 2-3 Sec Board of Registration of Medicine Dr Adam P Leighton 192 State St Portland

MARYLAND *Homeopathic* Baltimore June 18-19 Sec Dr J A Evans, 612 W 40th St Baltimore *Medical* Baltimore Dec 10-13 Sec Dr J T O Mara 1215 Cathedral St Baltimore.

MASSACHUSETTS Boston July 9 12 Sec. Board of Registration in Medicine Dr H Q Gallupe 413 F State House Boston 33

MICHIGAN * Lansing Oct. 9 11 Sec Board of Registration in Medicine Dr J E McIntyre 100 W Allegan St Lansing 8

MINNESOTA * Minneapolis, June 18-20 Sec. Dr J F Du Bois 230 Lowry Medical Arts Bldg St Paul 2

MISSISSIPPI June Asst. Sec. State Board of Health Dr R N Whitfield, Jackson 113

NEW JERSEY Trenton June 18 19 Sec. Dr E S Hallinger 28 W State St Trenton

NEW MEXICO * Santa Fe Oct 7-8 Sec Dr LeGrand Ward 141 Palace Ave Santa Fe.

NEW YORK Albany Buffalo New York and Syracuse June 24 27 Sec. Dr Jacob L. Lochner Education Bldg Albany

NORTH CAROLINA *Endorsement* Morehead City July 5 Act. Sec. Mrs L McNeill 226 Hillsboro St. Raleigh.

NORTH DAKOTA Grand Forks July 2 5 Sec. Dr G M Williamson 4½ S Third St Grand Forks

OREGON * *Examination* Portland July 24 26 Exec Sec. Miss Lorienne M Conlee 608 Failing Bldg Portland 4

RHODE ISLAND * *Examination* Providence, June 27 28 Sec Division of Examiners Mr Thomas B Casey 366 State Office Bldg, Providence

SOUTH CAROLINA Columbia June 24-26 Sec Dr N B Heyward 1329 Blanding St. Columbia.

SOUTH DAKOTA * Pierre July 16-17 Sec. Medical Licensure State Board of Health Dr Gilbert Cottam Capitol Bldg Pierre.

TEXAS Dallas June 11 13 Sec Dr T J Crowe 918 20 Texas Bank Bldg Dallas 2

WASHINGTON * Seattle July 11 12 Sec Department of Licenses Miss Nell Adams Olympia

WEST VIRGINIA Charleston July 15-17 Sec. Public Health Council, Dr John E Offner State Capitol Charleston 5

WISCONSIN * June 25-27 Sec. Dr C A. Dawson River Falls.

WYOMING Cheyenne, June 3-4 Sec. Dr G M Anderson Cheyenne.

* Basic Science Certificate required.

### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

COLORADO Denver June 5 6 Sec. Dr Esther B Starks 1459 Ogden St Denver

CONNECTICUT June 8 Address State Board of Healing Arts 250 Church St. New Haven 10

IOWA *Examination* Des Moines July 9 Sec. Division of Licensure & Registration Mr H W Grefe Capitol Bldg Des Moines 19

MINNESOTA *Examination* Minneapolis June 4-5 Sec Dr Raymond N Bieter 126 Millard Hall Univ of Minnesota Minneapolis 14

OREGON Portland July 6 Sec. Mr C D Byrne Univ of Oregon Eugene.

RHODE ISLAND *Examination* Providence Aug 14 Sec Division of Examiners Mr Thomas B Casey 366 State Office Bldg, Providence

SOUTH DAKOTA Probably Aberdeen June 7 8 Sec Dr G M. Evans Yankton

TENNESSEE *Examination* Memphis June 13 14 Sec. Dr O W Hyman 874 Union Ave. Memphis

WISCONSIN *Examination* Milwaukee June 1 Sec Prof R. N Bauer 152 W Wisconsin Ave Milwaukee 3

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

### American Heart Journal, St. Louis

**31** 115-252 (Feb.) 1946

*Pericarditis with Effusion Following Infections of Upper Respiratory Tract. D. A. Nathan and R. A. Dathe.—p. 115
*Hemiplegia Following Carotid Sinus Stimulation. J. M. Askey.—p. 131
Transitory A-V Block Occurring During Scarlet Fever. W. D. Paul, C. Rhomberg and Julia Cole.—p. 138
Rate and Control of Blood Flow Through Skin of Lower Extremities. R. H. Goetz.—p. 146
Electrocardiographic Changes in Cases of Infectious Hepatitis: Study of 11 Cases Occurring in an Epidemic. H. Dehn, H. Feil and R. E. Rinderknecht.—p. 183
Method for Construction of Vectorcardiogram from Einthoven Electrocardiogram. F. H. Howard.—p. 191
Differences in Blood Pressure Values Determined by Inflating and Deflating Cuff of Sphygmomanometer. R. S. Cunningham.—p. 220

**Pericarditis with Effusion Following Infections.**—Nathan and Dathe report 8 cases of acute pericarditis with effusion observed at their army installation. The diagnosis in 5 cases was based on a pericardial friction rub associated with severe substernal pain which was the initial complaint in each. Leukocyte counts varied from 6,000 to 27,400 per cubic millimeter. Significant recession of the cardiopericardial shadow was demonstrated in 5 cases. Pericardiocentesis, which was performed in 5 cases, revealed hemorrhagic fluid in 4 and a clear amber fluid in 1. Slide film, culture and guinea pig inoculation of the pericardial fluid were negative for bacteria in all cases. The commonest change in the electrocardiograms was a progressive inversion of the T waves, straightening of the ST segments in 7 cases and the elevation of the ST segments in 5 cases. Two possibilities are considered as to pathogenesis: (1) the proximity of the hilar lymph nodes with extension of the infection into the pericardial sac and (2) a hypersensitive response by the pericardium to an offending organism in which the immune reaction of the body is inadequate. This parallels the present accepted explanation of a hypersensitive reaction on the part of the heart and serosal linings of the joints in the rheumatic fever state.

**Hemiplegia Following Carotid Sinus Stimulation.**—According to Askey, 7 instances of hemiplegia occurring immediately after carotid sinus stimulation were reported by members of the California Heart Association. This communication includes 10 cases and is submitted as a joint report. Of the 10 cases only 7 presented sufficient evidence that the hemiplegia was a direct result of mechanical stimulation of the carotid sinus. From an analysis of the first 7 cases it is apparent that mechanical stimulation of the carotid sinus is not as innocuous as is generally believed, and it may be followed by more or less serious paralysis. The great majority of the patients were elderly and had arteriosclerosis and hypertension. It would appear therefore that, although stimulation of the carotid sinus may be harmless in young people, the procedure should be utilized with caution in elderly persons with arteriosclerosis.

### American J. Digestive Diseases, Fort Wayne, Ind.

**13** 33-58 (Feb.) 1946

Carcinogenic Value of Oxidated Oils: Sunflower Oil. A. H. Roffo.—p. 33
Incidence of Appendicitis from Survey of College Students. K. A. Stiles and F. W. Mulsow.—p. 39
Endocrine Aspects of Obesity. M. A. Goldzieher.—p. 40

### American Journal of Diseases of Children, Chicago

**71** 113-210 (Feb.) 1946

Behavior Problems in Children. H. Bakwin.—p. 113
Outlines for Well Baby Clinics: I. Recording Development of First Twelve Months. C. A. Aldrich and Edith S. Hewitt.—p. 131
*Multiple Sclerosis in Childhood. H. R. Carter.—p. 138
*Congenital Biliary Cirrhosis. I. Dunsky.—p. 150
Pathologic Study of Acutely Inflamed Human Pharynx in Influenza A Infection. J. M. Adams, M. M. Pennoyer and A. M. Whiting.—p. 162

**Multiple Sclerosis in Childhood.**—A survey of 711 cases diagnosed as multiple sclerosis at the Neurological Institute of New York over a period of eleven years revealed that there were 2 girls aged 12 years at the onset (before menarche), 2 girls aged 13 (with one year of menstruation) and 1 boy aged 10 at the onset. There were ages at onset of 14 and 15 in 2 boys and 2 girls. There was a sharp increase of cases between 16 and 17, some 64 in number. The girls outnumbered the boys. Carter cites reports from the literature which indicate that in the greatest number of cases the onset occurs between the ages of 21 and 30, with the 31 to 40 decade coming next. Whereas in adults multiple sclerosis presents a fairly clearcut picture of chronic multiple lesions of the central nervous system following a course of remissions and exacerbations, a wider scope of variations is revealed in the clinical symptoms of multiple sclerosis in children. The author presents illustrative cases of 4 children between the ages of 9 and 13 years at the onset. A sudden and fulminating onset is illustrated in the first case, while the slow insidious onset is shown in the second and third cases. The fourth case exemplifies a third type of onset with an associated retrobulbar neuritis, as mentioned by Ford and Adie. Therapy for children with multiple sclerosis is at the same impasse as that for adults.

**Congenital Biliary Cirrhosis.**—Dunsky reports the occurrence of hepatic diabetes in association with a rare case of biliary cirrhosis in a young infant in whom melituria was first noted in the second week of life. The exclusion of pancreatic diabetes was possible when the infant was 2 months old on the basis of an intravenous tolerance test. At necropsy it was found that pathologic changes were limited to the liver. The pathologic picture was that of a biliary cirrhosis with associated renal involvement. The probability of galactemia and galactosuria is considered.

### American Journal of Ophthalmology, Cincinnati

**29** 151-268 (Feb.) 1946

Technical Refinements in Removal of Magnetic Foreign Bodies from Posterior Segment of Eye. G. C. Struble and L. J. Croll.—p. 151
Ocular Complications of Leprosy. J. Mendonça de Barros.—p. 162
Concentration of Penicillin in Aqueous Humor Following Systemic Administration. A. E. Town and Margaret E. Hunt.—p. 171
Fascia Lata Transplant for Retrotarsal Atrophy of Upper Lid Following Enucleation. N. L. Cutler.—p. 176
Nonperforating Cyclodiathermy for Treatment of Glaucoma. F. C. Lutman.—p. 180
Stevens-Johnson's Disease: Case Report. W. Y. Jones, F. F. Talbot and W. F. King.—p. 185
*Congenital Glaucoma Following Maternal Rubella: Report of 2 Cases. D. Guerry III.—p. 190
Heterogeneous Conjunctival Transplantation. E. Rosen.—p. 193
Continuation of Screen Test. H. G. Martin.—p. 196

**29** 269-388 (March) 1946

Diathermic Surgery of Ciliary Body in Glaucoma: Experimental and Clinical Observations. M. U. Troncoso.—p. 269
Case of Atypical Achromatopsia. L. L. Sloan.—p. 290
Ocular Leprosy in Panama: Study of 150 Cases. R. D. Harley.—p. 295
Superficial Pigmentation of Cornea. R. R. Blondin.—p. 316
Glioma of Optic Nerve. M. Mannheimer.—p. 323
Relationship Between Light Adaptation and Dark Adaptation and Its Significance for Appraisal of Glare Effect of Different Illuminants. E. Simonson, S. S. Blankstein and E. J. Carey.—p. 328
Control of Experimental Anterior Chamber Infections with Systemic Penicillin Therapy. A. E. Town, Frances C. Frisbee and J. G. Wisda.—p. 341

**Congenital Glaucoma Following Maternal Rubella.**—Guerry recently observed a boy and a girl, both aged 3 years, with congenital glaucoma whose mothers had had German measles during early pregnancy. This suggests that such an anomaly may be a common sequel of German measles and that careful inquiry into the history of all cases of congenital glaucoma may reveal the history of rubella in many

## Am J Roentgenol & Rad Therapy, Springfield, Ill

55 125 250 (Feb) 1946

*Lipoma of Corpus Callosum Clinicopathologic Study C F List, J F Holt and Marjorie Everett —p 125
Newer Investigations of Radiation Effects and Their Clinical Applications Pancoast Lecture L. Reynolds —p 135
Skeletal and Pulmonary Metastases from Cancer of Kidney Prostate and Bladder J R Freid —p 153
*Abdominal Lymphogranulomatosis L. F Craver and J B Herrmann —p 165
Primary Mesothelioma (Endothelioma) of Pleura Case Report A D Piatt —p 173
Unusual Urinary Calculi Brief Review of Literature and Report of 6 Cases E J Bertin —p 181
Massive Calcification of Liver Case Report with Discussion of Its Etiology on Basis of Alveolar Hydatid Disease N Heilbrun and A J Klein —p 189
Congenital Absence of Pedicle from Cervical Vertebra Report of 3 Cases L. A Hadley —p. 193
Protection of Photofluorographic Personnel R H Morgan and I Lewis —p 198
Calculation of Dose from Point and Linear Sources of Radium S M Silverstone —p 203

**Lipoma of Corpus Callosum**—List and his associates present a tabulation of previously reported cases of lipoma of the corpus callosum and report 2 additional cases The clinical symptomatology is not pathognomonic but the diagnosis can occasionally be made by observing the x ray appearances of increased radiolucency of the tumor, calcification, demonstration of an expanding mass in the anterior part of the corpus callosum and agenesis of the posterior portion of this structure. Surgical treatment is contraindicated

**Abdominal Lymphogranulomatosis**—Craver and Herrmann detected symptoms referable to the gastrointestinal tract in 13 per cent of 406 cases of Hodgkin's disease These symptoms may be produced by primary secondary or extrinsic disease of the gastrointestinal tract. Primary Hodgkin's disease of the gastrointestinal tract is a distinct entity whose treatment is surgical Secondary involvement of the gastrointestinal tract may be asymptomatic and discovered only at necropsy Gastrointestinal manifestations from secondary involvement or extrinsic Hodgkin's disease are usually a late occurrence and are found most frequently in the long lived patients If gastrointestinal symptoms appear early in the course of a generalized Hodgkin's disease the life expectancy as a rule is exceedingly short. The clinical picture in some instances may resemble that of appendicitis Roentgen therapy may give considerable symptomatic relief in the cases of secondary or extrinsic Hodgkin's disease of the gastrointestinal tract but there is no evidence that the life expectancy is increased

## American Journal of Tropical Medicine, Baltimore

26 1-150 (Jan) 1946

International Appraisal of Research in Tropical Medicine. M F Boyd —p 1
Lessons in Malariology from World War II P F Russell —p 5
Epidemiology and Incubation Period of Jaundice Following Yellow Fever Vaccination G Freeman —p 15
Studies on Susceptibility of Marsupialia to Different Strains of Yellow Fever Virus. H W Laemmert Jr —p 33
Bromeliad Malaria in Trinidad British West Indies W G Downs and C S Pittendrigh.—p 47
Results in an Infantry Regiment of Several Plans of Treatment for Vivax Malaria. W G Downs —p 67
*Diagnosis of Schistosomiasis Japonica I Symptoms, Signs and Physical Findings Characteristic of Schistosomiasis Japonica at Different Stages in Development of Disease E C Faust, W H Wright D B McMullen and G W Hunter —p 87
Id II Diagnostic Characteristics of Eggs of Etiologic Agent Schistosoma Japonicum E C Faust —p 113
Attempt by Feeding to Induce in Animals Reactivity to Trichinella Spiralis in Absence of Infection J W Avera E M Low, G T Harrell and Elizabeth B Fowler —p 125
Detecting Intestinal Protozoa Saline Iron Hematoxylin Solution for Wet Smears D K Lawless —p 133
Unitarian View of Treponematosis E H Hudson —p 135
Influenza Epidemic of 1943 1944 in San Antonio Texas M Pollard M Kalkstein and H R Livesay —p 141
Foreign Quarantine in Military Traffic. P T Knies —p 145

**Symptomatology of Schistosomiasis Japonica**—The occurrence of several hundred cases of schistosomiasis japonica among military personnel following the American reoccupation of Leyte, Philippine Islands, beginning in October 1944 has provided a group of patients with this disease who were available for study during the late incubation period and during the acute and early chronic stages For comparison there have been many natives on Leyte, Mindoro, Mindanao and Samar who have been exposed to single or multiple infections and usually exhibit a relatively advanced stage of the disease The inoculum consists of the viable forktailed larvae the cercariae, capable of penetrating human skin and initiating an infection The quantity of the inoculum differs in endemic areas seasonally and in different locations, depending on the number of cercariae released by the snail hosts Wading only ankle deep in infested water, especially if pants are carefully tucked inside well laced combat boots, provides relatively scant opportunity for exposure Wading up to the armpits and bathing or swimming in infested water constitute heavy exposure hazards Within a few minutes after skin exposure to schistosomiasis japonica a person may experience sharp needling pain at the sites of penetration of the fork tailed cercariae The physical weakness and mental lethargy, loss of appetite and loss of weight, pain and stiffness in the leg muscles, small of the back and neck, the headache, the intermittent chilly sensation followed by fever each night, the abdominal fulness and tenderness in the right hypochondrium—all of these are relatively constant features of the disease as it approaches the end of the incubation period The onset of the acute stage occurs at the time the mature, fertilized female worms are beginning their egg laying and the eggs are filtering through the intestinal wall usually to be evacuated in the stool within a period of a few days This stage lasts for three to four months and is gradually transformed into the early chronic condition During the acute state the disease may be (1) fulminating, (2) severe with sudden onset, (3) insidious and (4) asymptomatic Recovery of the eggs of Schistosoma japonicum constitutes the only reliable method of specific diagnosis Since the eggs are not deposited until the worms mature, only a tentative diagnosis can be made during the incubation period.

## Annals of Allergy, Minneapolis

4 1-78 (Jan-Feb) 1946

Inunction of Allergens with Intraderm II Desensitization by Allergen Inunctions F Herrmann —p 4
Pollinosis in Brazil A Oliveira Lima P Dias da Costa R Galeno and P Pereira dos Santos —p 13
*Airborne Fungi in Allergic Disease II Survey of Airborne Fungi in San Antonio Texas, Area Incidence of Skin Reactions with Mold Extracts. F W Bieberdorf and S F Hampton —p 23
Studies on Tissue Tolerance to New Glycerol Peroxide Antiseptic Solution E A Brown —p 33
Laryngeal Obstruction with Asthmatic Symptoms Report of Case D E Frank —p 40
Drug Sensitivity on Nonspecific Basis W F Petersen —p 43

**Airborne Fungi in Allergic Disease**—Bieberdorf and Hampton report the results of a twelve months survey of airborne molds at the Regional and Convalescent Hospital of the Army Air Forces Personnel Distribution Command, San Antonio, Texas The study was conducted by means of exposure plates and exposed microscope slides coated with petrolatum Mold spores were found in the air almost every day Certain mold groups occurred as dominant forms, and nine of these constituted over 90 per cent of the molds encountered as shown by the exposure plate method. Hormodendrum and Alternaria had a higher incidence than any of the other genera by the exposure plate method, whereas Alternaria and Helminthosporium were most frequently observed in the exposed slide studies Routine intradermal skin tests with extracts of the molds encountered in this survey were done on patients with various allergic diseases One hundred and eighty-six, or 12.28 per cent, of the 1 515 patients with proved allergic disease and only 6 of 488 normal controls skin tested during this period showed definite reactions with one or more of the mold extracts when tested in strengths of 1 000 protein nitrogen units per cubic centimeter or less All but 6 of the 186 were cases of respiratory allergy (hay fever, vasomotor rhinitis and bronchial asthma) Thirty of the 186 patients reacted negatively to tests with all common pollen and inhalant extracts

## Anesthesiology, New York

7 1-112 (Jan.) 1946

Use of Methedrine as Vasoconstrictor with Spinal Anesthesia B M Anderson—p 1
Convulsions Produced by Fetal Anoxia Experimental Study F A. Fender, W B Neff and Grace Binger—p 10
Curare Misconceptions Regarding Discovery and Development of Present Form of Drug R C Gill—p 14
Curare and Nitrous Oxide Anesthesia for Lengthy Operations P Harroun F E. Beckert and H R. Hathaway—p 24
Effect of Various Surgical Positions on Vital Capacity Evelyn H Case and J A Stiles.—p 29
Further Experiences with Endotracheal Ether Air Anesthesia for Intrathoracic Surgery E C Mayer Jr and W Neff—p 32
Clinical Studies on Morphine II Effect of Morphine on Circulation of Man and on Circulatory and Respiratory Responses to Tilting J H. Drew, R D Dripps and J H Comroe Jr—p 44
Efficiency of Oenethyl (2, Methyl Amino Heptane) as Vasopressor Substance for Spinal Anesthesia. D A Roman Vega and J Adriani.—p 62
Anesthetic Complications and Their Management L. H Mousel, D Stubbs and J Kreiselman—p 69

## Annals of Internal Medicine, Lancaster, Pa

24 153-342 (Feb) 1946

Clinical and Roentgenographic Manifestations of Primary Atypical Pneumonia Etiology Unknown. J B McDonald and B Ehrenpreis—p 153
Treatment of Subacute Bacterial Endocarditis with Penicillin Second Report. M H Dawson and T H Hunter—p 170
Amebiasis in Military Overseas Returnees D F Marion and F N Sweetser—p 186
Tsutsugamishi Fever Agglutination Reactions and Clinical Observations in 25 Cases. I Greenfield—p 192
Asiatic Relapsing Fever Report of 134 Cases Treated with Mapharsen B P Wolff—p 203
Cystic Disease of Lung E Klosk, A Bernstein and A E Parsonnet.—p 217
Brief Review of Arthritis and Allied Conditions in Tropical Diseases. Julian Morgan and B I Comroe.—p 233
*Lipoid Pneumonia in Adults W A Sodeman and B M Stuart—p 241
Recognition and Clinical Significance of Auricular Heart Sounds. S Scherlis—p 254

**Lipoid Pneumonia in Adults**—Sodeman and Stuart report 2 cases of lipoid pneumonia in adults A man aged 49 had been hospitalized eleven times, usually for bronchopneumonia superimposed on chronic lung disease. Diagnoses of tuberculosis, Boeck's sarcoid, fungous diseases and bronchiectasis were considered. A diagnosis of osteochondroplasia plastica was finally established by bronchoscopy At the same time a specimen of sputum stained with sudan III disclosed the presence of fat. Questioning revealed that the patient had been taking agar-agar and liquid petrolatum daily as a laxative for twelve years and used an oily nasal spray for four years Necropsy disclosed extensive lipoid pneumonia. The second patient, a man aged 63 in whom the clinical picture simulated carcinoma of the lung had taken an ounce of liquid petrolatum five or six nights each week for some years to avoid constipation. A pneumonectomy was done for suspected carcinoma The pathologic specimen showed the characteristic changes of lipoid pneumonia.

## Archives of Dermatology and Syphilology, Chicago

53 79-212 (Feb) 1946

Types of Dermatitis in American Onchocerciasis L Goldman and L. Figueroa Ortiz.—p 79
*Lemon Grass Oil Primary Irritant and Sensitizing Agent H V Mendelsohn—p 94
Erythema Exudativum Multiforme A Weisberg and E. Rosen—p 99
Erythema Streptogenes W L. Dobes and J Jones.—p 107
Example of Need for Dermatologic Publicity of Developments in Radiologic Physics J C. Belisario and R. E. Pugh Jr—p 115
Familial Benign Chronic Pemphigus Report of Case H Pinkus and S Epstein—p 119
Fixed Sulfathiazole Eruption of Unusual Distribution W Leifer—p 125
*Treatment of Severe Pustular Dermatoses and Staphylococcic Septicemia by Oral Administration of Penicillin. E. L. Pfuetze and H G Nelson—p 128

**Lemon Grass Oil as Primary Irritant.**—According to Mendelsohn lemon grass oil is distilled from grasses that are indigenous to India It contains not less than 70 per cent aldehydes, the chief aldehyde being citral The principal use of the oil is for manufacturing ionone, a synthetic perfume. He reported an outbreak of an acute eruption resembling poison ivy dermatitis in approximately 30 men, presumably due to lemon grass oil These men had worked as machinists, carpenters and riggers on a boat which had recently arrived from India. Part of the cargo consisted of tanks of lemon grass oil, some of which had spilled and evidently had found its way to different parts of the boat. His experiences with patch tests with three lemon grass oils and three ionones on 20 patients with various dermatoses revealed that lemon grass oil from any source, with a citral content of 75 per cent or over, is a primary irritant, in a dilution of 1 10 it is a sensitizing agent Alpha, methyl and extra pure ionones are non irritating and, in all likelihood, nonsensitizing

**Oral Penicillin in Pustular Dermatoses and Staphylococcic Septicemia.**—Pfuetze and Nelson report 2 instances of severe pyogenic dermatitis One patient, with severe pustular dermatitis, was treated successfully with oral administration of penicillin, following two relapses with sulfadiazine therapy and intramuscular administration of penicillin This patient was given ten penicillin calcium tablets (200,000 units) every hour for four doses, or until forty tablets had been taken. This was followed by seven tablets every two hours for the first twenty-four hours Thereafter five tablets were given every two hours during the daytime for the next fourteen days The second patient had a severe generalized pustular dermatitis complicated by a hemolytic staphylococcus septicemia This patient likewise responded dramatically to the oral administration of penicillin No toxic effects from the penicillin were noted with the dosages given.

## Blood, New York

1 99-184 (March) 1944

Newer Concepts of Natural Derivatives of Hemoglobin I General Considerations, II Serum Bilirubin and Bilirubinuria III. Erythrocyte Protoporphyrin C J Watson—p. 99
Cardiovascular System in Anemia Note on Particular Abnormalities in Sickle Cell Anemia M M Wintrobe—p 121
*Observations on Effect of Massive Doses of Iron Given Intravenously to Patients with Hypochromic Anemia. Anne Tompkins Goetsch C V Moore and Virginia Minnich—p 129
*Erythroblastosis Fetalis in the First Born Prevention of Its Most Severe Forms P Levine and R K. Waller—p 143
Relation of Contacting Surface and Anticephalin Activity to Maintenance of Fluidity and Coagulability of Blood. L M Tocantins.—p 156
Relation of Certain Fractions of Plasma Globulins to Coagulation Defect in Hemophilia Jessica H Lewis, H J Tagnon C. S Davidson and others—p 166

**Intravenous Administration of Massive Doses of Iron in Hypochromic Anemia**—Elemental iron from 0 608 to 1 32 Gm was given intravenously in one injection either as colloidal ferric hydroxide or as colloidal ferric oxide to each of 8 patients with hypochromic anemia. The reticulocyte response, rate of hemoglobin regeneration and percentage of utilization were followed. Three subjects without anemia were used for control observations The reticulocyte response was higher in each instance than would be expected in oral therapy In 3 additional patients in whom injection had to be discontinued after 0 070, 0 180 and 0 123 Gm of elemental iron had respectively been given the reticulocyte rises were higher than were the average responses reported by Heath after optimal oral therapy This suggests that "optimal" oral therapy does not provide a maximal stimulus to outpouring of reticulocytes from the bone marrow Comparable doses of iron given to 3 control subjects with normal hemoglobin levels did not cause a reticulocytosis Calculations indicated that from 71 8 to 99 7 per cent of the injected iron was apparently used for the synthesis of hemoglobin. These figures are likewise lower than they would have been if several of the patients had not lost blood during the recovery period The observation of other workers that parenterally administered iron is almost completely retained by the body and converted into hemoglobin was therefore confirmed Toxic reactions to the injected iron were severe in all but 2 instances and were so alarming in 3 cases that injection had to be discontinued. The reactions to large doses of iron parenterally administered are great enough to contraindicate the use of this measure as a therapeutic procedure.

**Erythroblastosis Fetalis in the First Born.**—According to Levine and Waller isoimmunization by the Rh factor occurs in two groups of cases, namely (1) Rh negative persons after repeated transfusions of Rh positive blood and (2) Rh negative

women immunized by Rh positive fetal blood In a third group both factors, transfusions and pregnancy, are operative This paper deals mainly with selected cases of the third group in which isoimmunization was initiated by transfusions and, after a variable interval, became intensified through pregnancies The authors stress that the incidence of fatal forms of erythroblastosis fetalis in the first born can be diminished by the simple measure of transfusing all Rh negative female patients, even as infants, with Rh negative blood Once a female patient is found to be Rh negative, all subsequent transfusions must be carried out with Rh negative blood The indications are that sufficient human anti-Rh serums will become available for the more extensive Rh tests required for the prevention of isoimmunization by transfusion

## Bull. of the U S Army Med Dept, Washington, D C

5 245-366 (March) 1946

Dengue-like Fever on Okinawa J J Johnson Jr W B Martin and L Breslow —p 306
Incidence of Testicular Pathology G O Baumrucker —p 312
Hypnosis as Therapeutic Technic in War Neuroses. H S Alpert H A Carbone and J T Brooks —p 315
Use of Whole Blood in Field Hospital L W Hess and R L. Sutton. —p 325
Neurosurgical Service in Evacuation Hospital H E Houston —p 328
Effect of Antimony Compounds Fuadin and Tartar Emetic on Electrocardiogram Preliminary Report. L Tarr —p 336
Recovery from Severe Hypoplastic Anemia Associated with Atypical Lichen Planus H Most and J M Hayman Jr —p 339
Therapy Unit for Patients with Skin Diseases. A Feder —p 343
*Salmonella Epidemic from Commercially Prepared Sandwiches A. P Greenblatt P D Delay L. Breslow and I. J Greenblatt —p 345
*Outbreak of Cadmium Poisoning J S Garber —p 349
Investigation of Outbreaks of Food Poisoning E. H Marsh —p 350
Disposition Section for Ambulatory Patients A I Josy —p 353

**Salmonella Epidemic from Sandwiches** —Greenblatt and his associates say that during a four day period in February 1944 there were 97 soldiers admitted with gastroenteritis to the station hospital of an army camp of several thousand men Most patients recovered clinically within six days There were no fatalities Admissions were from all areas of the camp Interviews with 57 patients established that, with 2 possible exceptions all had eaten sandwiches at the post exchanges and clubs in the camp area. Several kinds of sandwiches were involved, the only item in common being the mayonnaise used as a spread. Cases of similar illness occurred during the same period at three other army installations using sandwiches from the same source The sandwiches were commercially prepared in an establishment which made its own mayonnaise by mechanically mixing fresh eggs, cottonseed oil sugar salt and spices Sometimes the mayonnaise was kept without refrigeration The possibility existed of four days incubation at room temperature following manufacture of the mayonnaise. The isolation and identification of the Salmonella organism from very early stool specimens in almost all cases regardless of the severity of symptoms suggest that the patients had ingested a large number of viable bacteria. The source of infection of the mayonnaise could not be determined Sulfaguanidine administered to a small group of patients had no apparent effect. Convalescent patients excreted the organism for as long as thirty-eight days This epidemic emphasizes the danger of mayonnaise handled at room temperature Most present day commercial manufacturers of sandwiches use such a product as a spread and in their salad preparations

**Cadmium Food Poisoning** —Garber describes an outbreak of gastroenteritis in an Air Forces squadron in New Guinea The outbreak began with nausea, vomiting, retching and abdominal cramps A few patients had a mild diarrhea Many had a considerable degree of collapse Twenty-seven men had to be hospitalized Since a lemonade mixture was the only common denominator, samples were submitted for analysis Arsenic and mercury were proved absent and no trace of antimony could be detected. A small amount of yellow precipitate was obtained with hydrogen sulfide, which failed to dissolve in sodium polysulfide This suggested the presence of cadmium. The lining of the metal container in which the lemonade was prepared was examined Cadmium was the only member of the copper-tin group found In view of this and the clinical aspects of the outbreak, it appears highly probable that cadmium poisoning was the cause Cadmium poisoning follows contamination of acid foods and drinks with soluble cadmium compounds Cadmium poisoning should be suspected in an outbreak of gastrointestinal disturbances in which there is a short interval between the ingestion of food and the onset of symptoms, particularly when there is a history of an acid fruit mixture made in a metal container

## Cancer Research, Baltimore

6 97-160 (March) 1946 Partial Index

Biochemistry of Benzpyrene F Weigert and J C Mottram —p 97
Effects of Massive Doses of Methylcholanthrene on Epidermal Carcinogenesis R E. Stowell and L. C Maas —p 121
Neutralization of Inhibition of Tumor Growth J C Keresztesy D Laszlo and C Leuchtenberger with technical assistance of E. Bor enfreund.—p 128
Intraperitoneal Sarcomas Produced in Mice with Mouse Ascitic Fluid. L Herly —p 131
Melanosarcoma and Rhabdomyoma in Two Pine Snakes (Pituophis Melanoleucus) H A Ball —p 134
Betel Chewing Among Natives of Southwest Pacific Islands Lack of Carcinogenic Action. M J Eisen —p 139
Histologic Changes in Central Vegetative Centers of Hypothalamus in Carcinoma as Indication of Vegetative Functional Disturbances L O Morgan —p 142

## Endocrinology, Springfield, Ill.

38 65-136 (Feb) 1946

Peripheral Inhibitory Influence of Large Doses of Testosterone on Epiphysial Cartilaginous Growth. M Reiss J E Fernandes and Y M L Golla —p 65
Effect of FSH and LH on Ovaries of Immature Chicks and Low Producing Hens A. V Nalbandov and L. E. Card —p 71
Biologic Assay of Adrenal Corticoides Eleanor H Venning V E Kazmin and J C Bell —p 79
Histochemical Age Changes in Normal and Pathologic Placental Villi (Hydatidiform Mole Eclampsia) G B Wislock and E W Dempsey —p 90
Relation of Hypophysis to Certain Changes Induced in Rat by Goitrogen Promizole G M Higgins and D J Ingle —p 110
Influence of Hypophysectomy on Plasma Iodine and Thyroxine Content of Thyroid Gland of Rat. A. Taurog I L Chaikoff and L L Bennett —p 122
Disturbances of Water Metabolism in Vitamin Deficiencies and Effects of Adrenal Cortical Hormones R. Gaunt Mildred Liling and C W Mushett.—p 127

## Florida Medical Association Journal, Jacksonville

32 397-448 (Feb) 1946

Psychosomatic Matrix, J V Cohn.—p 421
Combined Placenta Previa and Abruptio Placentae Report of Case J T Benbow —p 425

32 449-504 (March) 1946

The Prostate Gland in Men Over Fifty J J Nugent —p 475
Treatment of Acute Cardiac Decompensation A. S Anderson —p 480

## Indiana State Medical Assn. Journal, Indianapolis

39 97-158 (March) 1946

Boeck's Sarcoid M Mann M D Bartley and J E Dukes —p 97
Endocrinology in Office Practice J H Hutton —p 100
Massive Arsenotherapy of Early Syphilis H H Rodin —p 104
*Deep Burns Involving Bones F McDowell —p 108
Hysterectomy Indications for Various Types of Operation D A Bickel —p 110
Percutaneous Tuberculin Therapy in Behavior Disorders of Children R R Gutstein —p 113

**Deep Burns Involving Bones** —Early treatment of burned bone consisted in combating shock and correcting derangement of the body fluids, cleansing the involved areas and applying pressure dressings After the first ten days or two weeks the dressings were changed daily or every other day and debridement of necrotic tissue was done at each dressing Whenever enough slough was partially separated, an anesthetic was given and excision was done The slough was usually off within one to three weeks The surrounding viable soft tissues should be grafted as soon as possible without waiting for the bone to separate The dead bone does not interfere with the take of

split grafts and it can be removed a few weeks later Within about ten days after removal of the bone the bed would be covered with granulations Grafting was done again at this time if the area was large or was allowed to heal spontaneously if small Amputation of some phalanges was necessary when they were burnt completely through, but often the burns extend just partially through the bone and amputation can usually be avoided

## Journal of Clinical Investigation, Boston

25 1-152 (Jan.) 1946

Traumatic Shock A M Seligman H A Frank and J Fine—p 1
Hemorrhagic Shock Definition and Criteria for Its Diagnosis H C Wiggers and R C Ingraham—p 30
Photoelectric Study of Some Factors Related to Blood Clotting H F Deutsch—p 37
Infectious Hepatitis Complicated by Secondary Invasion with Salmonella W P Havens Jr and H A Wenner—p 45
Cause of Respiratory Variation of Ballistocardiogram with Note on Sinus Arrhythmia I Starr and C K Friedland—p 53
Anemia of Infection G E Cartwright M A Lauritsen P J Jones and others—p 65
Absorption into and Distribution of Penicillin in Cerebrospinal Fluid Edith Dumoff Stanley H F Dowling and L K Sweet—p 87
*Absorption, Distribution and Excretion of Streptomycin in Man C W Buggs, M A Pilling Bernice Bronstein and J W Hirshfeld—p 94
Bacillus Mucosus Capsulatus in Infantile Diarrhea D V Walcher—p 103
Effects of Active and Passive Hyperventilation on Cerebral Blood Flow Cerebral Oxygen Consumption Cardiac Output and Blood Pressure of Normal Young Men S S Kety and C F Schmidt—p 107
Hemodynamic Changes in Salt Depletion and in Dehydration J R Elkinton T S Danowski and A W Winkler—p 120
Treatment of Shock Due to Salt Depletion Comparison of Hemodynamic Effects of Isotonic Saline of Hypertonic Saline and of Isotonic Glucose Solutions T S Danowski A W Winkler and J R Elkinton—p 130
Relationships of Oxygen Carbon Dioxide and Hemoglobin in Blood of Man Oxyhemoglobin Dissociation Under Various Physiologic Conditions R L Riley J L Lilienthal Jr D D Proemmel and R E Franke—p 139
Hepatitis Without Jaundice in Infectious Mononucleosis C Cohn and B I Lidman—p 145

**Absorption, Distribution and Excretion of Streptomycin in Man.**—Buggs and his associates studied the absorption and excretion of streptomycin following systemic injection and oral administration in 22 persons Doses of 25,000 to 500,000 units were given intramuscularly or intravenously, and doses of 500,000 to 2,000 000 units were given orally Generally after intramuscular or intravenous injection about 50 per cent of the dose was excreted in the urine within twenty four hours Streptomycin was not absorbed from the gastrointestinal tract following a single dose of 500 000 units, but traces appeared in both blood serum and urine after doses of one and two million units Doses of 500,000 units given either intramuscularly or intravenously every six hours, seemed to maintain a serum level adequate to combat bacteria whose growth is inhibited by concentrations of 5 to 7 5 units of streptomycin per cubic centimeter of culture medium The serum concentrations during the first few minutes after intravenous injection of streptomycin were much higher than those attained following a similar dose administered intramuscularly However, by the end of one hour the serum concentrations were approximately equal whether the drug had been given intravenously or intramuscularly At the end of the fourth hour the concentrations following the intramuscular injection were found to be slightly higher than those following the intravenous injection. No streptomycin was found at the end of three hours in the spinal fluid after a single dose of 500 000 units given intramuscularly or intravenously When administered intrathecally in doses ranging from 10,000 to 20 000 units, streptomycin was detected in the spinal fluid Streptomycin was found to penetrate into the peritoneal cavity in early cases of peritonitis following intravenous injection of 500 000 units Streptomycin was detected in ascitic fluid following injection Like penicillin, streptomycin injected intramuscularly did not penetrate into empyema cavities in therapeutic amounts, although traces could be detected in the pus A number of patients complained of flushing of the skin, a sense of fulness in the head or headache shortly after the intramuscular or intravenous injection of a large dose of streptomycin. Thirteen of 45 patients who received streptomycin therapeutically for one to eighteen days complained of generalized muscular aching weakness or pain in the joints Three of these patients developed drug fever, and a rash occurred in 2 All these symptoms cleared when the drug was discontinued

## Journal of Neurosurgery, Springfield, Ill

3 101-180 (March) 1946

Histologic Studies of Brain Following Head Trauma II Posttraumatic Petechial and Massive Intracerebral Hemorrhage. J P Evans and I M Schemker—p 101
Treatment of Compound Spine Injuries in Forward Army Hospitals D D Matson—p 114
Thoracolumbar Sympathectomies Examined with Electrical Skin Resistance Method. C P Richter and F J Otenasek—p 120
Peripheral Nerve Surgery—Review of Incisions for Operative Exposure Preliminary Report E Seletz—p 135
Report on Treatment of Craniocerebral Wounds in an Evacuation Hospital T A Weaver Jr and A J Frishman—p 148.
Water Content of Brain After Concussion and Its Noncontributory Relation to Histopathology of Concussion W F Windle W A. Rambach Jr M I R de Ramirez de Arellano R A Groat and R F Becker—p 157
*Treatment of Causalgia Analysis of 100 Cases T B Rasmussen and H Freedman—p 165

**Treatment of Causalgia.**—The 100 patients with causalgia treated by Rasmussen and Freedman were Chinese soldiers who had been wounded in the Burma campaigns The upper extremity was involved in 82 and the lower in 18 patients. The major nerves of the extremity were involved in 81 of the 100 patients and in 10 there was injury only to bones or joints There was injury only to soft tissues in 5 patients and injury to cutaneous or digital nerves in 4 The characteristic pain appeared within six hours after the injury in 48 cases and within one to three days in another 23 In a few cases its appearance was delayed up to eight weeks Fifty-five of the patients described the pain as hot or burning in character, while the remaining 45 did not associate any sensation of temperature with the pain Since the rest of the clinical picture of these 45 patients was so nearly identical with the others, it seemed obvious that the same pathologic process was involved Diagnostic paravertebral injection of procaine was done in 91 of the patients, producing complete temporary relief of pain in 73 great relief in 16 and no relief in 2 of the patients From the therapeutic standpoint, paravertebral injections of procaine produced complete and permanent relief of pain either immediately or within four weeks after the injections in 13 of the 91 patients Moderate relief of pain was produced in 32 patients, while in the remaining 46 the relief of pain produced by the injections alone was inadequate Postganglionic operations for causalgia of the arm resulted in immediate complete relief of pain in 5 patients and complete disappearance of all pain within one month after the operation in an additional 5 There was gradual disappearance of the pain several months after the operation in 4 patients, and in the remaining 7 patients in this group of 21 some residual pain persisted throughout the follow-up period. Preganglionic operations for causalgia of the arm were done in 14 patients with immediate complete and permanent relief of pain in 13 The remaining patient in this group obtained great immediate relief followed by complete disappearance of the residual pain during the first month after the operation The results of sympathectomy for causalgia of the leg were not quite as satisfactory as for the arm Four of the 5 patients in this group continued to have some residual pain

## Journal of Urology, Baltimore

55 143 212 (Feb.) 1946

Angioma of Kidney F C. Hamm—p 143
Case of Pyelitis and Cystitis Cystica L J Arduino—p 149
Malignant Hypertension Neurosurgery of Kidney J Duff H R Kenyon and K F Smith.—p 153
Prevention and Treatment of Delayed Wound Healing and Ulcerative Cystitis Following Surgery for Tuberculosis of Genitourinary Tract J A Lazarus—p 160
Xanthine Urinary Calculi Report of 2 Cases I Gersh and H L Meltzer—p 169
Seminal Vesiculitis (Congestive) Simulating Acute Abdominal Disease D R Seabaugh—p 173
War Wounds of Urogenital Tract J C Kimbrough—p 179
Primary Malignant Tumors of Retrovesical Region with Special Reference to Malignant Tumors of Seminal Vesicles Report of Case of Retrovesical Sarcoma J A Lazarus—p 190
Automatic Stabilizer of Water Pressure O A Nelson—p 206
New Cystoscope T J Kirwin—p 208

## Laval Médical, Quebec

**11** 257-364 (March) 1946

Penicillin Treatment of Subdiaphragmatic Abscess F Trempe and W M Caron —p 257
*Theoretical and Clinical Aspect of Thiouracil L N Larochelle and J Jobin —p 265
Darier Ferrand s Dermatofibrosarcoma J T Michaud —p 279
Tumors of Mammary Gland in Man C Auger —p 283
Respiration Under Positive Pressure in Tracheotomy F Hudon —p 293

**Thiouracil**—Larochelle and Jobin used thiouracil in the preoperative management of 29 patients with hyperthyroidism at the medical service of the Hotel-Dieu from September 1944 to July 1945 Twenty-nine control patients were treated with Lugol's solution Twelve of the patients treated with thiouracil and 11 of those treated with Lugol's solution had toxic diffuse goiter, the other patients had vascular goiters or toxic adenomas with increased basal metabolic rate Twenty-eight females and 1 male between the ages of 9 and 67 years were treated with thiouracil, and 26 women and 3 men between the ages of 19 to 57 years were treated with Lugol's solution The mean basal metabolic rate of the patients treated with thiouracil was plus 40 per cent and that of the patients treated with Lugol's solution was plus 45 per cent. The daily dose of thiouracil was 0 75 Gm and was administered in three fractional doses of 0.25 Gm one hour after meals The patients treated with Lugol's solution received 10 drops three times daily The duration of the treatment varied from three to twenty-two days The patients treated with thiouracil were hospitalized for an average period of 7 1 days and those treated with Lugol s solution for 6 6 days

## Military Surgeon, Washington, D C

**98** 191-278 (March) 1946

Etiology and Treatment of Blepharitis Study in Military Personnel P Thygeson —p 191
Functions of Medical Units in Amphibious Operations O B Morrison Jr and R. Mazet Jr —p 204
Three and One-Half Years of Nutrition Activities in Eighth Service Command W L. Hart and R G Daggs —p 214
Blood—War to Peace J B Alsever —p 219
Problems of Naval Warfare under Climatic Extremes M Critchley —p 221
March Fracture of Inferior Pubic Ramus P V McCarthy and R E. Van Demark. —p 233
Military Importance of Low Back Disability M Moore Jr —p 235
Biologic Warfare G W Merck —p 237

## Occupational Medicine, Chicago

**1** 99 198 (Feb) 1946

Symposium on Burns from Hartford Circus Disaster
I Management of Civilian Disaster Burns D B Wells —p 99
II. Esprit de Corps Among Catastrophe Victims. M T Root —p 107
III Laboratory in Burn Catastrophe R. E Kendall —p 112
*IV Bacteriostatics Employed and Medical Problems J C. Leonard —p 116
Neuroses of Peace and of War R. C Anderson.—p 121
Lumbar Herniations of Intervertebral Disks Value of Surgical Removal for Naval Personnel J C. White and T H Peterson —p 145
Thymol Barbital Test in Experimental Carbon Tetrachloride Poisoning C P McCord, J H. Sterner L L. Kline and P E Williams —p 160
Actual Causes of Certain Occupational Dermatoses II Further Study of 532 Cases with Special Reference to Dermatitis Caused by Certain Petroleum Solvents J V Klauder and Marjory K. Hardy —p 168

**Bacteriostatics and Medical Problems in Burns**—According to Leonard, each of the adult patients from the Hartford circus fire was given sulfadiazine by mouth Unfortunately the catastrophe coincided with excessively hot and humid weather This tended to accentuate the oliguria, and many patients showed red blood cells in their urine, while in a few gross hematuria developed. The use of sulfonamide drugs was therefore discontinued within twenty-four to forty-eight hours in all cases On discontinuance of sulfadiazine penicillin was used prophylactically and therapeutically The author thinks that several patients would have died or at least would have had dangerous sepsis if it had not been for the liberal use of penicillin parenterally It seems difficult to explain the rarity of invasion of the blood stream entirely on the basis of the careful aseptic technic. Despite the preliminary use of sulfadiazine followed by penicillin, staphylococci and nonhemolytic streptococci flourished beneath the dressings It is well known that penicillin given parenterally cannot reach organisms in necrotic tissue which has lost its blood supply and penicillin was not employed locally Treatment of the hypochloremia consisted in the addition of 3 to 12 Gm of sodium chloride to the diet or in its being given intravenously as isotonic solution of sodium chloride if the patient was still vomiting The problem of anemia was met by the frequent use of whole blood and suspensions of red cells Hypoproteinemia made its appearance in spite of a high protein diet, but amigen in 10 per cent solution with or without dextrimaltose was masked in soups and broths and disguised in fruit juices so that the total protein intake was increased to from 125 to 300 Gm a day in almost every case Diets were supplemented with vitamins Patients burned about the head often became irrational and needed oxygen therapy and considerable sedation

## Ohio State Medical Journal, Columbus

**42** 113-216 (Feb) 1946

Folic Acid (L. Casei Factor) Essential Pan Hematopoietic Factor Experimental and Clinical Studies C A Doan H H Wilson Jr and C Wright.—p. 139
Psychiatric Notes on War in Pacific H S Evans —p 145
Fatal Case of Sodium Nitrite Poisoning M Oosting —p 150
Battle Wound of Thigh Complicated by Gas Gangrene in Case of Hereditary Hemorrhagic Thrombasthenia R L. Shively —p 151
*Air Embolism Following Uterotubal Insufflation Report of 2 Cases R L Faulkner —p 154
Notes on Heart Failure D L. Beers —p 156
Early Ambulation in Abdominopelvic Surgery J J McDonough —p 158

**Air Embolism Following Uterotubal Insufflation.**—Faulkner feels that dangerous departures from the proper technic of uterotubal insufflation have crept into medical practice The most serious of these is the use of air as an insufflation medium instead of oxygen or preferably carbon dioxide as stipulated by Rubin. The author describes 2 deaths from air embolism which resulted when air was used for insufflation Air may be introduced into the peripheral veins through a break in the mucosa of the uterine cervix or cavity Report of these accidents from improperly performed uterotubal insufflation does not mean that one should turn to uterosalpingography with opaque mediums as a routine practice. The ideal totally harmless opaque medium has not yet been introduced.

## Pennsylvania Medical Journal, Harrisburg

**49** 497-592 (Feb) 1946

Complications of Bronchial Asthma and Their Association with Bronchostenosis. J A Mausmann and L H Osmond.—p 513
Radiation Treatment of Carcinoma of Female Urethra. J Jackman and R D Bacon.—p 518
Clinical Significance of Certain Respiratory Symptoms L. H Clerf —p 520
Medical Management of Incomplete Abortion F B Nugent —p 523

**49** 593-704 (March) 1946

Evaluation of Criteria Useful in Differentiation of Benign and Malignant Lesions of Stomach H J Tumen —p 609
Shoulder and Arm Pain of Scalenus Anticus Origin W C Hendricks —p 615
Occlusive Vascular Diseases in Lower Extremities Diagnosis and Differential Diagnosis. D W Kramer —p 619
Tuberculosis Control in Philadelphia Katharine R Boucot —p 623
Volvulus and Gangrene of the Sigmoid Complicated by Manson s Schistosomiasis M Corff —p 632

## Psychiatric Quarterly, Utica, N Y

**20** 1-182 (Jan) 1946 Partial Index

Phyletic Manifestations and Reversions A A Brill —p 1
Penicillin in Early Syphilis Preliminary Report of Penicillin Treatment of Early Syphilis in Syracuse Treatment Center G A. Group and T F Laune.—p 16
Sudden Graying of Hair Alopecia and Diabetes Mellitus of Psychogenic Origin H S Barahal and N Freeman.—p 31
Narcosynthesis for Civilian Neurosis H Freed —p 39
Mechanism of Reactivation in Depressions of Old Age Group Report of 3 Cases K Stern and Doris Menzer —p 56
Psychosomatic Problems as Seen in Internal Medicine P C Clark. —p 113
New Aspects of Two Old Neurologic Problems E. N Boudreau —p 123

## Rocky Mountain Medical Journal, Denver

**43** 81-184 (Feb) 1946

Environmental Sanitation—A Colorado Major Health Problem Review of the Problem W H Gaub—p 99
Observations on Etiology Pathology and Symptomatology of Poliomyelitis with Special Consideration of Dehydration Treatment of Poliomyelitis T E Robinson—p 119
Infectious Mononucleosis Study of 25 Cases L. Razinsky—p 123

## United States Naval Med Bulletin, Washington, D C

**46** 325-478 (March) 1946

Traumatic Lesions of Peripheral Nerves Experience in South Pacific Area. O H Fulcher—p 325
*Fractures of Patella. H C Fett and M J Mackby—p 335
Chemical Sympathectomy in Neurovascular Lesions of Upper Extremity M H Brown—p 343
Diving at U S Naval Torpedo Station Newport R I with Emphasis on Cases of Bends Occurring During 1944 J W Huston and W J Alexander—p 348
*Penicillin Lozenges in Treatment of Vincent's Stomatitis L W Strong Jr and E. W Willett—p 353
Modified Acrylic Inlay D Callar—p 357
Skin Lesions of Rheumatic Fever A. D Campbell G C Griffith and W H Leake—p 360
Problem of Recurrence in Rheumatic Fever C T Bingham, G C Griffith R T Solley and W H Leake—p 367
Studies on Primary Isolation of Influenza Viruses The Personnel of U S Navy Medical Research Unit No 1 University of California. —p 369
Segregation of New and Old Recruits Effect on Epidemic. Epidemiology Unit No 22—p 375
Deafness Due to Noises of Warfare J A Weiss.—p 381
Auditory Impairment Caused by Drugs J C Howard Jr—p 387
Surgical Service at Shore Station W Bartlett Jr—p 392
Experiences with X Rays on Hospital Ship J F Belair—p 397

**Fractures of Patella**—Fett and Mackby found that in only 2 of 8 cases in which they performed patellectomy has there been the return of function which one might be led to expect It is the belief of the authors that patellectomy is indicated in fresh compound comminuted fractures, in comminuted fractures, in old fractures that have healed in malposition or have been incompletely reduced, leaving irregular articular surfaces and thus producing traumatic arthritis, and in some cases of hypertrophic arthritis of the knee joint in which it is believed that the patella is causing a mechanical block and is a factor in the production of pain Patellectomy is a procedure which has been called radical and condemned by many authorities The technic is simple and, if performed early and followed by the proper rehabilitative measures, will yield gratifying results in carefully selected cases It must not be used as a routine measure in the treatment of all fractures of the patella

**Penicillin Lozenges in Vincent's Stomatitis**—Lozenges containing 750 units of pure penicillin sodium were developed The first patients were treated by Strong and Willett on April 6, 1945 Since that time over 400 patients with Vincent's infection have been treated with these penicillin lozenges and every patient has had complete recovery The actual length of time before smears have been negative has varied between forty-eight and one hundred and twenty hours, according to the severity of the case and the amount of tissue involved Within twenty-four hours the patients have remarkable relief from pain and discomfort and can actually resume the mastication of food The foul odor of the breath, so typical of the disease, has disappeared along with the necrosed and sloughed tissue. Most patients require from 30,000 to 50,000 units of penicillin

## West Virginia Medical Journal, Charleston

**42** 29-48 (Feb) 1946

*Ammonium Chloride in Prevention of Stilbestrol Nausea A P Hudgins—p 29
Why a Public Health Career A L Chapman—p 33
Continuous Caudal Analgesia in Obstetrics as Viewed by Mother Baby and Physician W R Hodges Jr—p 36
Severe Erythema Multiforme (Erythema Multiforme Pluriorificialis) Case Report D B Gray and E C Clair—p 39

**Ammonium Chloride in Prevention of Diethylstilbestrol Nausea.**—Hudgins points out that the most common side effect of diethylstilbestrol is nausea and occasionally vomiting The nausea may cease after a few days without change in dosage or following reduction of the dose. However, if it continues, 0 65 Gm of ammonium chloride after meals and at bedtime will aid in control and thus allow continuation of diethylstilbestrol therapy

# FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below Single case reports and trials of new drugs are usually omitted.

## Brain, London

**68** 167-241 (Sept) 1945

'Discharging Lesion" in Neurology J P Martin—p 167
Case of Topographical Disorientation Associated with Unilateral Cerebral Lesion A Paterson and O L Zangwill—p 188.
*Folie à Deux in Uniovular Twins Reared Apart. W H Craike and E Slater, with the assistance of G Burden—p 213
Development of Human Lateral Geniculate Body E R A. Cooper —p 222

**Folie à Deux in Uniovular Twins Reared Apart**—Craike and his associates describe 2 uniovular twin sisters aged 52 who were separated at the age of 9 months, were brought up in different families in different parts of the country, met each other for the first time at the age of 24 and never lived together or had any close contact with one another One had a stable home with an affectionate maternal aunt, the other lived with a drunken and violent father of whom she was terrified Both were nervous as children, both stole as children or adolescents One at the age of 19 and the other at the age of 18 had some form of gastric disturbance, accompanied with indications of a neurotic aspect, which in each case passed off rapidly Both went into domestic service. Neither married Both have become gradually deaf and both imply that the other merely pretends it Paranoid symptoms appeared in each at about the same time, soon after their first meeting Despite the religious interests of the twins, neither shows a religious coloring to the mental content The principal difference between the psychoses is that, while one shows a chronic insidiously progressive paranoia, the other shows paranoid symptoms only episodically, and it is tempting to relate the different degrees of severity to the more fortunate upbringing and early life enjoyed by the second one Each sister centers her delusions around the other, this appears in one of them to be reactive to the accusations of the other It is this mutual involvement in a paranoid system of delusional ideas which suggested the title "folie a deux" Both twins are regarded as being the subject of a basically schizophrenic illness

## British Journal of Ophthalmology, London

**30** 129-192 (March) 1946

Penicillin and Vitamin C in Treatment of Hypopyon Ulcer T C Summers—p 129
Intraocular Use of Penicillin Ida Mann.—p 134
Penicillin in Ophthalmology Bacteriologic Experimental and Clinical Evidence of Its Value Including a Personal Series of 125 Clinical Cases C A. Brown—p 146
Penicillin Treatment of Ocular Inflammation. I C Fraser and A A B Scott.—p 168
Thrombin Technic in Ophthalmic Surgery T G Wynne Parry and G C Laszlo—p 176
Survey of Treatment of Traumatic Corneal Ulcer 1941 1944, Royal Hospital, Sheffield A Smith—p 178

## Edinburgh Medical Journal

**53** 1-48 (Jan) 1946

Basis of Penicillin Therapy T J Mackie—p 1
Clinical Use of Penicillin. J R Learmonth.—p 15
Penicillin in Treatment of Venereal Disease A Year's Experience in Civilian Clinic R C. L. Batchelor, W H Donald, M S Gray and others—p 31
Injuries of Cartilage in Miners. W A D Adamson—p 37

## Lancet, London

**1** 293 332 (March 2) 1946

Health Centers and Child Health Service. Helen M M Mackay—p 293
*Acutely Infected Pleural Effusions Technics of Penicillin Treatment L Fatti M E. Florey H Joules and others—p 295
Human Fertility C S Russell—p 300
Group Analysis in Military Neurosis Center S H Foulkes—p 303
Adhesiveness of Blood Platelets in Hemophilia Helen M Payling Wright.—p 306
Contact Dermatitis Caused by Penicillin H R Vickers—p 307
Allergic Reaction to Parenteral Penicillin R E Haswell and J T Wilkinson—p 308.

**Penicillin Treatment in Infected Pleural Effusions**—Fatti and his associates review observations on 24 patients with acute infected pleural effusions *Treatment with penicillin* was instituted in 14 while the pneumonic symptoms were still present

and in 10 after this phase had subsided The success or failure of the different technics was assessed by comparison of the results with those in 14 controls treated along accepted lines Aspiration followed by injection of penicillin was used in 7 cases, with 2 successes and 1 partial success This method was abandoned early in the series except for small interlobar effusions The 3 cases in which rib resections were done were failures in that the total lengths of illness and time from drainage were of the same order as those of the controls This method of treatment was abandoned In the 10 cases treated with intercostal drainage and instillation of penicillin there were 7 successes, 2 partial successes and 1 failure The technic depends on the use of aspirations and of injections of penicillin as soon as the effusion is recognized, followed, once it becomes purulent, by intercostal drainage alternating with instillation The choice of a systemic or local dose depends on whether or not the toxemic phase is passed and the infection well localized.

## Medical Journal of Australia, Sidney

### 1 65 96 (Jan 19) 1946

Politics and the Medical Profession J Dale —p 65
Case of So-Called Hydrophobia Matter of Diagnosis W E L H Crowther —p 69
Some Effects of Blood Loss on Healthy Males R J Walsh and A K. Sewell.—p 73
Early Results of Treatment of Gunshot Wounds of Limb Joints Aided by Penicillin Therapy T F Rose and A Newson —p 75
Use of Polysaccharide of Bacillus Proteus O\K in Diagnosis of Scrub Typhus P de Burgh —p 81

### 1 97-132 (Jan. 26) 1946

Postwar Rehabilitation of Science J G Wagner —p 97
Sociological Study of Aborigines in Northern Territory and Their Eye Diseases. M Schneider —p 99
Traumatic Arteriovenous Aneurysm of Femoral Blood Vessels G C V Thompson —p 104
Putrid Lung Abscess C. J Officer Brown —p 107
Inguinal Hernia and Its Repair H Turnbull —p 109
Saliva Factor in Peptic Ulceration L J J Nye —p 114

### 1 133-168 (Feb 2) 1946 Partial Index

Blood Groups in the Maori J J Graydon, R. T Simmons and others. —p 135
Fiftieth Anniversary of Discovery of \ Rays C E Eddy —p 138
Volvulus of Small Bowel with Report of Case Treated by Resection with Recovery D M Embelton and P Jones —p 144
Observations on Psychoses Occurring in Service Personnel in Forward Areas H J B Stephens —p 145
Adequacy of Medical Training B Williams —p 147
Anatomy in Medical Curriculum A. A Abbie —p 152
Plasma Protein Estimations in Battle Casualties T E Wilson —p 153

### 1 169-204 (Feb 9) 1946

Medical Aspects of Red Cross in Second World War J N Morris —p 169
Acquired Resistance of Staphylococci to Action of Penicillin E A North and R Christie —p 176
Pleuropneumonia like Organisms in Cases of Nongonococcic Urethritis in Man and in Normal Female Genitalia W I B Beveridge A D Campbell and Patricia E Lind —p 179
Early Results in Short Series of Cases of Gunshot Wounds of Abdomen T F Rose A Newson and D Watson —p 180
Lipomas of Uterus with Report of Case J D Hicks —p 184
Treatment of Inguinal Hernia F V Stonham —p 185
*Rupture of Liver in the Newborn Recovery After Blood Transfusion and Laparotomy F Arden —p 187
Report of Fatal Case of Blast' Injury of Spinal Cord. D Leslie —p 188

**Rupture of Liver in the Newborn**—Arden describes the treatment of a male infant hospitalized two days after birth because of pallor, breathlessness and inability to suck. His abdomen was slightly distended and dull on percussion all over the right side and in the left flank. Blood transfusion was started immediately One cc. of a vitamin K preparation was injected intramuscularly The transfusion was of immediate benefit but the abdomen remained distended On the assumption that the liver was the most likely organ to be involved, the abdomen was opened by a right upper paramedian incision. The peritoneal cavity was found distended with blood and blood clot, and exploration revealed a deep fissure, 2 inches long in the anterosuperior surface of the right lobe of the liver Owing to the friability of the liver attempted closure of the gap with mattress sutures proved unsatisfactory The fissure was so fortunately placed that it was possible to suture the torn edges of the liver capsule to the cut edges of the parietal peritoneum This had the effect of shutting off the peritoneal cavity from the source of the bleeding and rendered the oozing laceration in the liver subject to control by external pressure. A strip of the right rectus abdominis muscle, with a pedicle at the lower end, was placed in the fissure in the liver substance and the abdominal wall was closed Firm pressure was applied by strapping over dressings Apart from some postoperative vomiting and slight delay in wound healing, the baby made an uneventful recovery

## Lyon Chirurgical, Paris

### 40 681-808 (Nov-Dec) 1945

Air Embolism in Thoracic Surgery P Santy M Bérard and P Maillet —p 681
*Results of Bilateral Splanchnicectomy by Mediastinal Route in Arterial Hypertension P Wertheimer and J Lecuire.—p 691
Biliary Disturbances in Ascariasis P Mallet Guy and P Maillet. —p 705
Preservation of Ovaries and of Tubes in Hysterectomy D Fercy —p 713
Problem of Preventing Motor Sequelae After Removal of Lymph Nodes of Neck M Dargent and J Papillon —p 718

**Bilateral Splanchnicectomy for Hypertension.**—Wertheimer and Lecuire performed a bilateral splanchnicectomy by the mediastinal route on 14 women and 5 men with hypertension The patients were between the ages of 30 and 58 There was no operative mortality Postoperative complications were rare, transitory and mild. Control examinations were carried out on 16 of the 19 patients for more than six months after the intervention. Three of the 16 patients showed only temporary improvement and died within three to twenty-two months after the operation. Five of the remaining 13 patients had complete relief of their functional disturbances Four had pressures considerably and permanently reduced (35 mm of mercury) Seven presented satisfactory improvement These results are less favorable than those reported by Peet

## Presse Médicale, Paris

### 53 709-720 (Dec. 29) 1945

Vegetative Encephalitis in Typhoid. H. Roger and M H Gastaut. —p 709
Symptomatology and Limitations of Diabetic Coma R. Boulin and H Bour —p 710
Clinical Syndrome of Tumors of Pheochromic System and Their Curability F Van Goidsenhoven and J Vandenbroucke.—p 711
Immediate Accidents of Artificial Pneumoperitoneum. J Le Mellетier —p 712
Cholinesterase of Human Serum and Physiologic State in Various Pathologic Conditions A Kaswin —p 713
*Procaine Hydrochloride Blockage of Spinal Cord J Kunlin —p 714

**Intraspinal Procaine Anesthesia**—Kunlin, who first used intraspinal procaine anesthesia in 1942, has employed this technic for posterior commissural myelotomy and total myelotomy, using 0 5 to 2 cc. of a 1 per cent procaine solution. The anesthesia is complete for twenty to thirty minutes, disappearing rapidly after that. Nupercaine prolongs the anesthesia. All pain is suppressed, the advantages of local anesthesia are preserved The method is valuable for other interventions on the spine or spinal roots, particularly removal of radicular or intramedullary tumors

### 54 25-48 (Jan 19) 1946

*Otitis of Newborn Its Relation to Syndrome of Progressive Denutrition in Newborn. E Lévy Solal M Lelong R Joseph and Mrs J Debain. —p 25
Nosology of Besnier Boeck Schaumann Disease Epitheloid Reticuloses A Sézary —p 26
Surgical Treatment of Pseudotumoral Arterial Hypertension M Riser —p 27
Thirty Four Observations of Posterior Commissural Myelotomy P Wertheimer —p 28
Temper and Diencephalon J Delay —p 29
*Bronchial Tuberculosis and Collapsotherapy F Dumarest Le Tacon and Varin —p 30
Localized Meningeal Neuralgias Their Characteristics and Surgical Treatment J Guillaume —p 31
German and Allied Public Health Service Campaign Against Typhus Epidemic in Dachau Concentration Camp During 1944 to 1945 C Gonnet —p 32

**Otitis Media of Newborn.**—Lévy-Solal and his associates performed paracentesis for otitis media on 11 newborn infants In 5 intervention was done between the tenth and twelfth day of life in 2 on the fifteenth day and in 4 between the twentieth and twenty-first days Otitis media may occur from the tenth

day of life onward There is a paucity of symptoms The infant may refuse once or twice to take the breast, and there may be a slight loss in weight Frequently there is a tendency to hypothermia rather than to a febrile course. In rare cases there may be vomiting If the otitis media is diagnosed in time and incision of the tympanic membrane is made at once, the majority of the infants, even though premature and weak, will recover Early diagnosis and early treatment are the safest prophylactic measures against marasmus in the course of the first weeks or months of life. This condition may be due to infection of the ear and to antritis rather than to any hereditary tuberculous or syphilitic infection or to alimentary disturbance A systematic examination by the otologist of the tympanic membrane of the newborn with an abnormal curve of weight is suggested for maternity wards, infant asylums and nurseries

**Bronchial Tuberculosis and Collapsotherapy**—Dumarest and his associates' observations of 5 cases of bronchial tuberculosis suggest that collapsotherapy and particularly pneumothorax are contraindicated in the presence of lesions caused by stenosis of the large bronchi The artificial collapse aggravates and accelerates the process of stenosis Consequently dilatation of the adjacent bronchi occurs, causing infection and retention, from which definite blocking of the lung results

## Praxis, Bern

**35** 55-72 (Jan 24) 1946

Local Application of Penicillin in Diphtheria R. Roch and J P Doret —p 55
Balneotherapy in Poliomyelitic Paralysis O Hubacher —p 56
Allergy and Resistance as Formative Factors in Pulmonary Tuberculosis K Hommeyer von Brentano —p 62

**Local Application of Penicillin in Diphtheria.**—Roch and Doret vaporize 1 cc of penicillin solution in the throat of diphtheria patients and 0 5 cc. in each nostril by means of a spray The solution contains 1,000 units per cubic centimeter The spraying is repeated three times a day Bacteriologic controls are made in the morning, the last spray having been given the night before After two negative controls the local treatment is interrupted for four days and then another test is made. If the future confirms the results obtained so far, this local penicillin treatment will permit a considerable reduction of the quarantine period in diphtheria The authors do not wish to substitute local penicillin treatment for the serum treatment of diphtheria but rather to combine the two

## Hospital, Rio de Janeiro

**29** 1-148 (Jan) 1946 Partial Index

Rare Aspects of Double Auriculoventricular Conduction Q H de Mesquita —p 1
Application of Skin Graft in Treatment of Relapsing Hernias A Junqueira —p 11
Symptomatology of Pleural Empyema in Early Childhood C Pernetta —p 17
Antitoxic Liver Therapy in Various Ocular Disorders G von Grolman and E Angel —p 27
*Penicillin in Peritonitis Modes of Administration S Cintra Franco and H Ashcar —p 43
Vitamin A in Treatment of Leg Ulcers J de Freitas —p 63
Placental Globulin in Treatment of Measles R Franco do Amaral —p 69

**Modes of Administration of Penicillin for Peritonitis**—Cintra Franco and Ashcar investigated the best route for administering penicillin to reach an effective concentration in the peritoneum They report the results of such a study in 4 patients with ascites (3 with cirrhosis and 1 with peritoneal tuberculosis) and 2 patients with normal peritoneum They found that penicillin administered parenterally reaches effective therapeutic concentration in the peritoneum within twenty minutes The amount of penicillin that reaches the peritoneal cavity *is only about 2 per cent of the* total dose injected either intravenously or intramuscularly When injected intravenously or intramuscularly, therapeutic concentration in the peritoneal fluid remains constant for about four or five hours When 50,000 Oxford units is injected into the peritoneal cavity, therapeutic *concentration remains* for more than twenty-four hours The authors think that injection of penicillin directly into the peritoneal cavity is the best route for administering penicillin for the prevention or treatment of peritonitis

## Revista de Neurol e Psiquiat. de São Paulo

**10** 177-224 (Sept.-Oct) 1944

*Subarachnoid Alcohol Injection for Intractable Pain of Genital Cancers O B Nestarez and S Cintra Franco —p 177

**Subarachnoid Alcohol Injection for Intractable Pain.**—Nestarez and Cintra Franco employed subarachnoid alcohol injections in 16 cases of cancer of the cervix with intractable pain They favor Stern's technic The injections were made slowly and the amount of alcohol injected varied between 0 4 and 1 5 cc Results were good in 7 cases (in 1 the relief lasted for six months), in 2 some relief was obtained and in 1 only temporary relief One patient developed palsy of the right lower extremity and 3 patients developed urinary retention Survival varied between one and six months

## Acta Medica Scandinavica, Stockholm

**123** 209-302 (Jan 25) 1946

*Acute Anterior Poliomyelitis Complicating Pregnancy E Waaler —p 209
Neurocirculatory Syndrome ("Neurocirculatory Asthenia") in Soldiers I Clinical Investigation E Adlercreutz.—p 219
Serum Protein and Antibody Protein During Pneumonia F Heintzelmann —p 242
Normal and Pathologic PQ Time of Electrocardiogram M Savilahti —p 252
Reliability of Clearance Tests in Deficient Kidneys G Ekehorn —p 269
*Acute Hepatitis in Light of Clinical and Laboratory Examinations. S G Jokipii —p 294

**Poliomyelitis Complicating Pregnancy**—Waaler reports 8 cases of poliomyelitis in pregnant women between 18 and 38 years of age Seven cases occurred during an epidemic in Bergen, Norway, *in 1941, the eighth case occurred in 1944* There were two fatalities The author observed that poliomyelitis is not more severe in pregnant women except during the last months of pregnancy, when there may be great discomfort if the respiratory muscles are involved The prognosis is probably worse for the mother in late pregnancy The disease has little influence on pregnancy and labor Labor is usually normal, and cesarean section is indicated only when paralysis embarrasses the respiration or when genitourinary complications are *serious It seems likely that poliomyelitis is more frequent in* pregnant women than in other adults, and the cases hitherto observed have been uniformly distributed among the various stages of pregnancy No evidence has been produced of intrauterine transmission of poliomyelitis Of this series 5 newborn infants did not show any sign of paralysis or malformation Follow-up investigation of age showed that all children were well and that they had learned to walk at the usual age. In *1 case of stillbirth with spontaneous labor* there was a history of previous stillbirth and no evidence that poliomyelitis was responsible. Microscopic examination of the nervous system of the fetuses of the 2 mothers who died in the sixth and eighth month respectively of pregnancy did not reveal any abnormality

**Acute Hepatitis**—Jokipii reports 262 cases of acute hepatitis observed at the Third Medical Clinic of the University of Helsinki during the years 1942 to 1944 The patients were between the ages of 18 and 60 years No age or sex disposition was noted The intensity of jaundice was fairly high, as demonstrated by the Meulengracht reaction and by Heilmeyer's extinction coefficient obtained directly from the serum Ehrlich's reaction and Schlesinger's test were positive in 242 cases (92 4 per cent) in the initial phase of the disease, they were negative in only 20 cases (7 6 per cent) but turned positive when the yellow pigmentation became less pronounced The normal color of the feces returned in one week and bilirubin disappeared from the urine in 177 cases (67 5 per cent) in one week The erythrocyte sedimentation rate was normal in 153 cases (58 per cent), it was low in 109 cases but returned to normal when jaundice faded Recurrences occurred in 28 cases (10 7 per cent), in 12 of which the color of the serum had not returned to normal at the time of discharge (two weeks) Rest in bed for three to four weeks, until bilirubin and urobilin reactions are negative and the sedimentation rate is normal, may prevent recurrences

# Book Notices

**Intelligence and Its Deviations** By Mandel Sherman Ph D M.D Professor of Educational Psychology The University of Chicago Chicago Psychology Series Albert T Poffenberger Ph D Editor Professor of Psychology Columbia University New York Cloth Price $3 75 Pp 286 with 19 illustrations New York Ronald Press Company 1945

In this book the author undertakes to treat "the medical, psychological and social aspects of" intelligence for the benefit of the pediatrician, the medical student and the psychologist. He covers this field by discussing, first, the theory of intelligence and general intellectual development The conditions essential to growth and functioning of intelligence—the individual's endowment and environment—receive two chapters These are followed by chapters on the relation of intelligence to delinquency and to psychosis There is exposition of mental deficiency, including its relation to specific brain changes The entities epilepsy, mongolism and retinism receive separate treatment, and these are followed by the topics of mental testing adjustment of the mentally deficient, genetics and "superiority" including genius

The merits of the book lie in the broad surveys it offers of the field of intelligence the clinical groups in which the deviants distribute and the patterns it follows in these groups together with something as to the conditions medical and environmental, peculiar to each. Some of these chapters are excellent, serving especially a satisfying refresher purpose Others are scanty and the exposition correspondingly unsatisfying Thus there is an interesting review of intelligence testing and its history generally and of the nature nurture problem with a valuable discussion of the fallacy in relating delinquent and mental deficiency

There is a surprising neglect of the important work done especially in recent years in mental deterioration Nor is adequate justice being done to investigation of intellectual functioning in psychosis more especially in schizophrenia. There is emphasis, for example (p 125), on the "neurological basis of intellectual deterioration in the functional' psychoses ' The alternative view of schizophrenia as an adaptive maladjustment, one facet of which is the apparent "dementia," receives no mention In fact the volume ignores entirely this aspect of the adapting organism, utilizing its abilities sometimes in ways destructive to it with the resulting atrophy of ability One misses in this connection mention of the valuable work by Norman Cameron in the brain damaged and in schizophrenia, by Vigotsky in concept formation, Halstead's current contributions based on his critical investigations in patients with lobotomies and that of Kurt Goldstein and his followers in breakdown of abstract thinking in schizophrenia.

One specific criticism It is hard to see why the author felt it necessary to include chapter 15, on intellectual superiority, basing it as he does only on the reconstruction by Terman and his associates of the "intelligence quotients of John Stuart Mill Faraday, John Adams, Lincoln, Ben Johnson and other 'geniuses"

For all these criticisms this book is a useful well organized survey of the field. It is well documented with graphs and tables A glossary is helpful The bibliography is extensive. It is unfortunate that the author has included so little of his own experience or of his critical reactions Nevertheless the little volume will be useful in the library of the professional man who must deal with intelligence as a technical problem and needs a compact reference source at hand.

**The Effect of Smallpox on the Destiny of the Amerindian** By E Wagner Stearn Ph D and Allen E Stearn Ph.D Cloth. Price $2 50 Pp 153 Boston Bruce Humphries Inc 1945

The authors of this book, professors of bacteriology and chemistry respectively at Christian College and the University of Missouri have attempted to answer their personal question as to vaccination of their own child by study of source material. During the course of their studies they were impressed with the effect of smallpox on the "Amerindian ' This volume, which is presented as the result of a year of research based on study of source material consulted in libraries at the University of California, Stanford University and the Barcroft Library at Berkeley, Calif, portrays the devastation which smallpox wrought among the various Indian tribes as they were being pushed back by the constant pressure of the white man It attempts to make a semiquantitative estimate of the extent to which smallpox uncontrolled through vaccination reduced the population of the tribes, impaired their capacity to resist and may even have been used as a weapon of subjugation The reader cannot be surprised at the conclusions of the authors that smallpox was a factor of consequence and that vaccination when ultimately introduced and accepted late in the nineteenth century protected the small remnant of Indians, but he can be surprised that the authors should have taken so cumbersome and uncertain a method to convince themselves of the value of vaccination The material is presented in strictly chronological fashion, which portrays the magnitude of the smallpox problem in successive years but lacks an orderly sequence of events as far as they concern a particular tribe or area The data refer almost exclusively to the tribes in what is now the United States scanty reference is made to the Canadian tribes and none to those of Mexico or of Central or South America as might have been expected from use of the term "Amerindian." The book represents an interesting and valuable collection of information but is by no means a searching or exhaustive study of the role of smallpox in the depletion of the Indian population More extensive use of original source material and quotations from these sources would have added to its value and its readability

**The Physiology of the Newborn Infant.** By Clement A. Smith M D Professor of Pediatrics Wayne University College of Medicine Detroit Michigan Cloth Price $5 50 Pp 312 with 36 illustrations Springfield Illinios Charles C Thomas Publisher 1945

This excellent monograph covers the fetal and neonatal aspects of respiration the circulatory system including the fetal circulation and its alterations at birth, also fetal and neonatal blood volume, dynamics of circulation and other important phases The blood and its various components and changes from the fetal stage through the neonatal period, icterus neonatorum inclusive of hepatic insufficiency, metabolism and heat regulation, the physiology of the digestive tract, fetal and neonatal nutrition assimilation and metabolism of minerals and vitamins, renal physiology inclusive of regulation of electrolytes and water, neonatal endocrinology and neonatal immunology are all covered in a detailed analysis of our present knowledge of these subjects The bibliography is exceptionally complete. This book can well be recommended to pediatricians obstetricians and others interested in various fields of clinical research.

**Hackh s Chemical Dictionary [American and British Usage] Containing the Words Generally Used in Chemistry and Many of the Terms Used in the Related Sciences of Physics, Astrophysics Mineralogy Pharmacy Agriculture Biology Medicine, Engineering Etc. Based on Recent Chemical Literature with Numerous Tables Diagrams Portraits and Other Illustrations** 1946 Printing with changes and additions of third edition edited by Julius Grant M Sc Ph.D F.R I.C. Fabrikold. Price $8 50 Pp 925 Philadelphia & Toronto Blakiston Company 1946

This is a revised and edited third edition, the original of which was reviewed in THE JOURNAL, Sept. 30, 1944 The price has been lowered and the book contains recent data on atomic disintegration. Some of the definitions of medical words, e. g digitalis, which were considered unsatisfactory by the reviewer of the third edition are still inadequate. This book continues to serve as a good reference work for terms used in chemistry and allied subjects

**What You Can Do for Angina Pectoris and Coronary Occlusion** By Peter J Steincrohn M D F.A C.P Cloth Price $2 50 Pp 254 Garden City N Y Doubleday & Company Inc. 1946

This little book is written for nonmedically trained persons who have angina pectoris or have had a coronary occlusion Its purpose is to discuss the nature of the conditions, the prognosis and management at greater length than can be done personally by most physicians In general the information is accurate, but there are a few casual observations made for the sake of public appeal for which the evidence is slight. For example, on page 30 it is stated that "the heart does more flip-flops than it did during the stolid altercations of the cave man days' It is perhaps a little unfair to pick out such a single example because most of the book gives accurate information which should be of assistance both to the patient and to his physician

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT HOWEVER REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## MEDICAL AND SURGICAL TREATMENT OF GASTRIC AND DUODENAL ULCER

*To the Editor* —Is recurrence of stomach ulcers a rule? Do ulcer patients have to stay on a diet all their life? Is surgery or conservative treatment preferable?

M D New Jersey

ANSWER.—Gastric ulcers show a high incidence of recurrence but not as high as duodenal ulcers Gastric ulcer presumably is different from a duodenal ulcer Roentgenologically, on healing, scarring in contrast to the classic scarring which results from healing of duodenal ulcer is not evident The deformities of duodenal ulcer may persist throughout life without activity Because of the complete healing of gastric ulcers, a patient may not have to stay on a diet all his life. However, patients should be cautioned to refrain from overindulgence in tobacco, coffee, condiments and alcohol, which stimulate hyperplastic parietal cells to secrete more hydrochloric acid than can be properly buffered by food, saliva and mucus (the mucus has little if any buffering capacity)

Whether surgery or conservative treatment is preferable remains a question Some investigators believe that irrespective of the modern medical treatment of gastric ulcer, the incidence of carcinoma is much too high when compared with the low morbidity and mortality from surgical treatment.

In a young person conservative management may be tried If the patient is at or about the carcinomatous age his best chance may be through the surgical route, notwithstanding our ability to control the healing of gastric lesions by both roentgenologic and gastroscopic observations The final differential between a benign and a malignant ulcer must rest on the microscopic findings

## POSSIBLE SENSITIVITY TO MOLD IN ROQUEFORT CHEESE

*To the Editor* —I treated a man with a diplococcus infection and a corneal ulcer using penicillin instillations He developed a severe reaction to the penicillin and some time later an infection in the eye again I used penicillin ointment in the eye and he again had a definite reaction in the eye I gave him two injections of 15 thousand units of penicillin after which he broke out in a severe rash over the entire body A month or so later he had eaten Roquefort cheese containing some of the mold He developed a rash after eating the cheese I understand that the mold in Roquefort cheese is Penicillium Is there any relation between the mold in Roquefort cheese and the Penicillium notatum from which the commercial penicillin is made?

A F Jensen M D Grand Forks N D

ANSWER.—It would be impossible for any one to say whether the mold in the Roquefort cheese which was eaten by the patient was in any way responsible for the development of the rash. It would be interesting to know whether or not penicillin given by mouth could produce an eruption in this patient. Some of the molds in Roquefort cheese belong to the Penicillium group, but since penicillin is a product of the metabolism of the mold it is not known whether there are cross reactions between penicillin and the mold itself This is a subject for future investigation

## NASAL POLYPS

*To the Editor* —Are any efficient procedures available to prevent the return of nasal polypi after surgical removal and if so what are they?

E W Telford M.D De Kalb Ill

ANSWER.—Nasal polyps do tend to recur after surgical removal no matter what methods are used or how carefully or completely one operates The chief factors responsible for their return are the presence of a chronic suppurative sinusitis and the allergic state itself Every attempt should be made to treat these conditions as completely as possible and, in addition if one wishes to avoid recurrences, radium may be used postoperatively by a qualified roentgenologist. Other postoperative methods to avoid a return of polyps are the use of zinc ionization of the nasal mucosa and electrosurgical removal of the polypoidal growths

Reference

Hollender A R Office Treatment of the Nose Throat and Ear Chicago, Year Book Publishers Inc 1943

## SEX INTERGRADE

*To the Editor* —At the birth of a child two years ago it was noted that the external genitals were abnormal and the parents were told to have the sex determined when the child was 2 years old Externally at the penile site an erectile organ was found measuring 1 inch in length without an external opening Underneath was an opening surrounded by labia which opened into the bladder A normal vaginal opening was not found On exploratory laparotomy no vagina was seen An organ apparently a prostate was found with tubes leading off and attached at ends were small white masses On biopsy of part of this whitish tissue four histologists concurred in saying that it was testicular tissue The parents have been raising the child as a girl and are now at a loss as to what to do Any answer to this problem or reference to information will be greatly appreciated

M.D California

ANSWER.—It would seem that the best program for a child like this would be as follows

1 He should be raised as a boy and not as a girl

2 When the child is 4 years old, an attempt should be made to correct the hypospadias Apparently, from the description, the child has a penis

3 Because testicular tissue is absent or almost so, it would seem that as far as endocrine therapy is concerned the gonadotropins would be of little value, and therefore the child might be started on small doses of androgen (at least 50 mg a week and possibly more, depending on the response of the patient to this therapy) This should be started at 4 years of age, and in all probability it will be necessary to continue it indefinitely The androgen can be given by mouth in the form of methyl testosterone, but intramuscular injections of testosterone propionate are much more preferable in the beginning If the genital growth becomes definite and the child begins to develop some of the signs and symptoms of puberty, the injections will obviously have to be discontinued for a reasonable time. Whether or not the small amount of testicular tissue present in the abdomen could be placed in the scrotum cannot be determined from the inquiry

## AURICULOVENTRICULAR BLOCK

*To the Editor* —What is the best treatment for first degree auriculoventricular block The PR interval in this patient's cardiogram is 0 24 second

M.D California

ANSWER.—First degree auriculoventricular block is a condition in which the auriculoventricular transmission time is prolonged but every impulse reaches the ventricles The PR interval, which is the electrocardiographic measurement of auriculoventricular condition, must exceed 0.21 second before first degree block should be diagnosed.

There are a number of causes of this condition, of which digitalis is the most frequent example. Acute infections, especially rheumatic fever and diphtheria, may cause a prolonged PR interval Coronary artery sclerosis is the third major cause. Occasionally vagal reflexes may produce first degree block, and in such cases it may be produced or accentuated by carotid sinus pressure Other less frequent causes are congenital anomalies, quinidine and syphilis involving the junctional tissue.

Therefore, first degree auriculoventricular block is not a disease but is to be considered only a sign of disease, and treatment should be directed at its underlying cause. If digitalis or quinidine is at fault, the drug should be omitted or the dose reduced If due to specific diseases such as rheumatic fever or diphtheria treatment should be directed to the disease and not toward the sign of prolonged auriculoventricular conduction In coronary artery disease associated with myocardial infarction prolongation of the PR interval tends to be transitory and, with healing, many cases return to normal When syphilis is the inciting agent, therapy for syphilis must be administered with great caution

## TREATMENT OF EPILEPSY

*To the Editor* —A man aged 23 has had epilepsy for three and one half years At the onset the seizures were frequent but under treatment they have been reduced to one every several weeks Treatment has consisted in a strict ketogenic diet phenobarbital sodium ¼ grain (0 05 Gm) morning and night and thiamine hydrochloride 100 mg intravenously once weekly Please discuss further treatment

Willis P Baker M D Santa Ana Calif

ANSWER.—The ketogenic diet is not as effective in adults as in children, nor is phenobarbital usually as effective as diphenylhydantoin (dilantin) sodium for the control of convulsive seizures This medicine is dispensed in capsules containing 0 1 Gm. Three to five capsules may be given daily

Reference

*Lennox* W G The Treatment of Epilepsy *M Clin North America* September 1945 p 1114

# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL 131, No 6 — CHICAGO, ILLINOIS — JUNE 8, 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

## SYMPATHECTOMY IN THE TREATMENT OF PERIPHERAL VASCULAR SCLEROSIS


GEZA de TAKATS M D
EDSON FAIRBROTHER FOWLER M D
PAUL JORDAN M D
Chicago
and
CAPTAIN THOMAS C RISLEY
Medical Corps Army of the United States


The causes of and effective measures against arteriosclerosis are highly debatable and mostly not understood For a general review of the vast amount of experimental and clinical research on this subject we refer to the exhaustive critical review of Hueper [1] Unquestionably, as this author points out, a fatalistic attitude prevails toward its prevention and treatment In a recent monograph on arteriosclerosis Moschcovitz [2] came to the conclusion that "unless the individual is cut down by intercurrent disease death is invariably the result of arteriosclerosis It is the inevitable destiny of all creatures who possess a cardiovascular system with intravascular pressure Arteriosclerosis being an inevitable consequence of aging and therefore an irreversible process, it is hardly likely that any method of therapy will ever be discovered which will restore the diseased vessels to their normal texture, unless we can cure mortality Nor can arteriosclerosis be prevented, no more than gray hair or facial wrinkles"

It was exactly this type of attitude which we took when scattered reports of sympathectomy for peripheral arteriosclerosis of the lower extremities began to appear in the literature [3] Our indications for sympathectomy in peripheral vascular disease were tabulated in 1937, and, since it was believed that sympathectomy is useful only in vasospastic states with or without an organic component, arteriosclerosis had not been considered In fact one of us (G de T ) felt that it was an unnecessary type of surgery which discredited the excellent results obtained in Raynaud's disease, Buerger's disease and many other vasospastic phenomena

Two observations, however, changed our pessimistic attitude on this subject It was noted, following the communications of Atlas [4] and of Freeman and Montgomery,[5] that patients with obliterative vascular sclerosis could walk farther after a paravertebral sympathetic block with procaine, their claudication improved while under the effect of the block In addition, some of them exhibited angiospastic phenomena while walking, which was abolished by a paravertebral block [6] More impressive yet was the following case history

J P, a man aged 45, a pedler of Russian-Jewish extraction, was admitted to Research and Educational Hospitals on Dec. 7, 1940 His difficulty in walking started five years previously, but ever since his late twenties he had had "rheumatic" pains in the calves He had no other complaints on admission except that after two blocks cramping in the left calf became so severe that it was necessary for him to stop After a few minutes he could start walking again He smoked heavily

On admission he was given our routine cardiovascular work-up consisting of a thorough physical examination, the study of the eyegrounds, an electrocardiogram, a 2 meter chest film, a concentration-dilution test and a paravertebral sympathetic block The only positive findings were a closed left radial artery and closure of both popliteals with well pulsating femoral arteries Neither the eyegrounds nor films of the thighs showed any arteriosclerosis The blood cholesterol was 210 mg per hundred cubic centimeters of blood The blood pressure was 140/80 mm of mercury

Because of his age, race, heavy nicotine intake, lack of vascular sclerosis elsewhere and mainly because of the closed radial artery, which is frequent in Buerger's disease and seldom occurs in arteriosclerosis a diagnosis of a late, burned out thromboangiitis obliterans was made Since a paravertebral block raised the temperature of all toes and increased his walking ability from 300 to 900 steps, a left lumbar sympathectomy was performed

The operation was done with the usual anterolateral muscle-splitting extraperitoneal approach, and the left lumbar sympathetic trunk was removed between the brim of the pelvis and the lumbocostal arch On palpating the aorta we felt large oval atheromas, making the diagnosis of thromboangiitis untenable. The patient had unquestionably a presenile atheromatosis

Not only did the patient's left lower extremity remain warm and dry, but his walking ability rose to 6 blocks, at which time cramping became obvious in his right extremity, not operated on Four years later he still maintained this result.

This observation, shortly followed by others together with the convincing article of Trimble and his associates, which appeared in April 1944,[7] encouraged us to extend the use of lumbar sympathectomy to patients


From the Department of Surgery University of Illinois College of Medicine, the Research and Educational Hospitals and St Luke's Hospital Chicago and the Veterans Facility Hines Ill


1 Hueper W C Arteriosclerosis A General Review Arch Path 38: 162 (Sept ) 245 (Oct ) 350 (Nov ) 1944 39 51 (Jan ) 117 (Feb ) 187 (March) 1945

2 Moschcovitz E. Vascular Sclerosis New York Oxford University Press, 1942

3 Harris, R. I The Role of Sympathectomy in the Treatment of Peripheral Vascular Disease, Brit. J Surg 22 414 1935 Leriche, R and Fontaine R. Einige Bemerkungen über 1199 Operationen am Sympathikus Arch f klin Chir 186: 338 1936

4 Atlas L. N Lumbar Sympathectomy in the Treatment of Selected Cases of Peripheral Arteriosclerotic Disease Am Heart J 22 75 1941, 23: 493 1942

5 Freeman N E. and Montgomery, M Lumbar Sympathectomy in the Treatment of Intermittent Claudication Selection of Cases by Claudication Test with Lumbar Paravertebral Procaine Injection, Am. Heart J 23 224 1942

6 Pearl, F Angiospastic Claudication with a Report of 6 Cases, Am J M Sc. 194 301 1937

7 Trimble, I R , Cheney, W S , and Moses W R. The Operative Attack on Organic Vascular Disease Surgery 13: 655, 1944

suffering from arteriosclerosis Obviously case selection seemed very important and we shall define briefly our indications for operation in this type of patient

CASE SELECTION

Both thromboangiitis obliterans and arteriosclerosis may produce a diffuse involvement of the entire vascular tree, but even in arteriosclerosis the involvement may predominate in the lower extremities with surprisingly little involvement elsewhere Visceral involvement is studied with funduscopy an electrocardiogram, a 2 meter chest film and a concentration-dilution test Films of the thigh may detect calcification, although many atheromatous occlusions lack medial classification Severe cerebral, cardiac or renal involvement naturally contraindicates any surgical attack on the vascular occlusion of the lower extremities A patient who has had a coronary occlusion should not be subjected to a lumbar sympathectomy, but angina on effort is not a contraindication although it must be recognized that, when claudication improves, cardiac burden increases

A paravertebral sympathetic block must precede all lumbar sympathectomies The increase in skin temperature of the digits the improvement in walking ability and the shortening of the venous filling time are observed after paravertebral block with procaine just as in cases of thromboangiitis obliterans [8] When the digits do not warm up after sympathetic block but remain cold or show a paradox drop in temperature sympathectomy may precipitate gangrene, as in the cases reported by Atlas [4] It is our conviction that such an occurrence can be predicted and avoided by the measurements of digital temperature While in Buerger's disease with its usually abundant collateral circulation a paradox drop in skin temperature calls for a minor amputation combined with sympathectomy, we have very seldom resorted to this combination in sclerotic patients Certainly minor amputations in arteriosclerotic patients are tolerated very poorly with the exception of the diabetic gangrenes of infectious background [9]

The arterial occlusion—mostly caused by ulcerated atheromas with superimposed thrombosis or an occasional embolus from an aortic plaque—is at popliteal, femoral or iliac levels Closure of both femoral arteries with claudication in gluteal or genital areas with sexual weakness is rather characteristic of an aortic occlusion, which, since it occurs gradually, is perfectly compatible with fair nutrition of both lower extremities Such patients, if their terminal vascular bed is intact, experience benefit from a sympathectomy, whereas a diffuse arteriolar sclerosis, with relatively little involvement of the major arterial pathways, is unsuitable for operation

As Louis G Herrmann pointed out in his monograph on passive vascular exercise,[10] this is the kind of patient on whom suction and pressure therapy fails This is equally true of intermittent venous hyperemia, which we have routinely used for all our patients suffering from organic arterial occlusions and which is much more effective in the sympathectomized extremity, since reflex vasoconstriction originating from venocapillary distention is abolished [11] One can state then that the higher occlusions are not necessarily more refractory to surgical treatment, provided the terminal bed is not concomitantly involved Clinically the postural changes of color (pallor on elevation, rubor on dependency) indicate poor flexibility of the capillary bed and capillary stasis

There is one other criterion which may help to decide for or against sympathectomy in a given case We mention this, however, with hesitation, since it is not measurable and is purely subjective It is the relief of pain, which is very striking in some patients, entirely absent in others The relief of pain may be due in some instances to an infiltration of the lumbosacral plexus with procaine and is thus due to a sensory, not a sympathetic, block The relief of pain, however, may be observed in cases of severe ischemic neuritis which act not unlike a causalgic state and which may well be due to a volley of sympathetic impulses acting on demyelinated sensory fibers [12] The hot, burning pain of this neuritis, which is aggravated by heat relieved by cold and elevation occurs in arteriosclerotic patients with and without diabetes It is often accompanied by severe diffuse osteoporosis [13] Such patients mostly require amputation for the intractable pain, but a trial with a sympathetic block is sometimes rewarded by a cessation of pain, permitting a sympathectomy Ordinarily the pain has been allowed to persist so long that the patient is addicted to narcotics and the pain can be interrupted only at higher sensory levels [13]

Age per se, is not a contraindication, but obviously common sense must prevail The number of our sympathectomies done on patients over 60 years of age is seven, the oldest patient being 66 years old Whether this age group would fare better with paravertebral blocks of alcohol is very doubtful We used this method in our earlier experience [14] but have abandoned it, since infiltration of somatic nerve elements, plexuses or undivided anterior primary rami occurs, and while the percentage of this mishap is not too great (2 to 3) the crippling effects are disheartening In 1 arteriosclerotic patient aged 72 years in whom a paravertebral alcohol block was done elsewhere a permanent foot drop developed, together with an intractable burning pain corresponding to the distribution of the third and fourth lumbar segment Two of our own patients had ilioinguinal and genitofemoral neuralgia and quadriceps weakness for many months For this season our clinic has abandoned the use of paravertebral alcohol injections in spite of recent favorable reports [15]

Briefly, then, our indications for sympathectomy in arteriosclerosis of the lower extremities may be summed up as follows

INDICATIONS FOR SYMPATHECTOMY IN PERIPHERAL ARTERIOSCLEROSIS OF THE LOWER EXTREMITIES

In patients with popliteal, femoral or aortic occlusions who show a favorable response to paravertebral block with procaine and whose visceral vascular involvement is subclinical or

8 de Takats G The Value of Sympathectomy in the Treatment of Buerger s Disease Surg. Gynec & Obst 79 359 1944

9 McKittrick, L S and Pratt T C Principles of and Results After Amputation for Diabetic Gangrene Ann Surg 100 638 1934

10 Herrmann L. G Passive Vascular Exercises and the Conservative Management of Obliterative Arterial Diseases of the Extremities Philadelphia J B Lippincott Company 1936

11 de Takáts G Hick F K and Coulter J S Intermittent Venous Hyperemia in Treatment of Peripheral Vascular Disease, J A M A 108 1951 (June 5) 1937

12 Doupe, J Cullen C M and Chance G O Posttraumatic Pain and the Causalgic Syndrome J Neurol. Neurosurg & Psychiat 7:33 1944

13 de Takáts G Causalgic States in Peace and War J A M A 128 699 (July 7) 1945

14 de Takáts G, Beck, W C and Roth E. The Neurocirculatory Clinic I Peripheral Vascular Disease Ann Int Med 13:957 1939

15 Lilly G D Alcohol Injection of Lumbar Sympathetic Trunk in Cases of Peripheral Vascular Insufficiency When Surgical Sympathectomy is Contraindicated J. A. M A 128:479 (June 16) 1945

slight (no hemiplegia, no coronary occlusion, no advanced nephrosclerosis) The age group between 40 and 50 is most favorable.

In patients without and often with diabetes, whose chief complaint is continuous intractable burning pain associated with osteoporosis who obtain relief from paravertebral block and who otherwise would require a supracondylar amputation (a causalgic state)

## THE MATERIAL STUDIED

The material studied consisted of 25 patients [15a] Their age varied between 39 and 66 years They were placed in the category of the vascular sclerotic because of (1) definite evidence of sclerosis elsewhere, (2) no history of segmental phlebitis or arteritis in earlier years, no involvement of radial arteries, or (3) high pulse pressure, hypertension, hypercholesteremia or hyperglycemia.

While there was occasionally difficulty in separating a late burned-out case of thromboangiitis obliterans approaching the age of sclerosis from a presenile atheromatosis without calcification, the cases can usually be kept apart The borderline case must be treated alike anyway, dependent on the activity of the process, on the collateral involvement and on the site of occlusion (whether arterial or arteriolar)

Of the 25 patients, 6 were from St Luke's Hospital, 11 from the Research and Educational Hospitals and 8

TABLE 1—*Lumbar Sympathectomy for Peripheral Vascular Sclerosis*

| Age Groups | Number of Cases |
|---|---|
| 38 to 50 | 12 |
| 50 to 60 | 11 |
| 60 to 66 | 2 |
| Total | 25 |

from the Veterans Facility at Hines, Ill There was 1 patient below 40, 15 patients were between 40 and 50, 11 patients were between 50 and 60 and 2 patients were over 60 years (table 1)

Of the 25 patients retinal sclerosis was present in all, coronary sclerosis in 18, previous coronary occlusion in 2, nephrosclerosis in 5, hypertension in 10 and lipemia in 3 (table 2) The average walking ability before the operation ranged from half a block to two blocks, indicating the severity of the disease encountered The average postoperative walking ability ranged from one block to several miles Since this type of improvement lends itself poorly to statistical inquiry, a few illustrative cases are presented in more detail

CASE 1—R E. S, a man aged 51 a mail carrier, developed a sudden popliteal occlusion due to popliteal atheromatosis He could not walk more than 300 feet Left lumbar sympathectomy was done within a few weeks His walking ability is now unlimited he has resumed his work as a mail carrier The duration of follow-up has been one year

CASE 2—R. A, an amusement park operator, could walk less than one block without pain His job required a great deal of walking He was obese with a blood cholesterol of 320 mg per hundred cubic centimeters Following bilateral lumbar sympathectomy he could walk three hours continuously without pain

CASE 3—G H R, a man aged 44, had had symptoms of intermittent claudication for six years He had lost his left leg previously at the midthigh His preoperative walking distance was three fourths of a block and he had rest pain at night A diagnosis of chronic aortic occlusion was made. Following right lumbar sympathectomy he can walk from two and one-half to three blocks His toes and foot do not get numb now, but a mild ache develops in the calf The foot is warm and dry The duration of follow-up has been ten months

TABLE 2—*Lumbar Sympathectomy for Peripheral Vascular Sclerosis*

| Degree of Involvement (20 Cases) | |
|---|---|
| Retinal sclerosis | 25 |
| Coronary sclerosis | 18 |
| Coronary occlusion | 2 |
| Hypertension | 10 |
| Nephrosclerosis | 5 |
| Lipemia * | 3 |

Blood cholesterol over 2.50 mg per hundred cubic centimeters

CASE 4—A N, a man aged 49, a laborer, had claudication for several years, completely incapacitating him for any work. He had bilateral lumbar sympathectomy on Sept. 28 and Oct. 22, 1943 and could be reexamined several times, the last time two years after operation His walking ability increased from two to four blocks Both feet are warm and dry He is doing indoor work, and his feet seem well protected from the effects of minor injuries

CASE 5—S V, a man aged 66, a carpenter, had a left lumbar sympathectomy on May 16, 1944 for severe obliterating arteriosclerosis occluding the femoral artery His right leg was then pulseless, but he had no complaints regarding it. He came back a year later with a warm dry left foot and good skin texture The right foot (previously the better foot) had become frankly gangrenous and had to be amputated

CASE 6—J W, a man aged 55 a veteran had lost his left leg previously because of obliterating arteriosclerosis His right lower extremity became intractably painful and ulcerated Circulatory tests revealed the proper level of amputation to be above the knee, and a Callander-type of amputation would have been ordinarily performed In order to save his knee joint a preliminary sympathectomy was done which permitted a lower-leg amputation A well vascularized stump was obtained

These 6 case histories illustrate the different situations which were met in this series There are many others but they mainly group themselves as follows (table 3)

GROUP 1—Middle aged sclerotic patients with a walking ability of a few blocks The texture and color of their skin is normal Popliteal or femoral pulses are absent Lumbar sympathectomy has greatly improved

TABLE 3—*Lumbar Sympathectomy for Peripheral Vascular Sclerosis*

| Grade | Claudication | Trophic Change | Result |
|---|---|---|---|
| 1 | 2-6 blocks | None | Improves walking |
| 2 | ½-2 blocks | Capillary stasis digital sclerosis | Prevents gangrene |
| 3 | Few steps | Ulceration gangrene | Permits lower amputation |
| 4 | Intractable rest pain | Glossy edema osteoporosis | Stops pain prevents amputation |

their walking ability, occasionally for unlimited distance Of 9 patients in this group 2 showed more angina on effort since they could walk farther

GROUP 2—Middle aged or elderly sclerotic patients Walking ability ranged from one-half to two blocks Evidence of some arteriolar and capillary stasis was present, in addition to the major arterial occlusion Operation was mainly undertaken to prevent gangrene.

15a A report on additional material is now in preparation

Postoperatively their walking ability did not improve appreciably Nevertheless not a single patient developed gangrene on the sympathectomized side, while 2 patients lost their legs which had not been operated on, which were originally the better ones Ten patients belong to this group

GROUP 3—Patients requiring amputation or who had already lost one leg by amputation A preliminary lumbar sympathectomy enabled us to do three toe amputations and three lower leg amputations with a type of circulation which in our previous experience necessitated a supracondylar amputation Six patients belong to this group

GROUP 4—A type of patient which, because of intractable pain, diffuse osteoporosis and glossy edema, we believe belongs to the causalgic state Such patients have closed arteries and are in an advanced stage of arteriosclerosis with or without diabetes Their intractable symptoms have previously indicated amputation The peripheral nerves are demyelinized in segments The deep tendon reflexes are diminished or absent If sympathetic block relieves the burning, throbbing pain, sympathectomy is indicated Five patients belong to this group and not one has lost his leg so far This group is not unlike the one met in certain patients suffering from trench foot or air-hammer disease and seems to be due to an ischemic neuropathy and not to sympathetic paralysis

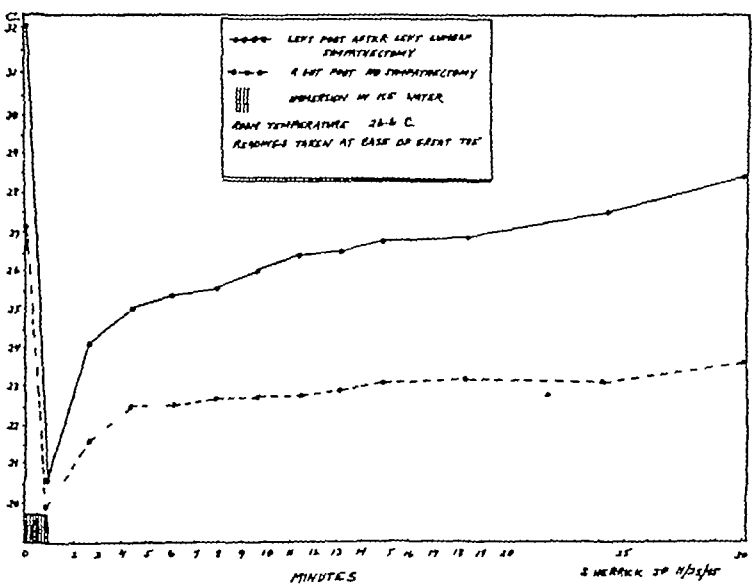



Fig 1—Effect of ice water on the sympathectomized extremity Solid line drop and recovery of toe temperature after immersion of sympathectomized foot into ice water for one minute, interrupted line control extremity not operated on exposed to identical conditions Note that the sympathectomized limb warms up much faster than the one with intact vasomotor apparatus Readings on a patient with obliterating arteriosclerosis whose left sympathectomized limb showed more severe involvement.

## COMMENT

In analyzing the effects of sympathectomy on an extremity crippled by arteriosclerosis, one must not expect a decided increase in basal blood-flow By basal blood-flow we mean the amount of blood per hundred grams of tissue as measured by a plethysmograph under basal conditions Our plethysmographic studies undertaken with a modification of Abramson's method by Donald Miller were interrupted during the war [10] But it became obvious that the basal blood-flow determined on patients without breakfast, after thirty minutes of rest, were greatly influenced by emotional stimuli, drafts and painful stimuli, all of which are known to activate the peripheral sympathetic outflow Lumbar sympathectomy then frees the extremity from such fluctuations, which are of surprising magnitude While the sympathectomized vessel reacts to the direct effect of cold by constriction, it warms up faster exposed to warmth, on the other hand it cools off more slowly having lost its vasomotor tonus Reflex effects of heat and cold, however, are ineffective on the circulation of a sympathectomized extremity Thus such a limb behaves as it would under a heat cradle surrounded by a temperature around 85 F, a temperature which abolishes vasomotor tone but which would be difficult to obtain on this continent continuously, even on the southern tip of Florida (fig 1)

One can state then that the sclerotic individual, provided he protects himself from the direct effects of cold by warm wool socks and suitable footwear, maintains a circulation in his sympathectomized extremity in a Midwestern or Eastern climate which he would otherwise obtain only in a warm, semitropical environment The beneficial effect of such climates on patients suffering from peripheral vascular disease is sufficiently known

This effect of vasomotor palsy is well recognized and need not be further discussed Much less attention has been drawn to the fact that the vasomotor tonus in the sitting and more in the standing position is high in the lower extremities This is one of the mechanisms, notably the first line of defense, which maintains man's blood pressure in the erect position That such postural vasoconstriction unfavorably affects a diseased vascular tree is obvious This postural vasoconstriction is eliminated by lumbar sympathectomy so that vasomotor tonus is not any higher than in the horizontal position This is not to say that the terminal vascular bed cannot contract on being distended by blood, that is, the intrinsic muscle tonus of the vessel reacts to stretch just as much as it reacts to cold after sympathectomy Nevertheless, the shifting of blood which occurs in the standing person away from the depending portions of the vascular tree cannot take place

It is curious that the second great therapeutic aid (the first being the even, warm climate) in the treatment of organic vascular lesions, namely rest in bed in the horizontal position, can be supplied to an ambulatory patient by sympathectomy, since it removes the excess vasomotor tone of the erect animal, man (fig 2) Physiologists working with quadrupeds have frequently denied the lasting benefits of sympathetic denervation to the circulation of an extremity but obviously could not study this factor (fig 3)

While intrinsic muscle tone is regained after a while in the sympathectomized vessels, our group showed several years ago that the venocapillary stretch produced by intermittent venous hyperemia is far more effective in the sympathectomized limb than in the extremity in possession of its vasomotor apparatus [11]

Finally a last, insufficiently understood effect of sympathectomy must be mentioned, namely the striking effect of paravertebral block and also of sympathectomy on the constant burning pain which ischemic limbs exhibit, whether this ischemia is due to thromboangiitis, to arteriosclerosis or to an embolic occlusion This is

10 Miller D S and de Takáts G Posttraumatic Dystrophy of the Extremities Sudeck s Atrophy Surg Gynec. & Obst. 75 558 1942

not to say that every case of ischemic neuritis is benefited by sympathetic interruption, since this is not the fact It is well known that poorly vascularized extremities suffer a demyelinization of their somatic nerve fibers and give rise to intractable pain, loss of motor

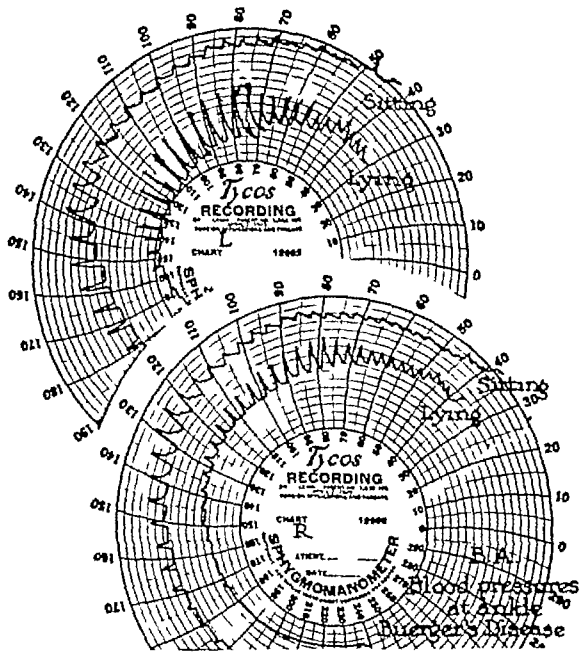



Fig 2—Effect of gravity in the lower extremities of a patient suffering from Buerger s disease. This patient has been selected for study since in the sclerotic ankle pulsations are hardly ever obtainable. The upper graph obtained from the left, less involved, extremity shows a shift of the curve to the left because of rise in peripheral resistance and a decrease in pulse volume On the right side with more advanced vascular impairment the rise in peripheral resistance is again obvious but the size of the spikes is not so striking because the vessels show less pulsatility

function and loss of reflexes This is especially pronounced in the diabetic neuropathies,[17] in which metabolic factors may play an additional role

Why the chemical or surgical section of sympathetic fibers should eliminate the pain originating from the injured sensory nerves is unclear, since sympathetic nerves in the extremities are said not to contain any afferent fibers The ingenious theory of Doupe [12] postulates that, because of the demyelinization of sensory nerve fibers, cross stimulation occurs between efferent sympathetic and the poorly insulated sensory axons, resulting in pain or even efferent vasodilatation as in the causalgic state There is much to support this view, which has been discussed by us elsewhere.[18] It is a very useful working hypothesis

Another cause for pain relief is more obvious Most peripheral pain is bound to cause a reflex vasoconstriction in the same and also in other vascular areas The tennis elbow (radiohumeral bursitis), a subdeltoid calcified bursa, a ligamentous strain maintain a diffuse vasoconstriction, the pathway of which one of us (G de T ) illustrated several years ago

This same reflex operates in the case of ischemic neuritis, thrombosed arterial segments or periarterial and lymphangitic inflammatory reactions Sympathectomy abolishes this reflex and thus abolishes the pain due to vasoconstriction

Throughout this discussion we have avoided the mention of vasospasm in arteriosclerosis,[19] and it is our belief that while this is an important factor in phlebitis and thromboangiitis obliterans it plays little if any part in the symptomatology of arteriosclerosis obliterans

TABLE 4—*Effects of Lumbar Sympathectomy on the Lower Extremity*

| | |
|---|---|
| 1 | The extremity warms up faster and cools more slowly on direct exposure, reflex effects of heat and cold are ineffective |
| 2 | The high vasoconstrictor tonus in the sitting or standing position is abolished |
| 3 | Vascular exercises such as intermittent venous hyperemia are more effective |
| 4 | Any cross stimulation between sympathetic and demyelinated sensory fibers is abolished |

The excellent results obtained in this small but carefully selected series are due to the release of normal vasomotor tonus, which in turn insures an even blood flow uninfluenced by anything but the metabolic needs of the tissues [20] (table 4)

## SUMMARY

A group of 25 patients suffering from vascular sclerosis of the lower extremities were treated with lumbar sympathectomy if after preliminary block of the lumbar sympathetics the temperature of the digits rose, if walking ability improved and if generalized vascular involvement was not extensive

In one group of patients this resulted in a dramatic increase in walking ability

In another group of patients given lumbar sympathectomy amputation was averted

In a third group amputations could be performed at lower levels and in a fourth group intractable neuritic pain of the causalgic type was benefited

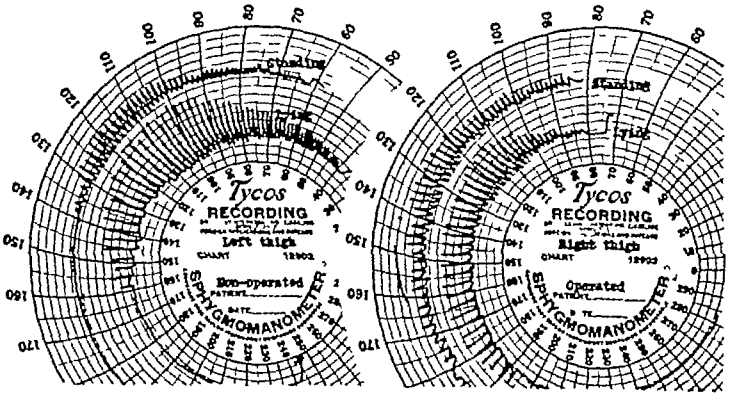



Fig 3—Oscillometric curves of a hypertensive arteriosclerotic patient whose right lower extremity has undergone sympathetic denervation Note the vasoconstriction on the left graph while standing The diastolic pressure rose from 75 to 95 mm of mercury as measured by the oscillometer On the right sympathectomized side there is no shift of the curve to higher levels the peripheral resistance has not increased and the pulse waves are only slightly decreased owing to the decreased cardiac stroke volume in the erect position. This graph indicates the elimination of postural vasoconstriction by sympathectomy

In selected cases of peripheral arteriosclerosis lumbar sympathectomy has proved to be of great value

122 South Michigan Avenue, Chicago 3

17 Rundles R W Diabetic Neuropathy Medicine **24** 111, 1945
18. de Takáts, G The Peripheral Neurovascular Lesions in Diabetics Tr Am Diabetes A to be published

19 Bernheim, A. R. and London J M Arteriosclerosis and Thrombo angiitis Obliterans Report of Cases and Treatment J A M. A **108** 2102 (June 19) 1937

20 Freeman N E. The Effect of Temperature on the Rate of Blood Flow in the Normal and in the Sympathectomized Hand, Am J Physiol. **113** 384 1935

# THE CRUSH SYNDROME IN OBSTETRICS AND GYNECOLOGY

NEWLIN F PAXSON M D
Professor of Obstetrics Hahnemann Medical College
LEIB J GOLUB M D
Attending Gynecologist, St Luke's and Children's Medical Center
and
ROBERT M HUNTER, M D
Associate in Obstetrics Hahnemann Medical College
Philadelphia

During the bombing of England in 1940 and 1941 many crushing injuries resulted Increased interest was manifested in the characteristic urinary suppression, which became known as the "crush syndrome," that followed these injuries

James Young [1] in 1942 reported similar urinary suppression seen in two types of obstetric condition, retroplacental hemorrhage and the trauma of labor They caused massive damage to the placenta, uterine muscle and other pelvic tissue In a careful study he showed that the syndrome included the following (1) initial tissue damage, (2) shock, severe, moderate or at times absent, (3) urinary suppression leading to anuria or oliguria with urine containing casts and leukocytes, and (4) a rise in blood urea, which reached its height between the fifth and the ninth day and was followed by death or increased urinary output and recovery

We are reporting 3 cases, 1 of retroplacental hemorrhage, 1 of ruptured uterus and the third a case of twisted ovarian cyst with bloody extravasation and urinary suppression The last is a new finding which broadens the aspects of the crush syndrome to include other than obstetric hemorrhage

## REVIEW OF LITERATURE

The first recorded work in regard to urinary suppression following crushing injuries was published by Hackredt [2] in 1917 It was mentioned also in the German Army Medical Manual [3] during the first world war Minami [4] in 1923 first gave the detailed microscopy of the kidney and described the presence of casts containing blood pigment in the renal tubules (figs 2, 4 and 5) Baker and Dodds [5] in 1925 offered the explanation of obstruction of the renal tubules by blood pigment as the cause of urinary suppression

In 1941, with the increase of crushing injuries, important studies were made by Bywaters and Beall [6] and later by Bywaters and Dible [7] They demonstrated that the important renal changes are found in the collecting tubules (figs 2, 4 and 5), the glomeruli are undamaged (figs 2 and 3) The tubules contain casts, and some are plugged with granules of blood pigment and show degeneration of the epithelium, particularly in the second portion and in Henle's loop (fig 4) Since this is the site of normal urine acidification and concentration, it seems to explain the clinical phenomena found in these cases of urine that is dilute, highly acid, low in urea and high in chlorides

They concluded, therefore, that the chief changes in kidney function are the result of failure of the tubular epithelium to concentrate and reabsorb the glomerular concentrate, thus confirming the histologic findings of tubular damage without injury to the glomeruli

Three theories are offered to explain the kidney damage (1) shock followed by renal ischemia, (2) obstruction of the renal tubules by blood pigment and (3) release of toxic substances from the crushed muscle which causes the characteristic degeneration of the tubal epithelium

Young and McMichael [8] reported 2 obstetric cases of prolonged labor followed by urinary suppression and high blood urea, 1 patient recovered and the other died of anuria on the eighth postpartum day This was the first report to show the relationship of obstetric trauma to crushing injuries

Dunn and Montgomery [9] believed that shock causes stagnation or ischemia of the entire glomerular system and that there is no mechanical obstruction to the tubules, the substance within the renal tubules is nothing but debris and blood, the result of stagnation which followed the shock occurring after the original trauma They thought also that in some cases of abruptio placentae symptoms of crush syndrome developed because the kidney had been damaged previously by the preeclamptic state

Young [1] in 1942 reported an extensive study of obstetric hemorrhage and its relation to the crush syndrome He believed that neither obstruction of the kidney tubules nor shock is the cause In order to prove his point he first compared 35 cases of postpartum hemorrhage, 12 cases of placenta previa with hemorrhage and 10 cases of retroplacental hemorrhage The first two groups showed shock without blood extravasation into the uterine musculature but no renal impairment In the group with retroplacental hemorrhage 10 cases showed renal impairment

Young further analyzed 79 cases of premature separation of the placenta with albuminuric toxemia In 59 cases bleeding was of the visible or frank type, and no case showed renal impairment In 20 cases of the concealed type with blood extravasation into the uterine muscle 5 showed renal impairment of varying extent

To disprove the shock theory, Young reported 1 significant case A woman, nontoxic and at term who arose about 7 a m, voided as usual and at 8 a m was struck on the abdomen by a suddenly opened door At 3 p m severe abdominal pain developed and shortly thereafter she collapsed At 4 p m, on arrival at the hospital, she showed a typical extensive abruptio placentae and died later On catheterization only 3 ounces of almost black urine was obtained, thus indicating that the urinary suppression occurred at least seven hours before the shock from abruption Against the theory of anuria caused by mechanical obstruction of the renal tubules by blood pigment he cited an instance in which a woman died nine hours after abruptio placentae Necropsy showed renal tubules with no pigmented casts but extensive degeneration In 2 other fatalities with anuria, 1 patient had a blood urea of 173 mg per hundred cubic centimeters with typical tubular degeneration and numerous blood casts, while the other had a blood urea of 220 mg per hundred cubic centimeters, typical tubular degeneration and no blood casts

Young stated that he did not know the cause of the urinary suppression but postulated that a toxic sub

From the Department of Obstetrics Hahnemann Medical College

1 Young James Brit M J 2 715 1942
2 Hackredt Boret s Laboratory Reports Germany 1917
3 German Army Medical Manual 1918
4 Minami S Virchows Arch f path Anat. 245 67 1923
5 Baker S L. and Dodds E. C Brit. J Exper Path 6:247 1925
6 Beall, D, Bywaters, E. G L Belsey, R H R and Miles J A R Brit. M J 1:432 1941
7 Bywaters E. G L and Dible, J H J Path & Bact 54:111, 1942
8 Young J and McMichael J Brit. M J 2:887 1941
9 Dunn, J S, and Montgomery G L. J Path & Bact. 52 1 1941

stance is formed in the traumatized muscle (skeletal or uterine) which causes degeneration of the epithelium lining the renal tubules and is the real cause of the anuria He further postulated that the debris in the tubules is coincidental and not obstructive

Eggleton, Richardson, Schild and Winton[10] conducted extensive experiments on traumatized dogs while maintaining normal blood pressure level and blood volume with infusions of plasma and saline solution In spite of this precaution, renal impairment and increased nitrogen retention developed and the dogs died with the characteristic kidney finding of the crush syndrome Diuretics were used in another series and the renal flow was actually increased, slightly lowering the mortality rate The authors believed that renal ischemia is not the cause of the crush syndrome but that Young's theory of a toxic substance released in the traumatized muscle is perhaps true

## REPORT OF CASES

CASE 1.—*Retroplacental hemorrhage, with death from urinary suppression*

Mrs M C. (fig 1), aged 29, admitted to Hahnemann Hospital Feb 1, 1943, had been pregnant for the first time in 1941, and at six months preeclampsia developed, with hypertension and albuminuria followed by premature placental separation and expulsion of a dead fetus After this pregnancy she was in good health, without evidence of hypertension

The patient again became pregnant, her last menstrual period was July 6, 1942 and her calculated date of confinement was April 16, 1943 Pregnancy was normal until about two weeks before admission to the hospital, when hypertension, albuminuria and slight general edema developed She was referred to a hospital in another city remained there about one week and then was transferred to the Hahnemann Hospital

Examination on admission showed that the patient was well nourished She weighed 61 Kg Moderate edema was present over the face, hands and feet Oral hygiene was good, the thyroid was normal to palpation and the heart and lungs appeared normal to physical examination Pregnancy had been present about twenty-eight weeks, the fetal heart beat was 152 The fetus was estimated to weigh about 900 Gm The blood pressure was 170 mm systolic and 118 mm diastolic. Examination of the optic disks showed edema of the retina, with arteriovenous ratio of 2 to 3, pulsations of the arterial vessels were present, but there was no hemorrhage or exudate. Urinalysis of a catheterized specimen showed albuminuria 1 plus with granular casts 5 to 10 per high power field and 5 to 10 leukocytes per high power field, and the hemoglobin was 13 1 Gm, red blood cells numbered 4,000,000 and white blood cells numbered 9,800 The Wassermann and Kahn reactions were negative. The blood type was O There was no nitrogen retention, the nonprotein nitrogen was 22 mg per hundred cubic centimeters and uric acid was 5 mg per hundred cubic centimeters The provisional diagnosis was preeclampsia, probably with previous arterial damage The classic signs of hypertension, albuminuria and edema were present The Rh factor was not determined.

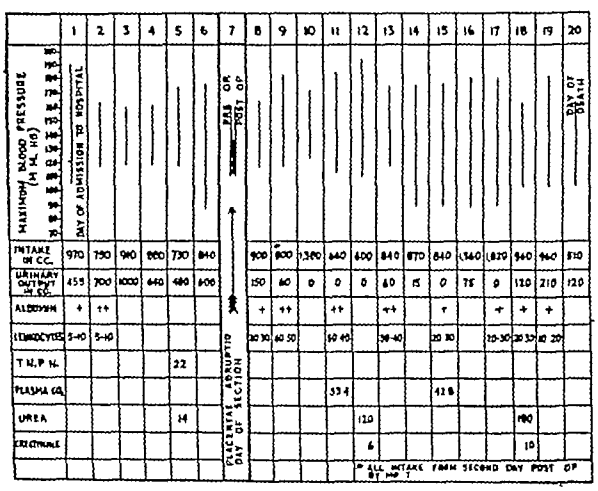



Fig 1 (case 1).—Abruptio placentae with retroplacental hemorrhage showing urinary suppression leukocytes in urine and elevation of blood urea and creatinine with fatal termination

Six days after admission premature separation of the placenta, concealed type, developed suddenly, with slight external bleeding and absent fetal heart sounds A low, classic cesarean section was performed promptly under cyclopropane-oxygen anesthesia and a transfusion of 500 cc. of citrated blood was given At operation a retroplacental hematoma of about 250 cc. was found, with considerable infiltration of blood into the uterine wall.



Fig 2 (case 1).—Section of kidney showing obstructed tubules and normal glomeruli Stained with hematoxylin and eosin slightly reduced from a photomicrograph with a magnification of 80 diameters



Fig 3 (case 1).—Section of kidney showing normal glomeruli Stained with hematoxylin and eosin slightly reduced from a photomicrograph with a magnification of 350 diameters

10 Eggleton M G Richardson, K C Schild O and Winton F R Quart J Exper Physiol 32 89 1943

Dr. Joseph Field Library
53 P. C. P. Medical College

The baby, a premature infant of about thirty weeks, was stillborn. There was no evidence of shock.

From the time of the placental separation urinary suppression developed, the urinary output was 150 cc. on the first postoperative day, 60 cc. the second day and then none at all. The anuria persisted, with increasing edema and anemia. On the

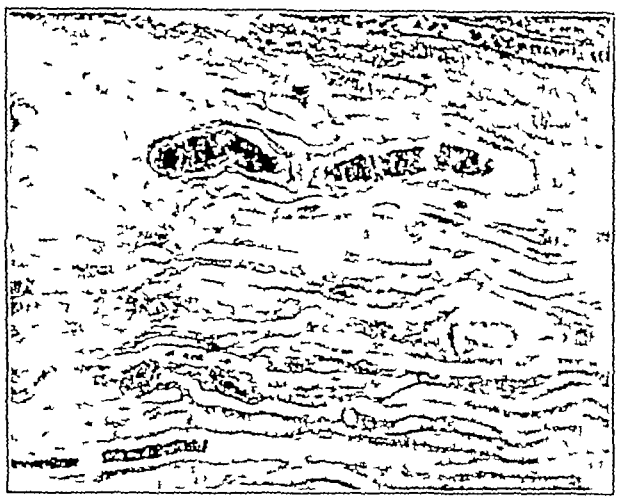


Fig. 4 (case 1).—Section of kidney showing characteristic obstruction of the collecting tubules by blood cells and débris. Stained with hematoxylin and eosin, slightly reduced from a photomicrograph with a magnification of 80 diameters.

second postoperative day a consultation was held with Dr. Garth Boericke of the medical staff, who drew attention to Young's[1] report of crush syndrome in cases of abruptio placentae and its similarity with this case.

The treatment during this period consisted in four transfusions of citrated blood, 500 cc. each, hypertonic glucose 50 cc. of a 50 per cent solution intravenously, Fisher's solution by rectal drip, two doses of 1,000 cc. each of potassium citrate and sodium bicarbonate by mouth. Urinalysis showed persistent albuminuria 1 plus without casts but with leukocytes and occasional erythrocytes. Increasing nitrogen retention was evident, the blood urea concentration was 180 mg. per hundred cubic centimeters and creatinine 10 mg. per hundred cubic centimeters on the tenth day after operation. On the eleventh postoperative day the patient voided 210 cc. of urine and began to show signs of improvement, but on the twelfth day she died suddenly with acute dyspnea.

Abstract of the autopsy findings was as follows: Generalized edema of the body tissues and serous cavities, including edema of lungs, bilateral hydrothorax, hydropericardium and hydroperitoneum. The characteristic liver findings of eclampsia were present, including widespread focal hemorrhagic necrosis. These areas of necrosis were not of recent occurrence but had been present several weeks as shown by the reactive fibrosis around them. The kidneys were swollen and firm, weighing 285 and 290 Gm. respectively, and the cortex contained numerous punctate hemorrhages on section. Microscopic examination (figs. 2, 3 and 4) showed no glomerular damage but degeneration of the tubules with many hyaline and pigmented casts. Staining with prussian blue (fig. 5) demonstrated that the pigment was iron, confirming the hemorrhagic nature of the tubular casts.

CASE 2.—*Rupture of the uterus with extensive hemorrhage, with recovery.*

Mrs. R. B. (fig. 6), aged 25, a quadrigravida, was admitted to Broad Street Hospital on Aug. 2, 1942 at term, shortly after the membranes had ruptured. The baby was in breech presentation, right sacroanterior. Labor proceeded unsatisfactorily owing to primary inertia and considerable restlessness on the part of the patient. On the evening of August 3, twenty-nine hours after the onset of labor, she was seen in consultation by one of us, who found the cervix dilated only 2 cm. Sedation and rest were advised. She was given morphine 0.0016 Gm. (1/4 grain) and scopolamine 0.1 mg. (1/150 grain), which produced excellent rest that night.

Eleven hours later labor started again and proceeded with fair pains for three hours, when she was given pitocin 0.15 cc. (2 minims) by hypodermic. This was followed by pains of increased severity, vaginal bleeding, rapid pulse (110) and drop in blood pressure to 90 mm. systolic and 60 mm. diastolic. A vaginal examination at this time showed considerable bleeding, the cervix was fully dilated. The consultant was called a second time. The patient was in moderate shock. She was anesthetized with open drop ether and a dead baby was delivered with little difficulty by prompt breech extraction. During delivery she received 1 unit (250 cc.) of blood plasma and an infusion of 5 per cent glucose in saline solution. Immediately following delivery the placenta was delivered manually and the uterine cavity explored for evidence of ruptured uterus.

A large tear was found, 15 cm. long, extending from the external os on the right up into the fundus. The uterus was quickly packed and the patient taken to the operating room, where a supravaginal hysterectomy was performed while a transfusion of 500 cc. of citrated blood was given.

When the abdomen was opened the uterine tear was found to extend out the right broad ligament to the external iliac artery. There was approximately 300 cc. of free blood in the peritoneal cavity and a great area of extravasation throughout the broad ligament. After hysterectomy, 9 Gm. of sulfanilamide was placed on the cervical stump and the patient was returned to bed in serious shock. She received a second transfusion and 1 500 cc. of 5 per cent glucose in saline solution by infusion.

Convalescence was stormy. Urinary suppression developed immediately, so that no urine was voided for the first twelve hours after operation. The next day the output was 105 cc., the second postoperative day 315 cc. the third day 900 cc. At this time the patient showed nitrogen retention with blood urea of 31.5 mg. per hundred cubic centimeters. The blood pressure rose to 120 mm. systolic and 68 mm. diastolic. The next day the urinary output rose to 1,830 cc. and the blood pressure to 136 mm. systolic and 70 mm. diastolic, but on the sixth day distinct improvement appeared. The blood urea was 14 mg. per hundred cubic centimeters, the blood pressure 130 mm. systolic and 80 mm. diastolic. At this time a vesicovaginal fistula developed and the urinary output could not be measured, but there was no further sign of urinary suppression. Convalescence continued to be stormy, complicated by sepsis, infec-



Fig. 5 (case 1).—Section of kidney showing characteristic obstruction of collecting tubule by blood cells and débris. Stained with prussian blue to show presence of iron thus proving that the obstructing debris contains blood pigment, slightly reduced from a photomicrograph with a magnification of 350 diameters.

tion of the urinary tract and later, secondary bleeding from the fistula.

In all, the patient received seven transfusions of citrated blood of which five were given during the first three postoperative days. Aminophylline 0.2 Gm. one dose on the third day, and sulfadiazine for five days beginning on the sixth

postoperative day, were administered The patient was discharged on the forty-second day after operation in fairly good condition except for moderate secondary anemia and the vesicovaginal fistula, which was still present

One year later the patient returned to the hospital and the fistula was closed by vaginal operation At that time she was in excellent condition A later test showed her to be Rh positive

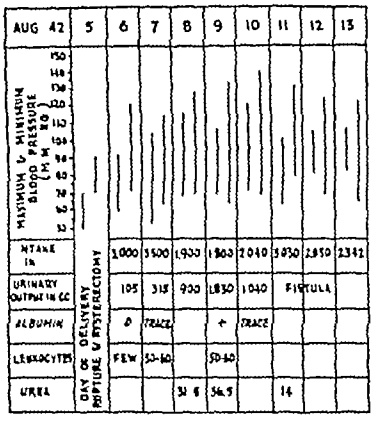



Fig 6 (case 2) —Rupture of uterus with extensive bloody extravasation showing urinary suppression leukocytes in urine and elevation of blood urea followed by recovery Antepartum blood pressure was normal.

CASE 3—*Twisted ovarian cyst, with urinary suppression*

Miss R Z, white aged 22, who was admitted to St. Luke's and Children's Medical Center on Aug 8, 1943, gave an essentially negative past history The menstrual periods were regular and normal The last menstrual period was August 1 to 6 inclusive

On August 3, the third day of her menstrual period, she suddenly was seized with sharp abdominal pain, vomiting and later fever The pain was most intense in the upper left quadrant *Immediately total urinary suppression appeared,* which continued during the four days she remained at home There were no signs of shock at any time. She was sent to the hospital with a diagnosis of left renal calculus producing ureteral obstruction and reflex anuria of the opposite kidney

On admission to the genitourinary service the patient's temperature was 100 F, pulse rate 100 and respiratory rate 24 She appeared to be acutely ill and in pain Examination of the abdomen revealed generalized tenderness and rebound pain No peristalsis was heard. There was resistance to palpation in the left upper quadrant of the abdomen Blood examination revealed hemoglobin 11 1 Gm, red blood cells 4,130,000 and white blood cells 15,800 Sedimentation rate was 38 mm per hour, blood sugar 128 mg per hundred cubic centimeters, urea nitrogen 14 0 mg per hundred cubic centimeters and creatinine 1 0 mg per hundred cubic centimeters The Wassermann and Kahn reactions were negative The blood Rh was positive. Cystoscopy revealed that the bladder mucosa was normal A number 5 catheter was passed into the left renal pelvis without meeting any obstruction, and 120 cc. of brownish red, cloudy urine was removed from the bladder This contained a cloud of albumin and numerous red blood cells One cc. of urine was obtained from the left renal pelvis Pelvic examination revealed that the external genitalia and perineum were normal Although the bimanual examination was unsatisfactory because of pain and abdominal distention, the uterus was found to be small and freely movable and the cervix normal There was no evidence of fluid in the posterior cul-de-sac. Both adnexal regions were tender, and no masses were palpable

The patient was treated conservatively with intravenous fluids oral Wangensteen suction and sedation. In the first twenty-four hours after admission only 60 cc of blood-tinged urine was obtained Thirty-six hours after admission 480 cc. of urine was obtained Following this the urinary output returned to normal Roentgenographic examination of the colon on August 13, with contrast enema showed no structural or pathologic changes within the colon and no displacement of the colon There was a shadow of a large tumefaction on the left side which reached as high as the transverse process of the first lumbar vertebra This shadow appeared to arise from below upward and suggested a cyst or other pelvic tumor

The patient's general condition *improved For the first five* days after admission the temperature fluctuated between 98.2 and 102.2 F and gradually subsided to a range between 98.2 and 100 F On August 29, or the twentieth day after admission, laparotomy was performed A large left ovarian cyst was found, twisted on its pedicle three times, with hemorrhagic infiltration into the cyst wall (fig 7) and hemorrhage into the cyst cavity The omentum and intestines were adherent to it. The pedicle was ligated and the cyst removed Pathologic examination showed a nonpapillary serous cystadenoma with early gangrene, blood infiltration of the wall and bleeding into the cyst.

## COMMENT

In a consideration of the relationship of our cases to the studies of previous investigators, Young's[1] theory seems to offer the best explanation of the mechanism of the urinary suppression

The one common factor in all 3 cases was extravasation and infiltration of blood into body tissue That the tissue does not have to be muscle tissue is shown by the case of twisted ovarian cyst in which the bloody infiltration occurred only in the cyst wall and cavity It is possible that the infiltration of blood into any type of cellular tissue may release toxic substances, causing the typical kidney reaction, and thus the syndrome may be found in other hemorrhagic conditions Extensive bloody infiltration seems to be a more important factor than shock in 2 of our cases, the patient with the twisted ovarian cyst and the one with placental separation showed little or no evidence of shock The role played by the Rh factor in this condition is unknown *In these cases it did not seem to be a factor* The 2 patients who survived were Rh positive The factor was undetermined in the fatal case It seems logical that the Rh factor should have no effect on the prognosis except in cases in which multiple transfusions are necessary

It is possible that the underlying toxemia, with its antepartum renal damage, was a contributory factor in the fatal termination of the case of placental separation It is important to note, however, that in this case the areas of hemorrhagic liver necrosis were not extensive and that regeneration had started before death occurred



Fig 7 (case 3) —Section of *ovarian cyst wall showing* infiltration of red cells and leukocytes Stained with hematoxylin and eosin slightly reduced from a photomicrograph with a magnification of 80 diameters

The ruptured uterus is an excellent example of birth trauma as a cause of urinary suppression, and it is likely that *other cases of dystocia* and extensive surgical procedure will show crush syndrome if the physician is on the alert for its signs

SUMMARY

Three cases of crush syndrome with urinary suppression were all of different origin 1 case of placental separation with retroplacental hematoma, 1 case of ruptured uterus and a third case of hemorrhagic twisted ovarian cyst

The 3 cases have in common the one factor of extensive hemorrhagic infiltration into body tissue Two patients showed little or no evidence of shock and 1 severe shock, although this patient recovered Apparently shock is not the important causative factor Young's [1] theory of release of unknown toxic substances seems to offer a better explanation

Urinary suppression may follow dystocia and birth trauma more often than is ordinarily suspected and may explain some hitherto obscure obstetric fatalities

The same syndrome may be present in other cases of twisted ovarian cysts and is worthy of further study

## A CLINICAL SYNDROME FOLLOWING EXPOSURE TO ATOMIC BOMB EXPLOSIONS

COLONEL PAUL D KELLER
Medical Corps Army of the United States

The information presented in this report was obtained from studies on 21 patients who were admitted to the Osaka University Hospital in late August and early September 1945 suffering from an alarming malady designated atomic bomb disease by the Japanese I observed, examined and followed approximately half of the patients, while information on the remaining patients was taken from the hospital records The patients selected for presentation do not include those receiving severe blast injuries or extensive external burns at the time of the explosion Included are patients who received minor or no injuries or burns during those catastrophic days at Hiroshima and Nagasaki but who subsequently developed severe clinical manifestations, which in 5 instances resulted in death Seventeen of the patients herein presented experienced the atomic bombing at Hiroshima, Japan, on August 6, 1945, while the remaining 4 were victims of the Nagasaki explosion on Aug 9, 1945 The average age incidence is 30, with extremes of 20 and 52 Three are women, while the other 18 are men It is to be remembered that these people were not hospitalized until on an average of one month after their atomic bomb experience The average day of death for the 5 fatal cases was twenty-six days after the bombing Those who survived required long periods of hospitalization before their recovery was sufficient to warrant a hospital discharge

### CLINICAL HISTORY

The environmental location of each victim at the time the atomic bomb exploded and their relationship to the center of the explosion is especially interesting The variation in distance among cases ranged from 50 to 4,000 meters Seventeen of 21 patients were in buildings at the time the bomb exploded Fourteen of these 17 patients were in wooden buildings, while the other 2 were in concrete buildings Table 1 summarizes the variations in distance and the location of victims in reference to the type of building or other location

Only 5 patients recalled experiencing a definite concussion wave at the time of the atomic bomb explosion One of the 5 who was in a wooden building about 50 meters from the center of the explosion was thrown 12 feet by the blast as the building collapsed The

TABLE 1—*Location of Victims*

| Distance in Meters | Number of Patients | Patients in Wooden Buildings | Patients in Concrete Buildings | Patients Outdoors | Location Unknown |
|---|---|---|---|---|---|
| 0 to 50 | 4 | 4 | 0 | 0 | |
| 200 to 300 | 3 | 1 | 1 | 0 | 1 |
| 500 | 4 | 3 | 1 | 0 | |
| 1 200 | 1 | 1 | 0 | 0 | |
| 1,500 | 1 | 1 | 0 | 0 | |
| 2 000 | 2 | 2 | 0 | 0 | |
| 4 000 | 1 | 1 | 0 | 0 | |
| Unknown | 5 | 1 | 1 | 2 | 1 |
| Total | 21 | 14 | 3 | 2 | 2 |

2 victims who were outdoors had contrasting experience in that 1 was knocked unconscious while the other 1 felt no blast

Three patients recall hearing a noise "like the sound of an explosion" One described a noise that sounded "like a falling bomb," and 2 said the noise they heard at the time of the atomic bomb explosion was a sound "like rain" Two stated that they heard no definite sound of an explosion, while the remaining 13 were uncertain

Nine patients were conscious of a "flash of light" when the bomb exploded One of the 9 described the light as being green Three of the remaining 12

TABLE 2—*Onset of Symptoms*

| Case No | Anorexia | Onset in Days After Bombing | Nausea | Onset in Days After Bombing | Vomiting | Onset in Days After Bombing |
|---|---|---|---|---|---|---|
| 1 | Present | ? | Present | Fourth day | Many times | Fourth day |
| 2 | Present | First day | Present | 30 minutes | Severe | 30 minutes |
| 3 | Not known | | | | | |
| 4 | Accentuated | First day | Accentuated | Immediate | Five times | Immediate |
| 5 | None | | None | | None | |
| 6 | Present | First day | Mild | First day | None | |
| 7 | Present | ? | None | | None | |
| 8 | Not known | | | | | |
| 9 | Present | First day | Present | First day | Present | First day |
| 10 | Present | Second day | Present | Second day | Once | Second day |
| 11 | None | | None | | None | |
| 12 | Mild | ? | None | | None | |
| 13 | None | | None | | None | |
| 14 | None | | None | | None | |
| 15 | None | | Slight | First day | Once | First day |
| 16 | None | | None | | None | |
| 17 | None | | None | | None | |
| 18 | Present | ? | None | | None | |
| 19 | Present | Fifth day | None | | None | |
| 20 | Present | First day | Present | First day | Present | Second day |
| 21 | Present | First day | None | | None | |

patients experienced no sensation of light, while the other 9 case records do not specify one way or the other

All patients but 4 incurred minor wounds (13 patients) or burns (4 patients) at the time of the explosion These wounds resulted from flying splinters, glass and other debris or resulted from falls by the patients, and were in the form of abrasions, contu-

sions and lacerations With 2 exceptions these lesions were healed prior to the time the patient applied for admission to Osaka University Hospital

Anorexia, nausea and vomiting of varying severity and length of duration were a common early symptom The onset of these symptoms occurred within the first five days after the explosion Data relative to these symptoms is presented in table 2

Twelve patients gave a history of having a fever or feeling feverish prior to the time they were admitted to the hospital Four patients did not know and a single patient stated that he had not experienced a rise of temperature before his admission to the hospital No data in reference to fever were available on 3 patients The onset of the fever ranged from two to twenty-five days after the explosion The intensity of the fever varied from slight to high

Unusual and in several instances considerable loss of hair from the scalp was experienced by 13 of 21 patients One person definitely did not lose unusual amounts of hair during the course of his illness The records on the remaining patients do not contain information relative to the loss of hair The onset of epilation varied from seven days to twenty-one after exposure to the atomic bomb explosion, with an average date of onset of eighteen A few persons noted swelling of the hair roots a day or two before they noticed the beginning of hair loss None of the twenty-one patients noticed unusual loss of hair from the axillas or pubis, but 1 had loss of hair from the eyebrows and another from the beard

Nine patients exhibited hemorrhagic manifestations prior to their admission to the hospital All 9 noticed this occurrence shortly before admission on an average of twenty-five days after the bombing In 2 it occurred after admission to the hospital Thus a total of 11 patients displayed unusual hemorrhagic tendencies during the course of their illness Bleeding gums was the most common manifestation (6 cases), subcutaneous bleeding next (3 cases), nose bleed and tonsillar bleeding last

Fatigability was almost a universal complaint, which was mild as a rule following the bombing but increased in severity to become actual weakness in most patients by the time they were admitted to the hospital

Two patients developed diarrhea, 1 on the fourth day after the bombing and the other on the ninth day This disturbance was transient in both The other patients showed no significant change in bowel habit

Other symptoms complained of by single patients were faintness, tightness in the chest dizziness, difficulty in swallowing and unusual thirst

### RESULTS OF PHYSICAL EXAMINATION

Fever and a corresponding rise in the pulse rate are the most common and prominent findings on physical examination Ten patients had an elevated temperature at the time of admission and all the remaining patients manifested elevations in temperature during their period of hospitalization The temperature ranged between 37 and 40 C (98 6 to 104 F ) with occasional recordings slightly above 40

Hemorrhagic manifestations were found on admission or developed soon thereafter in the form of bleeding gums, petechiae, ecchymoses and nosebleed in 12 of these cases Four of the 5 fatal cases exhibited purpuric tendencies

Epilation of the scalp was detectable in 13 victims The loss of hair was diffuse In a few cases it was almost complete, while in other cases it was hardly detectable yet definitely abnormal

Unilateral slight enlargement of the cervical lymph nodes was palpable on 4 patients, of whom 3 had tender nodes

Areas of edema involving the lips, face and eyelids were noted on 2 patients at the time of their admission to the hospital

TABLE 3—*Blood Counts*

| Case No | Date | Red Blood Cells, Thousands | Hemoglobin | White Blood Cells | Polymorphonuclears | Lymphocytes | Eosinophils | Basophils | Monocytes |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ? | 3,500 | 90% | 150 | | | | | |
| 2 | ? | | 55% | | | | | | |
| 3 | ? | 3,700 | 67% | 600 | 7 | 93 | | | |
| 4 | ? | 3,370 | 60% | 470 | | | | | |
| 5 | Sept 2 | 3 040 | 63% | 2,700 | | | | | |
| | Sept 4 | 2,400 | | 5,000 | | | | | |
| | Sept 7 | 2 180 | | 7,500 | | | | | |
| 6 | Sept 3 | 2 040 | 49% | 000 | | | | | |
| | Sept 13 | | | 1,700 | | | | | |
| | Sept 18 | 1 700 | 38% | 0 900 | | | | | |
| 7 | Sept 6 | 2 740 | | 1,700 | | | | | |
| | Sept. 7 | 2 090 | 66% | 1,650 | | | | | |
| | Sept. 10 | 1 780 | 38% | 3 6o0 | | | | | |
| | Oct 15 | 2,330 | 65% | 7,800 | | | | | |
| 8 | Sept 5 | 4 800 | 76% | | | | | | |
| | Sept. 6 | | | 3,900 | | | | | |
| | Sept 8 | | | 2 000 | | | | | |
| | Sept, 15 | | | 2 900 | | | | | |
| | Sept 2o | 3,800 | 78% | 3,000 | | | | | |
| | Oct 6 | 3,200 | 76% | 7 000 | | | | | |
| | Oct 20 | 4,200 | 95% | 7,200 | | | | | |
| 9 | ? | 4,500 | 79% | 1,900 | | | | | |
| | Sept 16 | 4 000 | 77% | 2,170 | | | | | |
| 10 | Sept 1 | 4 430 | | 2,175 | | | | | |
| | Sept 8 | 3,320 | 60% | 2,100 | | | | | |
| | Sept 11 | 3 420 | 63% | 1 900 | | | | | |
| | Oct 10 | 3,260 | 53% | 2,800 | | | | | |
| | Oct 15 | 2,490 | 50% | 4 900 | | | | | |
| 11 | Sept 4 | 2,390 | 66% | 2,800 | | | | | |
| | Sept 11 | 2,860 | 65% | 1,800 | 40 | 55 | 2 | 0 | 3 |
| | Sept 28 | 2 860 | 75% | 6,300 | 31 | 61 | 3 | | 5 |
| 12 | Sept 6 | 3 600 | 76% | 3,000 | 61 | 32 | | | 7 |
| | Sept 10 | 3 400 | 66% | 2,700 | | | | | |
| | Sept 13 | 3 600 | 67% | 2 000 | | | | | |
| 13 | ? | 4,120 | 76% | 3 900 | | | | | |
| | Sept 10 | 4,200 | 80% | 3,500 | | | | | |
| | Sept 17 | 4 270 | 82% | 3 400 | | | | | |
| 14 | Sept 9 | 3 420 | 60% | 2 700 | | | | | |
| | Sept 11 | 3,150 | 55% | 3 000 | 40 | 47 | 6 | | 7 |
| | Sept 19 | 3 670 | 61% | 2 800 | 3o | 62 | 3 | | 2 |
| 15 | Sept 3 | 4 000 | 70% | 3 800 | 5o | 35 | 1 | | 9 |
| | Sept 14 | | | 2,500 | | | | | |
| | Sept 19 | 3 980 | 68% | 2,700 | 53 | 37 | | | 5 |
| 16 | Sept 5 | 2,430 | 50% | 3 200 | | | | | |
| | Sept 19 | 2,400 | 55% | 2,600 | 47 | 39 | 5 | | 9 |
| 17 | Sept 10 | 3,100 | 67% | 3 200 | | | | | |
| | Sept 18 | 3,880 | 69% | 3,800 | 72 | 23 | | | 5 |
| 18 | Sept 3 | 2,940 | 52% | 925 | 56 | 12 | 1 | | 31 |
| | Sept 10 | 3 010 | 60% | 1 470 | | | | | |
| 19 | Sept 7 | 2 070 | 60% | 1 6o0 | | | | | |
| 20 | Sept 7 | 3,250 | 60% | 2,000 | | | | | |
| 21 | Sept 10 | 4,200 | 95% | 4 100 | | | | | |

One patient who died presented jaundice terminally, while a second patient who recovered displayed a mild transient icterus

Varying degrees of pallor was a physical finding in a small percentage of the cases

Physical examination aside from fever, increased pulse and respiratory rates, purpuric tendencies, epilation, localized edema, cervical lymphadenopathy, jaundice and pallor was negative, including neurologic findings

### LABORATORY DATA

The laboratory studies that were done on these patients revealed evidence of profound pathologic changes. Abnormal white blood cell and white differential counts, red blood cell counts, hemoglobin determinations, sedimentation rates, amounts of plasma proteins and unusual bleeding times were consistently found. Significant abnormal changes in the urine also were observed.

Dramatically low leukocyte counts with pronounced granulocytopenia and in many cases a resultant relative lymphocytosis were the most spectacular findings. All cases reported showed the leukopenia, while in the few cases in which thrombocyte counts were made they were found to be low. Very low percentages of the granulocytic series of cells was found on 2 of the 5 patients who had sternal punctures and sternal marrow studies. Hypochromic microcytic and hypochromic normocytic anemia was a common but not constant laboratory finding. Table 3 gives most of the hematologic data on these Japanese bomb victims.

TABLE 4.—*Erythrocyte Sedimentation Rates*

| Case No. | Date | Rate in Mm., First Hour | Rate in Mm., Second Hour |
|---|---|---|---|
| 1 | ? | None | |
| 2 | ? | 125 | 148 |
| 3 | | None | |
| 4 | | 130 | 140 |
| 5 | | 45 | 92 |
| 6 | | 150 | 195 |
| 7 | September 7 | 100 | 120 |
| | September 10 | 87 | 117 |
| 8 | | None | |
| 9 | | 31 | 62 |
| 10 | September 1 | 6 | 17 |
| | September 11 | 40 | 80 |
| | September 12. | 108 | 129 |
| | September 15 | 75 | 110 |
| 11 | ? | 75 | 112 |
| | September 11 | 112 | 150 |
| 12 | September 3 | 88 | 105 |
| 13 | ? | 144 | 148 |
| | September 10 | 130 | 135 |
| | September 17 | 80 | 85 |
| 14 | September 11 | 60 | 100 |
| 15 | September 11 | 32 | 95 |
| 16 | ? | 130 | 154 |
| 17 | ? | 7 | 21 |
| 18 | September 8 | 129 | 130 |
| 19 | ? | 100 | 120 |
| 20 | ? | 108 | 130 |

### SEDIMENTATION RATES

The Westergren method for the determination of the sedimentation rate of red blood cells showed that the rate was exceedingly rapid both at one and two hour intervals. This determination is considered of great diagnostic and also prognostic importance in this malady. Table 4 gives the available data on sedimentation rates.

### MISCELLANEOUS LABORATORY EXAMINATIONS

Bleeding times were determined on 9 patients and found to be abnormally prolonged in all 9. The average bleeding time by the Duke method was thirteen minutes. The clotting time, however, on the same 9 patients was within normal limits, averaging slightly more than three minutes. The direct van den Bergh test on the 7 blood samples from 7 separate patients was negative, while the indirect van den Bergh was positive on 6 of the same 7 patients. Studies on the fragility of the red blood cells of 8 patients showed no deviation from the normal.

Urinalysis on most patients disclosed positive findings of small amounts of albumin, with positive evidences of tyrosin in the urine of 3 patients. Abnormal amounts of urobilinogen in the urine were found in 9 of 11 patients. Urinalysis otherwise was negative.

Total protein determinations were done on a few patients after they had been in the hospital for a while, and in all there was a profound decrease in the total proteins, especially albumin, with a resultant reversal of the albumin-globulin ratio.

### SUMMARY AND CONCLUSIONS

Twenty-one patients who developed a delayed illness following their exposure to atomic bomb explosions in Japan were studied. The data on these few patients seem to indicate that the possibilities of developing this syndrome is not significantly affected by distance from the center of the explosion as long as one is within a 2,000 meter radius. It is undoubtedly significant that only 1 patient is known to have been outdoors when the explosion occurred, and therefore people inside buildings were more apt to suffer from the delayed effects of atomic bombs provided they survived the initial effects. The delayed malady to some degree results from a generalized disturbance in human physiologic function, but the effects can be attributed principally to destruction or suppression of elements of the hemopoietic system (mainly granulocytes and thrombocytes) and to disturbance in liver function. The former effect produces a leukopenia (principally a granulocytopenia), thrombocytopenia, increased bleeding time and hemorrhagic tendencies with a resulting anemia, fever and weakness. The latter effect on the liver produces an albuminuria, tyrosinuria, hypoproteinemia, positive indirect van den Bergh reaction, jaundice and fever. The rapid sedimentation rate of erythrocytes gives evidence of extensive tissue destruction within the body. The similarity of this illness to that following excessive irradiation of the body with x-rays is striking.

600 South Kingshighway, St. Louis 10.

**Modern Research.**—The possibilities of research by simple means have largely disappeared. Expensive apparatus, great amounts of expendable material and proper assistance—secretarial and technical—are essential in modern research. What generous financial support does for an investigator is to increase and accelerate his output. If he has ample money to aid him he is not compelled to spend time in a shop making necessary apparatus but can order it made by skilful machinists, he is not required to undertake the labor of rearing and attending to animals for his studies but can buy the animals from reliable dealers or hire some one to breed them and give them proper care, he need not make charts, graphs and tables or prepare tracings and records for publication but can employ a draftsman to attend to these matters. Just so far as an investigator is freed from distracting attention to a variety of minor tasks which, though essential, are better performed by expert technicians in the several fields is he enabled to devote himself to his own special functions—keeping in touch with the moving frontier of knowledge, the newest literature, the latest discoveries, estimating the significance of fresh achievements in other places as related to his own current studies, and, by conferences with his fellow workers and by personal engagement in experiments, participating in the advances into new territory.—Cannon, Walter B. The Way of an Investigator, New York, W. W. Norton & Co., Inc., 1945.

# TYPHOID AND PARATYPHOID A IN IMMUNIZED MILITARY PERSONNEL

LIEUTENANT JEROME T SYVERTON
COMMANDER RICHARD E CHING
LIEUTENANT COMMANDER F S CHEEVER
Medical Corps, United States Naval Reserve
and
LIEUTENANT (jg) ANCIL B SMITH
Hospital Corps, United States Navy

A clinical picture strongly suggestive of typhoid in a patient hospitalized because of suspected typhus led to bacteriologic and serologic studies that established the illness as paratyphoid A This patient had become ill within four days of his arrival on Guam from Okinawa When further inquiry revealed that other marines and soldiers, recently evacuated from Okinawa, were in four hospitals on Guam because of similar clinical findings, the obvious importance of learning whether these patients had typhoid or paratyphoid led us to undertake an investigation of this problem Bacteriologic and serologic studies established typhoid or paratyphoid A as the diagnosis for 24 cases Of these, 21 were paratyphoid A and 3 were typhoid

It is our purpose in this paper to present certain clinical, bacteriologic, immunologic and epidemiologic data that relate to these 24 proved cases of typhoid or paratyphoid A in immunized military personnel [1]

## DATA RELATING TO THE PATIENTS

Of the 24 proved cases of typhoid or paratyphoid A, 16 were in marines and 8 were in soldiers All 24 patients had been overseas for at least six months prior to the onset of illness, and all but 1, a marine, had been evacuated recently from Okinawa, a combat area One explanation for the higher incidence in marines is that three of the four hospitals utilized on Guam to care for these patients were naval hospitals

The age distribution in years was from 18 to 37 Eighteen patients were between 20 and 30 years of age, 4 were under 20 and 2 over 30 Twenty-three of the patients were white Americans and 1 patient (case 10) was an American Negro

As these 24 patients were military personnel on duty in a forward area, there was little possibility that all indicated measures for immunization had not been effected It seemed worth while nevertheless, to check the most recent date of typhoid-paratyphoid immunization Accordingly, the health records of 20 of the 24 patients were reviewed, the records of the other 4 were not available The data on typhoid-paratyphoid immunization for the 20 men are presented in table 1 Nineteen of the 20 patients had received the full standard course of vaccination One patient had on record only a single initial dose of 0 5 cc, but he had received a booster dose recently Fifteen of the 20 men had been given one or more booster injections The interval in months between the last dose of vaccine and the onset of illness is given for each case in table 2 This interval ranged from five to fifteen months As the accepted expectancy for duration of immunity approximates twelve months, each of the 20 patients should have had some residual immunity at the onset of his illness The possible influence exerted by this residual immunity on the patient's clinical course will be considered

## BACTERIOLOGIC STUDIES

Repeated attempts were made to recover the causative organism from each patient by culture of blood, stool and urine Additional material for culture from 1 patient consisted of bone fragments removed from periostitic foci

The technic of blood culture was modified from that routinely employed This modification was effected because these patients, as members of the armed forces, presumably had received prophylactic inoculations of triple typhoid vaccine and therefore should react to infection with an immediate, specific, anamnestic response. It was assumed, therefore, that this early heightened response would result in humoral anti-

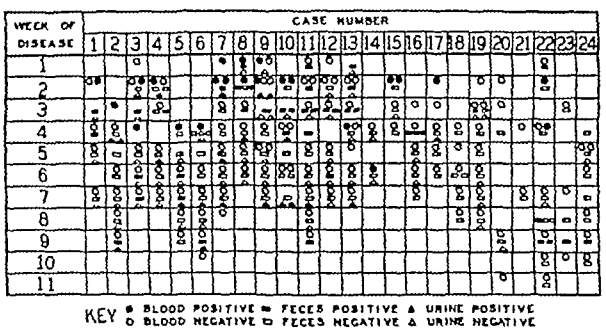



Chart 1.—Micro-organisms isolated by culture of blood, feces and urine

bodies in sufficient quantity to make cultivation of the organism difficult. Accordingly from 10 to 20 cc of whole blood was withdrawn and allowed to clot, the serum was saved for serologic study, and only the clot was used for culture. Each clot was divided into three portions for transfer to each of three tubes of medium, two of tryptose-phosphate broth containing 0 1 per cent agar and one of thioglycollate medium containing 0 1 per cent agar The cultures were incubated at 37 C. for seven days or until growth was found by daily examination to be present.

Source material for fecal cultures was obtained by the rectal swab technic or from whole fecal specimens This material was used for transfer to a Bacto-Shigella-Salmonella agar plate, which was inoculated comparatively heavily by means of a loop or cotton swab Urine for culture was obtained by having the patient void into a sterile test tube (25 by 150 mm.) Five cc. of urine then was added to an equal amount of tryptose-phosphate broth, *ph* 7.2, for incubation at 37 C for from eighteen to twenty-four hours When growth became apparent, a Bacto-Shigella-Salmonella agar plate was heavily inoculated by transfer of two or three loopfuls of the broth culture. After incubation at 37 C for from eighteen to twenty-four hours the plates were inspected for colorless colonies When such colonies were present, four to six were selected for transfer by streaking to separate MacConkey agar plates This step was to determine the homogeneity of a colony When, after incubation at 37 C for from eighteen to twenty-four hours the resultant colonies were found to be "pure," transfer to agar slants with incubation at 37 C. for twenty-four hours was carried out Then the growth on the slant was used as the source culture for determining the bio-

---

Because of lack of space this article has been abbreviated for publication in THE JOURNAL. The complete article appears in the authors reprints.

From the United States Naval Medical Research Unit No 2 (Lieutenant Syverton Lieutenant Commander Cheever and Lieutenant [junior grade] Smith) From Fleet Hospital 115 (Commander Ching)

This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the United States Navy The opinions and views set forth in this article are those of the writers and are not to be considered as reflecting the policies of the Navy Department

Dr Syverton is associate professor of bacteriology Department of Bacteriology University of Rochester School of Medicine 260 Crittenden Boulevard Rochester 7 N Y Dr Ching is assistant professor of medicine University of Tennessee School of Medicine Memphis Dr Cheever is associate in bacteriology Harvard Medical School Boston

1 The cooperation of Lieut. Col G G Carter, M C, A U S Comdr D W Marquis (MC) U S N R. Comdr S M Gardner (MC), U S N R Lieut Comdr H B Orenstein (MC), U S N R. and Capt I W Kramer M. C., A U S, made it possible for us to assemble the data recorded in this study Technical assistance was rendered by N F Hunt PhM2c A. J Clemente PhM1c G H. Freyvogel Jr PhM1c E H. Josselyn PhM2c W R. Hess CPhM and G H Vogt CPhM

chemical reaction of the organism The carbohydrates used in fermentative tests were glucose, lactose, sucrose, mannitol, dulcitol and maltose Incubation at 37 C for thirty days was carried out in all fermentative tests Growth in peptone medium was employed for tests to determine the production of hydrogen sulfide and indole Motility was determined by inoculating semisolid medium (the semisolid medium utilized in this laboratory is a modification of that of Jordan, Caldwell and Reiter, as described by Edwards and Bruner [2]) Incubation was carried out at 37 C for several days or until motility was apparent

Species identification within the various genera was carried out by agglutination tests in which specific typing serums were used The antigenic analysis of the Salmonella strains isolated was accomplished by means of the standard Salmonella typing serums prepared by Dr P R Edwards of the Department of Animal Pathology, Kentucky Agricultural Experiment Station, University of Kentucky, for the National Research Council

A specific diagnosis was established for 24 patients [3] with the clinical picture and physical findings of typhoid or paratyphoid A The bacteriologic findings are summarized in chart 1 Success or failure of isolation of the causative organism is indicated according to the week of the disease It can be seen that the etiologic agent was isolated from 19 patients, from the blood and feces of 8 patients, from the blood of 7, from the feces of 3 and from bone fragments of 1 This last case gave a history entirely compatible with typhoid complicated with periostitis of both tibias The diagnosis in each of the remaining 5 cases was made by serologic tests

## SEROLOGIC STUDIES

As far as possible, weekly samples of serum were obtained from each patient for the determination of the antibody titer against Salmonella typhosa, Salmonella paratyphi A Salmonella paratyphi B, Proteus $OX_{19}$ and Proteus $OX_k$ The macroscopic (tube) agglutination test was used Since standardized issue antigens were not available, we prepared our own In the case of the Salmonella organisms several strains of each species and various methods of preparation were tried in an attempt to produce antigens of maximal agglutinability Unfortunately, standardized "high titer" antiserums were not available for testing them

The results of the Widal tests are given in table 3 Each patient's immunologic response undoubtedly was altered by the residual relative immunity present at the onset of his disease Moreover, the picture is incomplete in some cases because serum specimens withdrawn early in the illness were not available or because the agglutinative tests were carried out in other laboratories

In the 3 cases of typhoid (in 2 of which the diagnosis was established by the isolation of S typhosa) the Widal reactions were quite typical In 21 cases of paratyphoid A the Widal reactions were diagnostic in 12 (S paratyphi A was recovered from either the

TABLE 3—*Reciprocal of the Agglutinin Titer for the H and O Antigens of S Typhosa, S Paratyphi A and S Paratyphi B*

| Antigen | Week of illness | Case 1 | | | | | | Case 2 | | | | | | | Case 3 | | | | | | Case 4 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2 | 4 | 5 | 7 | 8 | 9 | 4 | 6 | 7 | 8 | 9 | 10 | 11 | 1 | 4 | 5 | 6 | 7 | | 1 | 2 | 3 | 5 | 6 | 7 |
| OT | | 20 | 40 | 0 | 20 | 0 | 0 | 40 | 80 | 80 | 40 | 40 | 40 | 40 | 0 | 0 | 20 | 20 | 20 | | 0 | 40 | 20 | 20 | 40 | 20 |
| OA | Reciprocal | 20 | 20 | 20 | 20 | 0 | 0 | 40 | 40 | 80 | 40 | 40 | 40 | 40 | 0 | 20 | 40 | 80 | 40 | | 0 | 80 | 160 | 160 | 160 | 160 |
| OB | of | 0 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 | 0 | 20 | | 0 | 0 | 80 | 160 | 160 | 80 |
| HT | agglutinin | 40 | 80 | 20 | 80 | 0 | 0 | 80 | 160 | 160 | 80 | 80 | 160 | 160 | 40 | 20 | 80 | 40 | 20 | | 0 | 0 | 40 | 40 | 40 | 20 |
| HA | titer | 40 | 40 | 40 | 20 | 0 | 0 | 80 | 160 | 160 | 160 | 80 | 80 | 80 | 40 | 80 | 160 | 160 | 80 | | 0 | 0 | 80 | 80 | 80 | 80 |
| HB | | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 0 | 20 | 40 | 80 | 20 | 20 | | 0 | 0 | 80 | 40 | 80 | 80 |

| Antigen | Week of illness | Case 5 | | | | | | Case 6 | | | | | | | Case 7 | | | | | | | Case 8 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 4 | 5 | 6 | 7 | 8 | 9 | 4 | 6 | 7 | 8 | 9 | 10 | 11 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 1 | 2 | 3 | 4 | 5 | 6 |
| OT | | 20 | 40 | 20 | 0 | 20 | 20 | 40 | 40 | 20 | 20 | 20 | 20 | 80 | 80 | 160 | 80 | 80 | 80 | 80 | 40 | 40 | 40 | 20 | 40 | 40 | 20 |
| OA | Reciprocal | 20 | 40 | 40 | 20 | 40 | 20 | 20 | 40 | 20 | 40 | 20 | 0 | 0 | 160 | 320 | 320 | 160 | 80 | 160 | 80 | 160 | 160 | 40 | 160 | 80 | 40 |
| OB | of | 0 | 20 | 0 | 20 | 0 | 0 | 20 | 20 | 20 | 20 | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 40 | 140 | 80 | 40 | 40 | 40 |
| HT | agglutinin | 80 | 160 | 80 | 40 | 160 | 80 | 80 | 160 | 80 | 80 | 40 | 40 | 80 | 160 | 320 | 320 | 160 | 160 | 160 | 80 | 160 | 60 | 80 | 640 | 160 | 320 |
| HA | titer | 40 | 80 | 160 | 80 | 80 | 80 | 40 | 80 | 80 | 160 | 160 | 160 | 160 | 160 | 320 | 640 | 320 | 160 | 160 | 160 | 640 | 640 | 640 | 1280 | 320 | 160 |
| HB | | 0 | 20 | 0 | 0 | 20 | 0 | 20 | 40 | 20 | 40 | 20 | 40 | 20 | 40 | 40 | 40 | 0 | 20 | 0 | 40 | 40 | 40 | 160 | 160 | 80 | 80 |

| Antigen | Week of illness | Case 9 | | | | Case 10 | | | Case 11 | | | | | | | Case 12 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 4 | 5 | 6 | 7 | 4 | 6 | 8 | 2 | 3 | 5 | 6 | 7 | 8 | 9 | 10 | 2 | 4 | 5 | 6 | 7 | 8 | 9 |
| OT | | 80 | 80 | 40 | 40 | 80 | 80 | 40 | 20 | 40 | 40 | 80 | 20 | 20 | 40 | 20 | 40 | 80 | 80 | 160 | 80 | 40 | 40 |
| OA | Reciprocal | 320 | 160 | 320 | 80 | 40 | 80 | 40 | 40 | 80 | 80 | 40 | 40 | 40 | 20 | 20 | 80 | 160 | 80 | 160 | 160 | 40 | 40 |
| OB | of | 80 | 80 | 40 | 40 | 0 | 0 | 0 | 20 | 20 | 20 | 20 | 0 | 0 | 0 | 0 | 320 | 80 | 80 | 80 | 40 | 40 | 20 |
| HT | agglutinin | 160 | 80 | 80 | 160 | 320 | 320 | 160 | 160 | 160 | 160 | 160 | 160 | 80 | 80 | 80 | 80 | 160 | 80 | 320 | 160 | 160 | 160 |
| HA | titer | 640 | 640 | 640 | 320 | 160 | 160 | 160 | 1280 | 1280 | 640 | 640 | 640 | 640 | 160 | 320 | 80 | 320 | 160 | 320 | 320 | 160 | 160 |
| HB | | 80 | 40 | 40 | 0 | 80 | 40 | 80 | 0 | 40 | 20 | 0 | 0 | 0 | 0 | 0 | 160 | 80 | 40 | 80 | 40 | 20 | 0 |

| Antigen | Week of illness | Case 13 | | | | | Case 14 | | Case 15 | | | Case 16 | | | | Case 17 | | | | Case 18 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 3 | 4 | 6 | 7 | 4 | 6 | 3 | 4 | 5 | 5 | 6 | 7 | 8 | 4 | 5 | 6 | 7 | 6 | 7 | 10 |
| OT | | 0 | 20 | 20 | 20 | 20 | 20 | 20 | 0 | 0 | 0 | 80 | 40 | 40 | 40 | 0 | 0 | 0 | 0 | 320 | 80 | 80 |
| OA | Reciprocal | 20 | 20 | 80 | 80 | 40 | 20 | 80 | 160 | 160 | 80 | 40 | 40 | 40 | 20 | 20 | 0 | 0 | 0 | 640 | 640 | 320 |
| OB | of | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 320 | 160 | 160 |
| HT | agglutinin | 160 | 80 | 160 | 80 | 80 | 40 | 20 | 160 | 160 | 80 | 160 | 160 | 160 | 160 | 0 | 0 | 0 | 0 | 80 | 320 | 40 |
| HA | titer | 80 | 160 | 5120 | 2560 | 1280 | 40 | 40 | 1280 | 1280 | 1280 | 40 | 40 | 40 | 80 | 20 | 20 | 0 | 0 | 640 | 2560 | 640 |
| HB | | 0 | 40 | 20 | 0 | 0 | 0 | 0 | 80 | 40 | 20 | 40 | 20 | 40 | 20 | 0 | 0 | 0 | 0 | 320 | 160 | 160 |

| Antigen | Week of illness | Case 19 | | | | | Case 20 | | | | Case 21 | | Case 22 | | | Case 23 | | | Case 24 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 4 | 5 | 6 | 7 | 8 | 2 | 9 | 11 | 13 | 6 | 7 | 6 | 10 | 11 | 6 | 10 | 12 | 5 | 7 | 8 | 9 | 11 |
| OT | | 160 | 160 | 80 | 80 | 80 | 0 | 0 | 20 | 0 | 40 | 40 | 320 | 320 | 640 | 320 | 40 | 2560 | 160 | 320 | 320 | 320 | 160 |
| OA | Reciprocal | 160 | 160 | 160 | 160 | 160 | 40 | 0 | 0 | 0 | 160 | 160 | 80 | 160 | 320 | 80 | 40 | 0 | 80 | 80 | 80 | 40 | 160 |
| OB | of | 40 | 40 | 40 | 40 | 40 | 0 | 0 | 0 | 0 | 40 | 40 | 80 | 80 | 160 | 80 | 40 | 20 | 80 | 80 | 80 | 80 | 40 |
| HT | agglutinin | 320 | 160 | 640 | 80 | 160 | 20 | 40 | 20 | 40 | 160 | 320 | 640 | 5120 | 5120 | 1280 | 5120 | 1280 | 5120 | 5120 | 5120 | 5120 | 2560 |
| HA | titer | 640 | 640 | 640 | 640 | 640 | 160 | 5120 | 2560 | 2560 | 2560 | 5120 | 80 | 80 | 320 | 80 | 40 | 20 | 80 | 80 | 80 | 160 | 80 |
| HB | | 80 | 40 | 40 | 40 | 20 | 0 | 320 | 320 | 160 | 40 | 40 | 80 | 80 | 320 | 40 | 40 | 20 | 80 | 80 | 80 | 160 | 40 |

* OT = O antigen S typhosa; OA = O antigen S paratyphi A; OB = O antigen S paratyphi B
HT = H antigen S typhosa; HA = H antigen S paratyphi A; HB = H antigen S paratyphi B

2 Edwards, P R and Bruner, D W *Serological Identification of Salmonella Cultures* Circular 54, Kentucky Agricultural Experiment Station, December 1942

3 Through the technical assistance of the pharmacists mates named in footnote 1

blood or the stool or both of 5) In the remaining 9 cases the agglutination tests were atypical and the diagnosis was established by the isolation of S paratyphi A from the blood or stool or both in each case Thus, had the laboratory diagnosis been based on serologic results alone nearly half the cases of paratyphoid A would have been missed

In these 9 cases the agglutinin titers against the homologous H and O antigens were not significantly higher than those against at least one of the corresponding heterologous ones In several instances they were actually lower In 3 of these cases the highest agglutinin titer recorded against either homologous antigen (H or O) was 1 40, and in a fourth case it was 1 80 None of these cases showed the typical anamnestic reaction one would expect in a person who had been immunized against the disease relatively recently As in the other cases of the series the H agglutinin titers were usually higher than for the corresponding O

Agglutination tests were set up against Proteus $OX_{19}$ and $OX_k$ but in no case were these organisms agglutinated to a significant titer

## CLINICAL PICTURE AND COURSE

Even though the clinical and pathologic manifestations of typhoid or paratyphoid A are sufficiently protean to make difficult a comparison of the disease in vaccinated and nonvaccinated human hosts, the size and homogeneity of the group of cases under study make worth while a description of our findings It was expected that the relative immunity present in each host as the result of artificial active immunization would alter measurably the clinical picture as observed for the group

Typhoid and paratyphoid A may closely simulate each other More commonly, however, the clinical and pathologic manifestations in paratyphoid A are neither as severe nor of as long duration as in typhoid Unlike S paratyphi B, S paratyphi A rarely causes the type of infection classified clinically as 'food infection" or "food poisoning," In the present series of cases there was little to distinguish the cases of typhoid and paratyphoid A on clinical grounds alone

## INCUBATION PERIOD

The incubation period of typhoid or paratyphoid A is variable, ranging from five to forty days, but more usually it is from ten to fourteen days In the present series of cases, departure of the patient from Okinawa presumably cut off any further contact with the infectious agent It would seem, therefore, that an indication of the probable incubation period of typhoid or paratyphoid A in vaccinated persons could be gained by learning the interval in days between arrival on Guam and onset of disease Inquiry, however, revealed that the date of onset of disease varied from twenty-nine days after arrival on Guam to forty-one days before leaving Okinawa for patients who were evacuated because of their illness As these 24 patients were brought from Okinawa to Guam in sixteen different carriers (eight ships and eight planes) there is little possibility that the transport or conditions en route were factors

## CLINICAL FINDINGS AT ONSET

The onset of illness was fixed as the day of appearance of fever, although indefinite prodromal symptoms had been present in some cases The onset of illness in 23 of the 24 patients took place prior to admission to the hospital These data are presented in table 4 The number of days of illness before admission ranged from 0 to 21 and averaged 5 6 The onset of illness in 11 was abrupt, in 13 it was gradual Table 5 summarizes their presenting symptoms It will be noted that their symptoms were in common with those that occur in many acute febrile infectious diseases In 4 of the cases with gradual onset, chills occurred within from one to four days after admission to the hospital to initiate severe clinical symptoms essentially similar to those observed in the cases with abrupt onset

Abdominal pain and diarrhea at onset were indefinite in nature The liquid stools in no instance contained blood or excessive mucus It is of interest that 9 patients [4] (37 per cent) had diarrhea of variable severity within twenty-one days prior to the onset of their acute illness Since, however, diarrhea was common among combat troops on Okinawa and the diarrhea of the patients under study was not sufficiently outstanding in character or severity for the patient to be selected during that twenty-one day period for special studies the relationship of the preceding diarrhea to the specific disease subsequently proved to be typhoid or paratyphoid A could not be determined That more than infection by Salmonella may have been present was shown when attempts to recover intestinal pathogens from feces resulted in the isolation of dysentery bacilli from 2 patients Patient 8 yielded Shigella ceylonensis and patient 5 Shigella flexneri IX In addition, a third patient (16) with proved paratyphoid A, one who had diarrhea and severe right upper quadrant abdominal pain on admission, yielded on sigmoidoscopy vegetative forms of Endameba histolytica. Obviously these findings made it difficult to interpret the significance of diarrhea, whether preceding or accompanying the patient's illness

Headache was complained of by 14 patients at the time of admission and is discussed in detail with the other central nervous system manifestations

Generalized aching is recorded as being present at onset for only 4 patients It is probable that this figure is not correct for specific complaints such as headache, weakness, chills and diarrhea undoubtedly dominated the picture in many cases, and particularly in those with sudden onset

TABLE 4—*Duration of Symptoms Before Hospitalization*

| Disease | Paratyphoid A | | | | | | | | | | | | | | | | | | | | | Typhoid | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Duration in days | 5 | 10 | 5 | 7 | 10 | 20 | 5 | 4 | 2 | 6 | 2 | 4 | 2 | 1 | 7 | 21 | 10 | 15 | 4 | 5 | 2 | 0 | 6 | 7 |
| Average number of days from onset of illness until patient was hospitalized (for 24 cases of typhoid or paratyphoid A) | 6.5 | | | | | | | | | | | | | | | | | | | | | | | |

[4] Cases referred to in the text are indicated by number It is to be kept in mind that a diagnosis of paratyphoid A was established for cases 1 through 21 and a diagnosis of typhoid for cases 22 through 24

That the presenting symptoms did not tend to limit the diagnosis to a single disease is apparent from the wide variety of admission diagnoses, as shown in table 6

CLINICAL DISEASE

Study of the symptoms and signs that occurred during the course of each patient's illness gives a composite picture of typhoid or paratyphoid A as it affects

TABLE 6.—*Admission Diagnoses*

| Disease | Number of Patients |
|---|---|
| Malaria | 6 |
| Catarrhal fever, acute | 3 |
| Gastroenteritis, acute | 3 |
| Diagnosis unknown medical observation | 3 |
| Diagnosis unknown, fever cause undetermined | 4 |
| Rickettsial disease | 1 |
| Nasopharyngitis acute catarrhal | 1 |
| Appendicitis acute | 1 |
| Dysentery, type undetermined | 1 |

immunized personnel The manifestations for each of 24 patients are presented in table 7 It will be noted that the findings for each case are consistent with those of typhoid or paratyphoid A in a nonvaccinated population However, the signs and symptoms of illness in the present series of cases were, perhaps, less severe and more variable than those that occur in the natural disease Individual cases ranged from a mild febrile illness of a few days duration to a severe toxic and debilitating malady that resulted in fever for as many as sixty-four consecutive days and required hospitalization for eighty-eight days before evacuation could be effected

Table 8 shows the number of days of hospitalization required by each patient, and table 9 shows the disposition of each patient on his discharge from the hospital on Guam

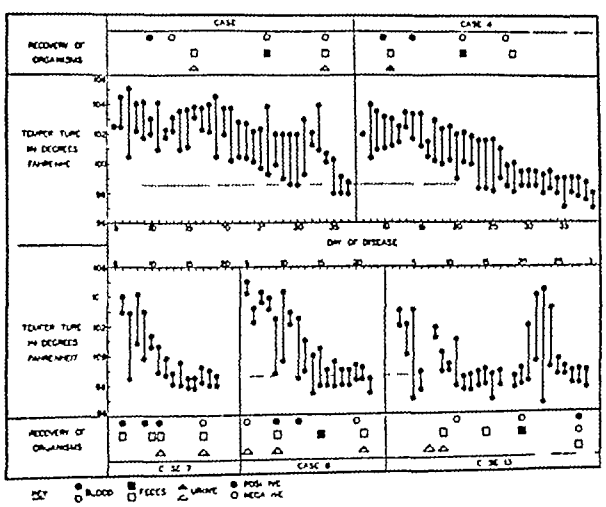


Chart 2.—Five fever charts that illustrate the diversity of temperature response in paratyphoid A and the relation of fever to recovery of the causative agent from blood and feces

Fever was the outstanding single manifestation of systemic involvement in this series of cases Present from the onset of illness in all patients, fever persisted in many for days after subjective recovery Attempts to classify the febrile reactions that were observed for each of these 24 cases brought out the total irregularity of febrile response To illustrate the variations observed in the febrile response of patients to the same infectious disease, the temperature curves of 5 patients are reproduced in chart 2 These temperature charts represent 5 cases of paratyphoid A admitted to one hospital The progressive stair-step rise in fever, said to be characteristically present but infrequently observed in typhoid, occurred in but 2 cases, 1 of paratyphoid A (case 5) and 1 of typhoid (case 22) The febrile reaction at the onset of disease for the remaining cases ranged from an immediate high, sustained fever with a diurnal variation of less than 2 degrees to a septic type of curve with wide diurnal variation Major fluctuations in temperature were accompanied by chills or chilly sensations The height of the fever curve usually was reached in the first or second week

The maximal temperature achieved by each patient ranged from 102.2 F to 105.6 F The temperature in 8 cases exceeded 105 F, in 22 cases, 104 F The duration of fever (99 F or higher by mouth) for each case is given in table 10, the range was from thirteen to sixty-four consecutive days The average duration of fever for 21 cases of paratyphoid A was thirty-three days, as compared with fifty-three days for the 3 cases of typhoid Septic curves continued into the second week for 6 cases but disappeared thereafter except for 2 cases In 1 patient (13) with paratyphoid A a twelve day fever free period was succeeded by return of symptoms with chills and a high septic type of febrile reaction for several days and then by progressive recovery The other patient (20) was acutely ill for ten days, following which he was subjectively well except for a septic type of fever curve that persisted for about forty days The longest continuous fever without remission to normal was twenty-four days Fever in 2 cases (7 and 9) fell abruptly to normal and remained there, whereas the temperature in all other cases became remittent with a progressive daily decrease in the height and duration of fever Only 1 patient (17) had a low grade fever throughout his illness

With very few exceptions the severity of symptoms and toxic manifestations could be estimated by the height of fever and, moreover, the fever curve reflected the patient's physical status Thus the patients seriously ill were limited to those with high fevers In fact, 3 of the most seriously ill patients had high fevers of short duration patient 7, nine days, patient 9, sixteen days, patient 8, twenty-one days

The cardiac rate was noticeably affected in each case, as evidenced by a discordance between pulse and temperature A relative bradycardia became apparent in the first few days of illness to continue for several weeks This was most apparent when a fever of 102 F or over was reached, irrespective of the type of temperature curve It was exceptional for the cardiac rate to exceed 100 Once the fastigium was passed and the patient began to show improvement, an increase in cardiac rate took place to reach during convalescence a relative tachycardia. Minor exertion resulted in elevations to 120 or more. Moreover, varying degrees of neurocirculatory asthenia were common and in 3 patients was so profound as to bring about their evacuation Postinfectious bradycardia was not observed It is of interest that 1 patient (22) at the height of his disease changed abruptly from a bradycardia to a sinus tachycardia at a time when he showed evidence of peripheral vascular failure

One or more manifestations of cerebral involvement was present in all but 1 case Headache was present almost continuously in 19 cases from the onset of illness until the fastigium was reached Thereafter it was present intermittently, to disappear about the time

of defervescence of fever The headache was usually generalized but varied as to localization and severity Temporary relief from headache for 1 patient was not obtained until his increased intracranial pressure had been relieved by the withdrawal of cerebrospinal fluid Further evidence of cerebral involvement was the occurrence of listlessness, somnolence, stupor and delirium Especial care was taken in the separation and tabulation of these manifestations, for each represents a gradation in extent and severity of cerebral involvement Listlessness usually merged into somnolence Stupor and delirium were present in the most severely ill patients Retrobulbar pain was surprisingly common It was present in more than a third of the patients and in 1 was the outstanding symptom Subsultus tendinum was not observed Four patients (2, 7, 8 and 9) presented findings suggestive of encephalitis These patients were ataxic and showed confusion and disorientation which merged into stupor and delirium No signs of meningeal irritation were noted, and the eyegrounds appeared normal Lumbar puncture performed on 3 of these patients revealed a normal spinal fluid in all, normal dynamics for 2 and a pressure elevated to 190 mm of water for the third (patient 7)

Symptoms or signs of involvement of the gastrointestinal tract were prominent Anorexia was present regularly at the height of fever Nausea occurred in a third of the cases, nonprojectile vomiting in a third, abdominal pain in a half and diarrhea in a half The abdominal pain was for the most part indefinite, crampy and nonlocalizing, irrespective of the presence of diarrhea In only a single case did it persist or become sufficiently intense to simulate the pain of an acute abdominal condition The exception was the patient (16) from whom vegetative forms of Endameba histolytica were recovered Diarrhea of several days' duration was a prominent finding It was present on admission in 8 cases, during the first week in 8 and during the second or third week in 5 Blood, excess mucus, severe cramps, tenesmus or the systemic effects of dehydration were not noted Paregoric readily controlled the attacks From the onset of decline in fever and throughout convalescence appetites varied from normal to ravenous Weight that was lost was for the most part rapidly regained

The spleen enlarged sufficiently to become palpable in 70 per cent of the cases This enlargement became apparent in from seven to fourteen days after the onset of illness, when palpation revealed a soft, tender organ with a smooth, round border Transitory hepatomegaly was noted in 2 cases In 1 patient (22) it undoubtedly resulted from chronic passive congestion

Bronchitis was present on admission in 4 patients and developed during the course of illness in another 4 The symptoms were mild and the physical findings transitory in 6 of these patients, all of whom had paratyphoid A The patients had a cough for several days that was distressing at times and productive of a slight amount of mucoid material Two of the patients had a few sibilant rales on each of two days Two patients with typhoid, on the other hand, presented more definite and prolonged evidence of bronchitis One man was admitted to the hospital with a clinical diagnosis of bronchopneumonia Coryza, laryngitis and bronchitis were present A rasping cough, intermittently productive of tenacious sputum, developed in the first week A roentgenogram showed slight pneumonic infiltration at the costophrenic angle, but sputum studies and subsequent chest plates were negative A course of sulfadiazine therapy was without apparent effect The patient continued to cough for several weeks The second case diagnosed clinically as bronchopneumonia developed in a typhoid patient at the height of his illness As it was associated with vasomotor collapse and sinus arrhythmia, it might better be considered as a complication Rapid, shallow respirations and coarse rales developed but were present for only three days Chest plates were negative

Weakness in many appeared early and became more evident as the disease progressed Present in all,

TABLE 8—*Length of Stay in Hospital*

| Disease | Paratyphoid A | | | | | | | | | | | | | | | | | | | | Typhoid | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Days of hospitalization | 72 | 54 | 45 | 49 | 50 | 70 | 52 | 41 | 52 | 43 | 64 | 60 | 39 | 50 | 45 | 4° | 67 | 60 | 53 | 88 | 58 | 75 | 84 | 71 |
| Average number of days of hospitalization | 56 | | | | | | | | | | | | | | | | | | | | | 77 | | |
| | 68 | | | | | | | | | | | | | | | | | | | | | | | |

TABLE 9—*Disposition of Patient on Discharge from Overseas Hospital*

| | Case Number | | | | | | | | | | | | | | | | | | | | | | | Total Number | Percental Number |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 1o | 16 | 17 | 18 | 19 | 20 | 21 | °2 | 23 | 24 | |
| Evacuation for convalescence. | | + | | | | + | + | | | | + | + | + | + | | | | + | | + | + | + | + | + | 13 | 54 |
| Returned to active duty | + | | + | + | + | | | + | + | + | | | | | + | + | + | | + | | | | | | 11 | 46 |

TABLE 10—*Duration of Fever*

| Disease | Paratyphoid A | | | | | | | | | | | | | | | | | | | | Typhoid | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Case number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | °2 | 23 | 24 |
| Duration in days | 36 | 30 | 20 | 32 | 28 | 25 | 13 | 21 | 16 | 34 | 21 | 38 | 24 | 46 | 30 | 48 | °4 | 64 | 19 | 49 | 50 | 57 | 38 | 63 |
| Average duration in days | 33 | | | | | | | | | | | | | | | | | | | | | 53 | | |
| | 35 | | | | | | | | | | | | | | | | | | | | | | | |

asthenia was profound in 50 per cent of the patients, as indicated in table 7

Excessive perspiration followed chills and abrupt changes in body temperature In addition, however, profuse sweating occurred toward the latter part of the illness when the maximal diurnal temperature rise remained low, and in convalescence It was particularly pronounced in about a third of the patients, who had drenching sweats by day and night

Exanthems appeared early in the disease as a discrete macular rash in about 25 per cent of the patients It was found over the abdomen and chest, sometimes spreading to the axillas and upper part of the thighs It faded on pressure, never was prominent and usually disappeared in from forty-eight to seventy-two hours

The results of 94 leukocyte counts on 24 patients are summarized in table 11 Total cell counts were largely within normal limits The highest (14,700) was recorded during the fourth week of illness and the lowest (3,100) during the second week Several patients showed a mild leukopenia, and in 2 (2 and 24) a definite neutropenia was noted during the fourth week of illness

TABLE 11.—*Data on Leukocyte Counts*

| | Average Leukocyte Count | | | | | | |
|---|---|---|---|---|---|---|---|
| | On Admission | By Week | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| Total number of leukocytes | 6 077 | 6 577 | 6 092 | 5 460 | 6 615 | 7 066 | 7 000 |
| Differential count expressed in percental numbers | | | | | | | |
| Neutrophils | 63 | 61 | 61 | 59 | 56 | 51 | 53 |
| Lymphocytes | 33 | 32 | 37 | 33 | 40 | 46 | 44 |
| Mononuclear leukocytes | 2 | 2 | 3 | 4 | 3 | 2 | 1 |
| Eosinophils | 2 | 2 | 1 | 4 | 1 | 1 | 2 |
| Number of leukocyte counts used to compute averages | 24 | 18 | 19 | 13 | 10 | 6 | 4 |

## DIFFERENTIAL DIAGNOSIS

The illness in each patient of the present series demonstrates the capacity of typhoid or paratyphoid A in vaccinated personnel to simulate during the early stages of the disease a wide variety of illnesses The presenting symptoms of each case are listed in table 5 These symptoms, supplemented by the clinical appearance history and physical findings for each patient, suggested to physicians stationed in four hospitals a wide variety of admission diagnoses These are listed in table 6 according to case number In no instance was the admission diagnosis that of typhoid or paratyphoid A For the most part typhoid or paratyphoid A was not seriously considered until other possibilities had been eliminated The diseases in addition to those listed in table 6, that must be considered in differential diagnosis are brucellosis, dengue fever, miliary tuberculosis, bacterial endocarditis, meningitis tuberculous peritonitis, Hodgkin's disease, trichinosis and other pyrogenic illnesses Obviously it is only through persistent and intelligent utilization of laboratory facilities that a specific diagnosis can be made A history of recent immunization with TAB vaccine offers little assurance that the disease is not typhoid or paratyphoid A Previous immunization may make the diagnosis more difficult by modifying the presenting symptoms and course of the disease as well as by causing atypical Widal reactions

## COMPLICATIONS

Complications occurred in 5 cases In case 23 acute periostitis and osteitis of the right tibia developed in the third week of illness, and of the left tibia in the fourth week Both required surgical intervention Bone fragments and exudate from each focus yielded S typhosa Both foci of infection failed to heal, there being a discharge of purulent exudate and sequestrums at intervals The patient was evacuated for further hospitalization eighty-one days after he was admitted

Patient 21 showed manifestations of vasomotor collapse on the thirty-first day of his illness He developed over a period of hours pulmonary congestion, sinus tachycardia and right axis deviation As there was no evidence of thrombosis or embolism, it was assumed that he had a toxic myocarditis This patient was the most severely ill of all His recovery was delayed to such an extent that he was evacuated on the seventy-fifth day of his illness because of persistent asthenia emaciation and debility

Four patients (6, 7, 4, 13) developed during convalescence precordial pain, effort syndrome and tachycardia They became exhausted by slight exertion Physical examination and electrocardiographic studies revealed no evidence of organic heart disease All these patients were evacuated because of their profound and persistent neurocirculatory asthenia

One patient (1) had evidence of a bilateral ulnar neuritis from the fifth to eighth weeks of his illness Recovery was complete He was treated intensively with vitamin $B_1$

## COMMENT

These 24 proved cases of typhoid or paratyphoid A in military personnel illustrate two accepted but not too generally recognized facts (1) that typhoid or paratyphoid A occurs among immunized civilian and military populations and (2) that the diagnosis of such cases may be difficult Sporadic cases occur not infrequently, but multiple cases are indeed rare There is, however, a recent report of multiple cases in a military population Thus Tullis[5] recorded observations on 7 cases of typhoid or paratyphoid A that occurred in military personnel in Sicily during October, November and December 1943 Five were diagnosed as typhoid and 2 as paratyphoid A The causative organism was isolated from the feces and urine of 1 patient and from fecal specimens of 6 Only two blood cultures were taken, both of which were negative Serologic confirmation of the bacteriologic diagnosis, as determined by the demonstration of a progressive rise in the antibody titer of successive samples of the host's serum, was obtained in only 2 of these cases Serologic studies in which blood from the remaining 5 patients was utilized yielded inconclusive results One patient showed no detectable antibody response, 1 showed a progressive increase in agglutinative titer to a heterologous organism but not to the homologous organism and 3 patients yielded essentially similar agglutinative titers for several antigens As no evidence is presented to show that Salmonella typing serums were utilized in the specific identification of the organisms isolated from the feces of these patients, and as no data are given as to length of incubation in fermentation tests, it is doubtful whether all these cases should be accepted as authenticated cases of typhoid or paratyphoid A in vaccinated personnel The evidence in 2 cases, however, is unequivocal

5 Tullis James L. Typhoid in Previously Immunized Subjects, War Med 7:95 (Feb) 1945

Our 24 proved cases of typhoid or paratyphoid A in military personnel suggested the possibility of a major break in the measures employed to safeguard health in all military units Moreover, since this outbreak of typhoid or paratyphoid A is the first such recorded experience among combat troops in the Pacific, it seemed probable that Okinawa presented some circumstance not previously encountered by our occupation forces Accordingly, an effort was made to account for this outbreak

Four questions immediately came to mind These were 1 Had a break occurred in the sanitary precautions routinely and rigidly maintained by each military unit for the control of its water supply, food, excrement, flies and sewage disposal? 2 Did the men inadvertently expose themselves to a source of infection declared out of bounds or not recognized by local military authorities thereby permitting the ingestion of a massive dose of the causative organism? 3 Was the causative organism a species of Salmonella other than S typhosa, S paratyphi A or S paratyphi B and therefore not included in the accepted triple typhoid vaccine? 4 Were these proved cases evidence that the triple typhoid vaccine employed routinely for artificial active immunization affords less protection than is assumed? Each of these questions was investigated as far as possible Certain points were difficult to ascertain, however, because the infections were contracted on Okinawa, whereas the patients were hospitalized on Guam

It was learned that public health measures were enforced and that the men had been well indoctrinated as to the proper care of utensils, food, excreta and water Flies, however, were present in excessive numbers in combat areas where it was impossible to keep food and mess gear free from them As the natives had deposited their excreta and distributed it for fertilizer throughout the areas occupied by our troops, fecal contamination of food by flies undoubtedly occurred It seems probable, however, that the dosage of Salmonella deposited by flies on the food of any one person would be exceedingly small The likely source of infection became apparent when 12 of the 24 patients with proved infections readily admitted eating uncooked carrots, cabbage, onions, sweet potatoes, peanuts or sugar cane The sugar cane had been cut and was lying on the ground In each instance the patient gave a history of having obtained at least one or more of these products directly from Okinawan fields or gardens The vegetables were cleaned summarily and in many instances eaten in great quantity Except for eating these raw products, all denied emphatically the ingestion of water or food from any other than the military source of supply Furthermore, it is probable that raw vegetables were eaten by the patients who denied doing so As human excrement, "night soil," constitutes most of the fertilizer used on Okinawa, the immediate source of the infectious agent seems obvious It is suggested that the patients ingested a massive dose of organisms, thereby overwhelming their relative immunity

The organism recovered from each patient was identified biochemically and serologically as either S typhosa or S paratyphi A, thereby excluding the possibility of infection by a species of Salmonella not included in the triple typhoid vaccine

Statistical evidence shows unequivocally that triple typhoid vaccine as routinely administered is effective in the prophylaxis of typhoid or paratyphoid A It is a procedure that is practiced by all nations and rigidly enforced for Americans in military service The protection confirmed is obviously adequate under most conditions of exposure In the present series of cases, however, the ratio of the number of cases of paratyphoid A to typhoid was 8 to 1 This difference in incidence for the two forms of fever may be of significance but is difficult to evaluate Paratyphoid A in military personnel in the United States is rarely diagnosed, nor has it been reported from any of the islands occupied prior to the invasion of Okinawa It is therefore questionable whether the immunizing capacity of the S paratyphi A component of triple typhoid vaccine has been tested adequately for its ability to prevent infection in men exposed under field conditions Moreover, the immunity to infection induced by each of the three components is not only specific but also relative, it is therefore in balance subject to being overwhelmed by heavy exposure This status of relative immunity in military personnel who presumably are "protected" not infrequently is overlooked, with the result that typhoid or paratyphoid A, usually modified or atypical, is wrongly diagnosed or tardily considered Thus it is common in the first few days of the patient's illness for blood to be withdrawn for serologic studies More usually, this same blood sample is cultured Unfortunately, often only the single blood culture is taken, instead of interval blood cultures The foregoing remarks are pertinent to the present investigation

A negative Widal reaction during the first fortnight of illness does not rule out typhoid or paratyphoid A as a diagnostic possibility Specific agglutinins commonly are absent or in negligible titer during the first several weeks Thus in the present series of cases serum samples withdrawn from 9 patients with paratyphoid A during the first two weeks of illness were available for testing Only 5 of these showed a significant agglutinin titer against the causative organism In 3 cases the antibody response was minimal or absent For the third the only significant titer recorded was against a heterologous antigen In 2 additional cases significant antibody titers were not recorded, but the evidence is not conclusive since serum specimens were obtained only relatively late in the course of the disease

It was found that bacteriologic culture of the blood is the most important single diagnostic procedure when a case is seen within two weeks of the onset of illness Culture of the patient's blood at two day intervals for two weeks, or until positive, rarely fails in typhoid or paratyphoid A to reveal the causative agent Accordingly, extra effort early in the disease may establish the diagnosis and thereby modify therapeutic measures, institute isolation precautions and reduce to a minimum further laboratory work

In some cases of typhoid or paratyphoid A the Widal test is of great assistance in establishing the diagnosis, particularly if several specimens of serum taken at intervals during the course of the disease are available for testing A sharp rise in agglutinin titer against a single organism early in the disease is practically diagnostic A series of high agglutinin titer readings against one organism later in the course of the disease is significant if the titers against the other organisms are definitely lower

On the other hand, a negative Widal test cannot be depended on to rule out the possibility of typhoid or paratyphoid A In several of our proved cases of paratyphoid A significant agglutinin titers failed to develop against the causative organism In several other cases

in which agglutinins did appear comparable titers against heterologous antigens were observed The reason for the failure of specific agglutinins to develop is not clear The explanation for the appearance of agglutinins against heterologous organisms may result from the presence of common somatic antigens in the three species and in part to nonspecific anamnestic reactions since all subjects had been immunized previously with TAB vaccine

It is believed, therefore, that every effort should be made to establish the diagnosis of typhoid or paratyphoid A by the isolation of the specific organism from blood, urine or feces The Widal test is frequently of no aid in making or ruling out the diagnosis and in the case of the previously immunized subject from whom only one serum sample is available for testing the results may be frankly misleading Furthermore, it is difficult to compare results reported by two investigators unless standardized antigens have been used in both series

Cases of typhoid or paratyphoid A which were not specifically diagnosed undoubtedly occurred on Okinawa During the late spring and early summer of 1945 a number of patients were admitted to hospitals on that island because of fever of unknown origin The clinical picture in this group was one of sustained fever out of proportion to the patient's sense of comparative well being Little bacteriologic work could be carried out under existing conditions, and the serologic evidence was equivocal Several of the cases of typhoid or paratyphoid A reported in this series came originally from this group, and it is likely that some of the other cases of "Okinawa fever" were in reality typhoid or paratyphoid A During the preparation of the manuscript 4 additional cases of typhoid or paratyphoid A were detected on Guam, and the diagnosis was proved in 3 patients on Saipan [6] These men had recently returned from Okinawa It is possible that some of the men whose condition was not recognized will become chronic carriers of typhoid or paratyphoid A bacilli and as such will constitute a distinct public health menace, particularly on their return to areas where TAB immunization is not the rule for the general population

### SUMMARY

The occurrence of the clinical picture of typhoid or paratyphoid A in several patients recently evacuated from Okinawa with a diagnosis of fever of unknown origin stimulated studies that led to the detection of 3 cases of typhoid and 21 cases of paratyphoid A in military personnel previously immunized with standard TAB vaccine The clinical findings closely resemble those characterizing the disease in unvaccinated subjects The case fatality rate was nil, although 5 patients developed complications Repeated blood cultures proved to be the most valuble diagnostic procedure, serologic findings were often noncontributory Infection appeared to have been acquired through the eating of raw vegetables in combat areas on Okinawa, where the use of human night soil as fertilizer is widely practiced

6 Capt J D Rosenbaum M C A U S, 39th General Hospital, brought to our attention 3 cases of paratyphoid A in soldiers evacuated from Okinawa to Saipan for hospitalization He supplied a summary of the clinical and laboratory data on which he established the diagnosis for each case Two of these cases add interest to the present study 1 case by way of adding emphasis to the need for repeated blood cultures early in the disease for he recovered the organism from only one of nine blood cultures taken in the first seven days following admission the other case in that an afebrile period of nineteen days with apparent convalescence after forty four days of fever was succeeded by a relapse as evidenced by clinical illness and fever for ten more days

## THE STATUS OF THE GENERAL PRACTITIONER, PRESENT AND FUTURE

S A THOMPSON M D
and
S B THOMPSON, M D
Camden, Ark.

In the addresses before medical meetings and in the papers in the medical literature today one sees more and more concern over the shortage of specialists certified by the various specialty boards Many of these utterances imply that this shortage indicates an inadequacy of medical care now available Our purpose in this presentation is to point out a trend toward the concept that only specialists are qualified to treat patients, to question the validity of this concept and to present a plan to halt or reverse this trend It is not our purpose to question the importance of highly trained specialists in the treatment of patients simply to question the necessity of their treating all patients

For convenience of discussion the system of the practice of medicine in which the patient has no choice of physician in which supervision of the physician in charge of a patient is exercised authoritatively and in which remuneration for services is not accomplished between the physician and patient directly, will be referred to as regimented medicine This system includes the medical service of the military services, the Veterans Administration, medical teaching centers, certain industrial medical plans and other similar systems The opposed system wherein a patient selects and remunerates his physician and where the physician is free from authoritative supervision will be termed the private practice of medicine The relative merits of these two systems will not be discussed

### THE TREND

Those who served in the army hospital system are familiar with the operation of the Consultants Division of the Surgeon General's Office Medical officers were classified as to specialty training and as to relative competence within the specialty On the basis of a number so derived, assignments of individual officers were made For example, the number 3153 indicated that the officer was a medical officer qualified as an orthopedic surgeon The letters A, B, C and D were used to denote relative competence D rating indicated minimal training and experience in the specialty and was used, for example, to denote an officer who had had only an internship prior to military service and had been given a brief army course in his specialty Thus, an officer rated as 3153 D would likely serve on an orthopedic staff under supervision of a higher rated officer A C rating indicated training incomplete but with sufficient background and experience to function as a specialist without supervision if necessary Men taken into service directly from residences, men with experience in a specialty but without formal training, were usually given this rating Thus 3153 C would lead to assignment as assistant to an orthopedist in a large hospital unit or chief of orthopedics in a smaller unit In actual practice many C rated men served as chiefs in the larger hospitals, owing to the scarcity of men with higher ratings B rating indicated certification by a specialty board or equivalent training and experience Thus 3153 B men were the ones the Army desired to use as orthopedic chiefs in their general and larger station and evacuation hospitals The A rating was reserved for men of professional rank and served

primarily as consultants and as chiefs in the specialty centers The introduction of this system resulted in improvement in medical care and in medical personnel assignment It brought about the conversion of indifferent, politics ridden hospitals into miniature teaching centers and it resulted in young medical officers setting their goal at certification in order to obtain the coveted higher rating Where did the general practitioner fit into such a system? In the hospital system, if he wished to treat patients, he had to serve as a "junior specialist" in a capacity similar to that of the D rated specialist Promotion in military rank depended on the position occupied, and position in the professional field depended on specialty rating, not at all uncommon was the sight of a 30 year old chief with 40 year old assistants Is it surprising that so many chose administrative, sanitary and field duties where promotion was not dependent on specialty training? Certainly physicians subjected to this system will emerge from the service feeling that there is a very high premium on specialty training What of the patient—the 11,000,000 soldiers? His unit surgeon, the Army's nearest approach to a family physician, was rarely allowed to treat him in quarters, had minimal equipment in his dispensary and relinquished contact, in most instances, when the patient was hospitalized For many complaints of relatively simple character the soldier was referred to the hospital specialty outpatient clinics and, when hospitalized, his case was controlled completely by men who were considered specialists If he had complaints in two different body systems, almost invariably he saw two doctors Is it unreasonable to expect that he may emerge with the impression that only specialists are capable of treating him?

With the war over and soldiers converted to veterans, this may pass Will it? The veterans' hospitals operate in a very similar manner, and the newly created consultants system of the Veterans Administration is almost identical with that of the Army In THE JOURNAL of February 16 General Hawley[1] indicates the concern of the Veterans Administration over securing specialists by pointing out that the law provides a 25 per cent increase in base pay and original appointment at a higher grade for men certified by specialty boards Further, he states that "physicians in the service of the [Veterans Administration] will be encouraged to train for certification in the specialty of their choice." Will not the eventual culmination of this policy be certification of all physicians serving the Veterans Administration? Here, again, all patients admitted to the hospital will be treated by specialists General Hawley[1] states that 19,000,000 men will fall under the care of the Veterans Administration The families of these are likely to think as they do If veterans have an average of three dependents, it is conceivable that 76,000,000 members of the American population may be indoctrinated with the concept that only specialists are capable of treating patients

The Veterans Administration program of making agreements with the state medical societies for care of service connected disabilities of veterans by physicians and hospitals of the veteran's home community does allow some participation in their care by general practitioners For example, the agreement with the Kansas society provides that a veteran claiming service connected disability will be sent to a physician of his home community for complete physical examination This examiner then recommends that the veteran be further examined by a specialist in whose field the alleged disability falls, if indicated The disability rating board then acts on the combined reports That this may be an act of expediency resulting from the overcrowding of the Veterans Administration hospitals rather than a Veterans Administration policy to permit participation by the general practitioner is indicated by the fact that this system is to be used only when the Veterans Administration hospitals are filled In THE JOURNAL, Oct 6, 1945 Dr DeBakey[2] recommended that treatment under this system be given by staff physicians selected on the basis of certification by the various specialty boards Although Dr DeBakey's opinion is strictly his own, it is probably in accord with that of most other members of the Consultants Division of the Army, and the liaison between the Army and the Veterans Administration consultants is very close From this one may reach the conclusion that even in the local care the trend of the Veterans Administration will be toward the concept of total specialization

The Pepper bill now before Congress would perpetuate the maternal and infant care of the Emergency Maternity and Infant Care Program for all families A committee from the advisory board to the Children's Bureau recommended that only certified specialists be allowed to participate in this program The advisory board did not accept the committee's report, but it is indicative of the trend of thinking now in progress

In the medical teaching centers where our students, interns and residents are trained and where so many of our low income group receive their medical care, a similar trend is apparent The organizational structure of most of them is familiar to all who have passed through them Each patient is seen in a specialty clinic or admitted to a specialty service All cases, including the most trivial and routine cases handled daily by the general practitioner in private practice, are treated by specialists or under the supervision of specialists The teacher of medicine who uses his contempt for the general practitioner as a substitute for humor is present, unfortunately, in many such centers Since the teachers of medicine are specialists, it is only natural that they should glorify the role of the specialist even where such feelings are not expressed Dr DeBakey,[2] in his previously quoted article, says with genuine concern that "there are in the United States today some 160,000 practicing physicians, of whom only slightly more than 20,000 are certified by the various specialty boards as qualified in their chosen fields" Is a ratio of one specialist to eight general practitioners low? Undoubtedly it is if all patients must be treated by specialists, as the present policies of the armed services, the Veterans Administration and the medical teaching centers imply they should be

What of private practice? More and more common is the patient who feels that his differential diagnostic acumen is such that he can select the proper specialist without benefit of advice from his family doctor, and it seems reasonable to anticipate that this group will become more numerous as the previously mentioned indoctrination progresses More and more prominence is being assumed in private practice by the group clinics, and the trend in these appears to be steadily toward specialization If one will glance through the classified advertisements in THE JOURNAL, "wanted, specialist in to join group, must be certified" will be found

1 Hawley P R New Opportunities for Physicians in the Veterans Administration J A M A 130 403 (Feb 16) 1946

2 DeBakey M E Our National Medical Resources J A M A 129 417 (Oct 6) 1945

to be the approximate wording of a great many Does not the absence of general practitioners from many of these groups imply to the patient that complete care does not include the general practitioner?

The one purpose of the foregoing material is to show that a trend is under way toward a concept that only specialists are competent to treat patients If this doctrine is accepted, the concern exhibited by Dr DeBakey [2] and felt by many others over a one to eight ratio of specialists to general practitioners, the preoccupation of the Veterans Administration and other regimented systems over the shortage of qualified specialists and the feverish activity of the various specialty organizations to provide additional residencies are understandable If the profession accepts it, steps must be taken to allow the physicians of private practice to acquire the required training just as General Hawley [1] has promised the men of the Veterans Administration Can the medical schools conscientiously send out a man with only an M D degree if they feel that he is not qualified to treat patients until he becomes certified by a specialty board?

## VALIDITY OF THE CONCEPT

Suppose the profession does not accept this concept Is the position that many patients may be treated adequately by general practitioners tenable? Dr B A Hopkins [3] in the chairman's address before the Section on General Practice of the Southern Medical Association quotes Dr Pressley as saying "It is the definite conviction of some of the outstanding leaders of the medical world that from 80 to 85 per cent of those seeking medical care could be skilfully and successfully cared for by a well trained general practitioner" After reviewing over 2,000 consecutive individual cases, Dr Hopkins found this estimate conservative A similar impression is echoed by medical leaders at every meeting where discussion of this topic arises

The basic policy of the private practice of medicine, even today, rests on the general practitioner who takes care of the routine ills of all members of the family and refers them to appropriate specialists when occasion demands Is this an outmoded system? Has it failed? Is it necessary to have a pediatrician prescribe for the children and an internist for the parents when the same upper respiratory infection strikes several members of a family? Must the orthopedist be called for the contusion, sprained ankle and undisplaced fracture? These examples are not absurd, this sort of thing occurs daily in the previously described regimented systems This may be more controversial, but does adequate care require the presence of a certified obstetrician at a normal delivery? A man who has spent the time and money required to become certified can reasonably expect a larger fee for this work, but is it necessary for patients to pay such fees for routine care?

Two basic criticisms have been leveled at the system of general practice First, failure of the general practitioner, on occasion, to differentiate between the trivial and the serious For example, the sprained wrist which the general practitioner may bandage and give reassurance about may be found to be a fractured carpal navicular when seen by the orthopedist Failure to immobilize may result in a preventable permanent disability The fractured lateral malleolus requiring simple immobilization may also present a tibiofibular diastasis requiring more involved treatment Specialists in other fields can cite equally telling examples within their experience In other words, the general practitioner sometimes fails in his very important function of referring patients to specialists at the proper time. The answer to this criticism is for the general practitioner to become more proficient in differential diagnosis This will be amplified later

Secondly, the failure of the general practitioner to observe the limitations of his training is a very serious criticism That some general practitioners fail to refer patients requiring specialized care may be attributed to their fear of loss of prestige and income, of the two, prestige is probably far more important The indoctrination of the public and the young physician with the idea that the specialist is a vastly superior being is, to a large extent, responsible for the fear of loss of prestige and leads many general practitioners to try to create the illusion, both to themselves and to the public, that they are, more or less, specialists The answer to this lies in the improvement of the status of the general practioner and his indoctrination with regard to the dignity of his position as a family physician

The abuses leading to these criticisms, while serious, are susceptible of being corrected Too, the criticism is directed at certain individual general practitioners and not at the system of general practice

What is the case for the general practitioner? The economic waste involved in specialty care for routine conditions has already been mentioned, but, more positively, what has the general practitioner accomplished? During the past fifty years the life expectancy has been increased from 33 to 60 years, maternal and infant mortality has been lowered tremendously, many infectious diseases have been all but eliminated, and numerous other great strides have been made Using Dr DeBakey's statistics,[2] seven eighths of the physicians today are general practitioners Of the one eighth who are specialists, many are quite young and many are engaged in full or part time research One may safely conclude that well over 90 per cent of medical care to patients has been given by general practitioners during this forty year period Has the general practitioner not been successful in bringing the advances of medical science to the patient? Surely this implies that he is capable of treating patients

How does the population fare in the system when he is eliminated? The lowest income group of a large city receive their medical care, for the most part, from teaching hospitals, where all patients are treated by or under the supervision of specialists The finest of equipment and professional skill are available In towns of 10,000 or less, patients are treated by general practitioners with quite limited facilities and are referred to private specialists or medical centers, depending on financial status, if their needs warrant. One needs only to observe the difference in appearance of these two groups to see which has the higher health standards True the social conditions in small towns are more conducive to health than are those in a city's slums, but may not this be a reflection, to some extent, of the success of the two systems of the practice of medicine? Can the businesslike chief resident, or even the suave professor, hope to compete with the well known and beloved family physician in persuading a family to modernize its toilets, cover its garbage can or inoculate its children? Which, likely, would be more successful in persuading the head of the house that it really is necessary for him to give up tobacco now that he has Buerger's disease, or that his wife must have extensive and dangerous surgery in the hope of eliminating carci-

3 Hopkins B A The General Practitioner and Rural Medical Care, South M J 39 106 (Feb) 1946

noma, or that his young daughter must have rest, sunshine and milk until her chest films clear? The specialist can expect far better results if he can count on the influence and moral support of the family physician in seeing that his specialized regimen is followed as he recommended

There is reason to believe that, in many instances, a patient may receive better care by routinely consulting his general practitioner before seeking the attention of a specialist No past or personal history, however skillfully taken, can approach in comprehensiveness the knowledge possessed by the doctor who delivered the patient, treated him for measles and whooping cough, gave him his inoculations, stood by while the otolaryngologist removed his tonsils or the orthopedist reduced his football fracture, advised him prior to marriage, nursed him through his period of mental depression and watched the gradual rising of his blood pressure By having cared for his parents, siblings, wife and children the family doctor may know more of his family problems than the patient himself With such background of information is it not possible that his opinion on some obscure complaint may be far more valuable than that of the most highly trained specialist? The importance of seeing the patient as an integrated personality in his natural environment has been strongly emphasized by the writers on psychosomatic medicine Can any specialist approach the family physician in his opportunity to do this?

What specialist can overcome the natural bias toward those things with which he deals? If the patient complains of low back pain, will not the orthopedist first check the posture, the urologist the prostate, the gynecologist the position of the uterus, the gastroenterologist the bowel habits? How many specialists must the patient consult before the source of his complaint is found? Many fruitless diagnostic procedures could be avoided and money, suffering and time saved if patients consulted the general practitioner and the appropriate specialist recommended by him

What of the value of personalized attention? The sick person is more than bed number 14, diagnosis duodenal ulcer He is Mr John Doe, who has, among other things, indigestion The services of the radiologist and clinical pathologist are most welcome in establishing the diagnosis, of the internist in outlining the management and of the surgeon in handling his complications duly appreciated The adherence to the regimen outlined and the eventual outcome, however, are far more dependent on the family physician who cajoles, threatens or placates as the occasion demands than on any or all of these. The returned service man has no specific complaint in regard to his medical care in the service, on questioning, he will admit, reluctantly, that he received the necessary care, but, somehow he was not satisfied Frequently it is worded "They didn't pay any attention to me" He knows this is not literally true, but the personal touch was missing and on this occasionally rests the difference between recovery and invalidism It appears inevitable that a system that does not include the general practitioner must give up much of the traditional doctor-patient relationship Can medicine afford to discard such a useful weapon from its armamentarium?

### PROPOSALS TO CHECK THE TREND

If the trend not just to increased specialization but to a philosophy that only certified specialists are competent to treat patients is accepted as existing and if it is believed that this concept is not valid, the medical profession is faced with an obligation to halt this trend What can be done to retain and improve the present status of the general practitioner?

Since the trend is so much more pronounced in regimented medicine, it is felt that recognition of the general practitioner by the regimented systems would do much to improve his status in the minds of patients and young physicians To implement this it is proposed that general practitioners be given staff appointments in teaching centers A competent and successful general practitioner assigned to each specialty service would act as an adviser to the chief of service in regard to those parts of his specialty which should be emphasized in the training of general practitioners It is believed that this would eliminate the situation where, for example, a future general practitioner completes the orthopedic service of his internship knowing well how to serve as assistant at a spinal fusion, which is of little value to him, but knowing little about the differentiation between sprain and internal derangement of the knee joint, the differentiation of which may save some future patient of his a permanent disability This system might go far toward eliminating the first of the two serious criticisms of the general practitioner previously discussed Secondly, it would enhance the prestige of the general practitioner in the mind of the young physician

A second proposal to implement recognition by the regimented services is to establish general practice services in teaching, military and veterans' hospitals These services could handle the routine, not necessarily minor, conditions usually handled in that community by general practitioners in a manner similar to that used in private practice This would provide an excellent spot for training future general practitioners, would relieve the specialty services of the routine so that their energy might be devoted to cases requiring such highly trained skill and would enhance the prestige of the general practitioner in the mind of both patient and young physician It would offer an excellent opportunity to inculcate in the young general practitioner the necessity of calling for specialty consultation when indicated and might do much to alleviate the abuses of both the major criticisms of general practitioners previously discussed In the military service, particularly in garrison, an opportunity for the unit surgeon to treat his own men in the hospital for routine conditions could be provided on such a service and might go far to make the assignment as unit surgeon a popular one rather than the undesirable assignment it so frequently is at present Since the apparent goal of the Veterans Administration is to make its hospitals as much like teaching centers as possible, the proposals for teaching centers would likewise apply to them The navy in its ship assignments offers some opportunity for general practitioners, but it is subject to the same proposals as the army for its shore installations

The agreements being made between the Veterans Administration and various state medical societies for care of service connected disabilities by local physicians in local hospitals is the only ray of hope for an improved status of the general practitioners now evident on the horizon of regimented medicine In that it provides for general physical examinations and general medical care by general practitioners with reference to specialists when indicated, it may represent the beginning of a trend toward recognition of the value of the services of general practitioners by regimented medicine It has been implied previously that this

may be an act of expediency rather than policy, but, whatever the reason for it it gives the general practitioner an opportunity to demonstrate the value of his service to regimented medicine It is urged that the general practitioners of the nation accept this opportunity as a real challenge The big flaw in the agreement, from the standpoint of elevating the status of the general practitioner, is that the veteran can receive care in this manner only if the Veterans Administration hospitals are filled It is proposed that, even when Veterans Administration hospital space is available, the veterans be given the choice of accepting his care in this manner or of going to a Veterans Administration hospital This would make available to the Veterans Administration that previously discussed fund of knowledge possessed by the family physician and would provide the personalized medicine the veteran misses so sorely in military and Veterans Administration hospitals For the general practitioner it would do much to enhance his prestige in the minds of the 19,000,000 veterans and their families It hardly need be added that for cases requiring prolonged hospitalization and highly specialized care the veterans' hospital centers designed for this purpose are admirable and desirable

In addition to and in order to obtain, the recognition of regimented medicine the causes for criticism of the general practitioner must be eliminated or minimized To do this it is proposed that the training of the general practitioner be standardized and improved In the past, the general practitioner has taken the same type of internship as the embryonic specialist. The rotating service consists in one to two months on each specialty service The disadvantages of this system and proposals for correction have already been presented The second year internship, the mixed residency and short residencies in various specialties frequently send a man into general practice with a rather confused idea of what the capabilities and limitations are Because one was allowed to do a few appendectomies in a one year internship, occasionally one honestly feels that one is competent to open an abdomen without supervision The general practice service in teaching hospitals might do much to clarify in the minds of young physicians the limits within which they can safely practice Training does not cease with entry into practice, and the proper training of the general practitioner must continue as does that of the specialist The addition of sections on general practice in the American Medical Association and other organizations is a significant forward step It is proposed, however, to bring the program closer to home Would one be justified in considering it the solemn duty of the specialist to keep the general practitioners of his community informed on those phases of his specialty which apply to general practice? Might not the specialist be considered partially responsible if a general practitioner who habitually refers patients to him makes an error in his field? It is urged that specialists accept this challenge as their contribution to the improvement of the status of the general practitioner

To eliminate or minimize the criticism that many general practitioners attempt to encroach on the field of the specialist to the detriment of the patient, the general practitioner must set his own house in order It is believed that the foregoing measures to improve the status of the general practitioner will give him sufficient pride in his field that the temptation to encroach on the specialties will be lessened An honest confusion as to what his limitations are can be corrected by improved training methods Fundamentally, however, this is an individual problem in ethics and must be worked out by individual general practitioners with the guidance of the medical organizations

As a method of improving the educational standards, as a means to bring about the limitation of the work of the general practitioner to that for which he is adequately trained and as an agency through which educational material directed at the profession and the public might be disseminated, an organization limited to general practitioners and with standards sufficiently high to make membership a significant honor might be considered That there is a need for the general practitioner to put his house in order is implied in the criticisms already discussed and in the fact that the prestige of the family physician is on the decline, as indicated by the trend toward his elimination Individual action, group action in local medical societies and free discussions at medical gatherings can do much to eliminate the abuses now prevalent Most specialties, however, have found it advisable to organize and set up standards in order to dignify their group, and such organization may be the answer for the general practitioner

## CONCLUSIONS

1 The outlook for the general practitioner of tomorrow is not encouraging in the regimented practice of medicine Some hope in this field is seen in the agreements between the Veterans Administration and the state medical societies Proposals for recognizing the general practitioner by regimented medicine are not expected to make the regimented services particularly enticing to the general practitioner but could do much indirectly to improve his status in private practice

2 The opportunity now available in the local care program of the Veterans Administration is a real challenge to the general practitioner to prove his value to regimented medicine

3 The outlook in private practice for the general practitioner remains good and it is felt that the proposals presented can do much to improve his status in this field

4 The status of the general practitioners of tomorrow depends on concerted action by the general practitioners of today

## SUMMARY

A trend toward the concept that only specialists are competent to care for patients may be checked by adoption of the following plan

I Recognition of the general practitioner by regimented medicine through
  A Staff appointments for general practitioners in teaching centers
  B General practice services in teaching, military and Veterans Administration hospitals
  C Perpetuation of the Veterans Administration's system for care of the veteran in his local community with general practitioners participating
II Elimination of causes for criticism of the general practitioner through
  A Standardization and improvement of training of general practitioners
  B Limitation of the work of the general practitioner to that for which he is adequately trained
III Organization of general practitioners to implement these proposals

# Clinical Notes, Suggestions and New Instruments

## ACCIDENTAL INGESTION OF DDT, WITH A NOTE ON ITS METABOLISM IN MAN

M I SMITH M D
Bethesda Md

R. A a man aged 46, a farm hand, weighing 140 pounds (63 5 Kg ) in the employ of Dr Paul Bartsch of the United States National Museum, was given a 5 per cent solution of commercial DDT [1] in kerosene for use as an insecticide spray Some of this solution in a bottle was carried in a pocket containing a supply of chewing tobacco The cork came loose and an undetermined amount, estimated at about 1 or 2 tablespoons was spilled on the tobacco A plug of the tobacco was chewed on that day, July 2, and in about two hours, by his own account, he became nauseated and apprehensive and experienced a sensation of tightness, stiffness and pain of the jaws and soreness of the throat He was apparently not aware of the odor or taste of kerosene The nausea and

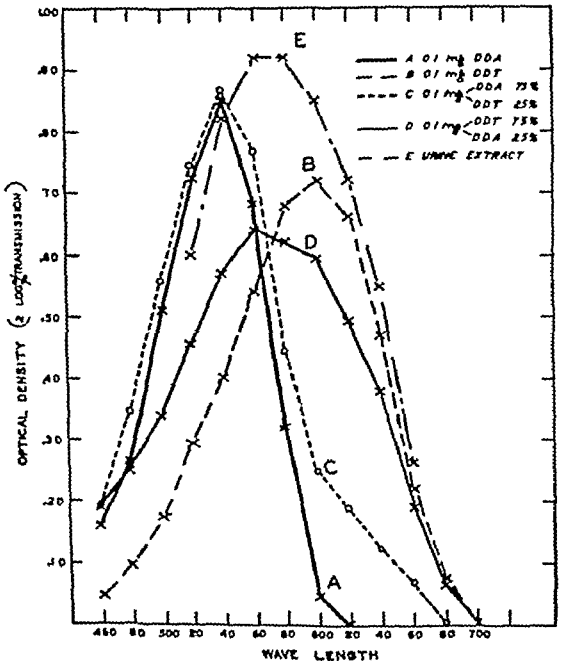



Chart 1 —Absorption curves of the nitrated products of DDT DDA and their mixtures All measurements of light transmission were made at a depth of 1 5 cm. and a total volume of 15 cc

discomfort increased He took some magnesium sulfate for relief in about two hours he vomited and by the following day he had fully recovered except for the soreness of the throat, which persisted for another day or two

When consulted July 3 I requested a sample of urine This was brought to the laboratory July 4 The urine presented a heavy opalescence, which did not clear on acidification with acetic acid When shaken out with ether in a separatory funnel it became perfectly clear Since the sample contained so much ether soluble material it was strongly suspected that the urine was contaminated with the insecticide and no further work was done with it.

On the sixth and eighth days following the incident (July 8 and 10) two small samples of urine were collected under the personal supervision of Dr Bartsch The pooled sample measured 300 cc. It was acidified with acetic acid and extracted with ether and the ether was dehydrated with anhydrous sodium sulfate, washed with water and evaporated to dryness by the same method used for the determination of organically bound chlorine in the urine of poisoned animals [2] The residue was taken up in 10 cc. acetone, and one fifth of this was evaporated to dryness and nitrated by the method of Schechter and Haller [3] The nitration product after extraction with ether was taken up in 10 cc of benzene. Five cc of this treated with 10 cc. of

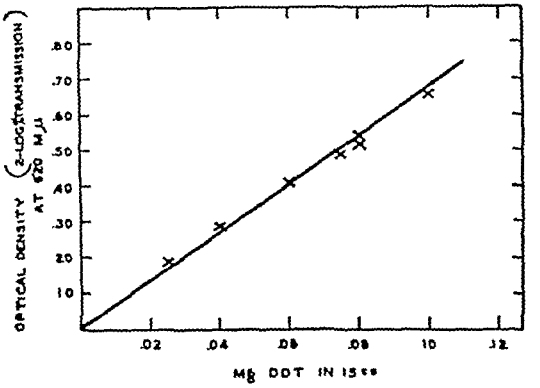



Chart 2 —Optical density at 620 millimicrons plotted against a graded series of concentrations of nitrated DDT in mixtures of nitrated DDT and DDA A linear relationship is indicated The data are given in detail in the table

10 per cent sodium methylate in methyl alcohol gave a purplish blue solution which on spectrophotometric analysis showed an absorption maximum at 560 580 millimicrons The absorption curve obtained by plotting optical density (2-log per cent transmission) against wavelength as shown in curve *E* chart 1, is similar in all essential respects to curve *D* which represents the nitrated product of 0 1 mg of a mixture of pure DDT [4] and DDA,[5] 75 per cent of the former and 25 per cent of the latter Absorption maxima for the nitration products of the pure compounds are 540 millimicrons for DDA and 600 millimicrons for DDT as shown in curves *A* and *B* respectively When mixtures of the pure compounds in the proportion of 75 per cent DDA and 25 per cent DDT are nitrated the absorption maximum does not change, as seen in curve *C* Nitrated mixtures of pure compounds with a preponderance of DDT show a change of absorption maximum from 600 to 560 or 580 millimicrons as shown in curve *D*

Quantitatively it has been possible to estimate the amount of DDT in mixtures of DDT and DDA by plotting optical density at 620 millimicrons against concentration Pure DDA shows no light absorption at this wavelength, and any light absorption at this point is related to the DDT in the mixture This is shown in the table and in chart 2

*Absorption Maxima and Optical Density at 620 Millimicrons of Nitration Products of DDT, DDA and Their Mixtures*

| Mg in 15 Cc | | Absorption Maximum Millimicrons | Optical Density at 620 Millimicrons |
|---|---|---|---|
| DDT | DDA | | |
| 0 000 | 0 100 | 540 | 0 000 |
| 0 025 | 0 075 | 540 | 0 190 |
| 0 040 | 0 060 | 540 | 0 285 |
| 0 060 | 0 040 | 540-560 | 0 410 |
| 0 075 | 0 025 | 560 | 0 490 |
| 0 080 | 0 040 | 560-580 | 0 510 |
| 0 080 | 0 000 | 600 | 0 520 |
| 0 100 | 0 000 | 600 | 0 660 |

The nitrated product derived from the urine under discussion had an absorption maximum at 560 millimicrons (curve *E*, chart 1) and an optical density of 0 72 at 620 millimicrons This indicates a mixture of DDT and DDA, with a preponderance

From the Division of Physiology National Institute of Health

1 GNBA DDT Geigy Company Inc New York

2 Smith M I and Stohlman E F The Pharmacologic Action of 2,2 Bis(p-Chlorophenyl) 1 1 1 Trichloroethane and Its Estimation in the Tissues and Body Fluids Pub Health Rep **59** 979 1944

3 Schechter M S and Haller H Colorimetric Tests for DDT and Related Compounds J Am. Chem Soc **66**: *2129 1944*

4 p-p dichlorodiphenyl trichloroethane

5 p-p dichloro diphenylacetic acid

of the former, and reference to the curve in chart 2 indicates 0.106 mg. of DDT. Simple calculation indicates 1.06 mg. of DDT and about one fourth of this of DDA in the 300 cc. specimen of urine. Assuming an elimination of 1,500 cc. of urine per day, it may be concluded that about 5 mg. of a mixture of about 75 per cent of DDT and some 25 per cent of DDA per day was excreted on the sixth and eighth days after the incident.

Four specimens of urine ranging in amounts from 250 to 400 cc. obtained from as many laboratory workers (three of whom have been in contact with DDT for nearly three years) gave no evidence of containing anything resembling DDT or DDA. The sensitivity of the test as carried out in this laboratory is such that 0.01 mg. could be estimated quantitatively, and considerably less than this could be detected qualitatively.

## COMMENT

On the basis of organic chlorine determination it has been shown that the elimination of DDT or its degradation products in the urine of poisoned rabbits reaches a peak on the second to the fourth day; it tapers off by the sixth day but continues to be eliminated in small amounts for two weeks or longer.[6] Of the chlorinated excretory products in the urine of rabbits about 80 per cent has been identified as p-p' dichlorodiphenylacetic acid.[7] No data on the fate of DDT in other animals or man have been reported so far. The results of the analysis in the present case appear to indicate that unchanged DDT was excreted in the urine along with a relatively smaller amount of the acetic acid degradation product.

The clinical features in this case present but little interest. Evidently the dose ingested was too small to cause serious effects. The nausea and vomiting may or may not have been due to the ingested DDT.[8] The transient symptoms of stiffness and pain in the jaws and the anxiety felt by the subject during the first day appear to be the counterpart of hyperexcitability and muscular tremors and twitchings, especially noticeable around the head, seen in animals within a few hours of ingesting a toxic dose. Recovery was rapid and apparently complete, with no delayed or persistent effects such as were reported by Wigglesworth[9] in his case of poisoning by skin absorption. Unfortunately he made no urinary analysis to substantiate the diagnosis. The value of urinary analysis for DDT or degradation products as an aid in the diagnosis of suspected poisoning has been demonstrated in experimental animals, in which organically bound chlorine is found long in advance of any detectable symptoms in chronic poisoning with small subtoxic doses.[6] Analysis of the nitration products by spectrophotometric methods as outlined herein greatly increases the sensitivity of the test.

It should be added that in the course of some work now in progress about a dozen compounds chemically related to DDT have been examined spectrophotometrically. The nitration products of only two, p-p' dichlorodiphenyl dichloroethane (DDD) and p-p' dibromo diphenyltrichloroethane have given absorption curves similar to that of DDT. The nitration products of three of the compounds, p p' dichlorodiphenyl dichloroethylene (DDD'), p-p' dichlorodiphenyl acetic acid (DDA) and p-p' dichlorodiphenylketone (DDK) gave similar curves with an absorption maximum at 540. One of the compounds so examined, p p' dichlorodiphenyl methane (DDM), showed after nitration an absorption maximum at 520 millimicrons. The excretion product in the urine of rabbits fed DDD gives an absorption maximum after nitration at 540 millimicrons and appears to be DDA. The details of this work will be published later.


## SUMMARY

A case of mild poisoning possibly due to DDT resulted from the accidental ingestion of an unknown amount of this substance through chewing of contaminated tobacco. Nausea, vomiting, a state of anxiety and stiffness and pain of the jaws were experienced for several hours and soreness of the throat for two or three days. Analysis by spectrophotometric methods of a pooled specimen of 300 cc. of urine obtained on the sixth and eighth days after ingestion showed the elimination of about 1 mg. of a substance which gave an absorption spectrum similar to that of a mixture composed of 75 per cent DDT and 25 per cent p-p' dichlorodiphenylacetic acid.[10]


---

# ALUMINUM HYDROXIDE GEL FOR EROSIONS IN PATIENTS WITH BOWEL FISTULAS


M. H. F. FRIEDMAN, Ph.D.
Philadelphia


A problem frequently encountered in the management of the patient with an ileostomy or colostomy is excoriation of the skin around the fistula. The more prevalent use of bowel exteriorization as a technic in surgery of the bowel in casualties of "total warfare"[1] has made this a problem of war surgery. In addition, the frequent establishment of bowel fistulas as procedures in various stages accompanying resection of segments of intestine for carcinoma or colitis has made the problem an important one in civilian practice.

The prime cause of the skin erosion in the vicinity of an intestinal fistula is believed to be in most cases the digestive action of the draining intestinal fluids. The proteolytic enzymes responsible are probably mainly of pancreatic origin,[2] thus the contents from the duodenum have a more corrosive action than the contents from the ileum, and the contents from the colon are least corrosive. For this reason colostomies are usually less troublesome with respect to excoriation than are ileostomies.

Treatment in the past has consisted mainly in protecting the affected area from the digestive action of the intestinal drainage fluid. Continuous aspiration of the intestinal contents has been tried.[3] The involved region has been covered with either various metallic compounds, such as aluminum and gold paints, or collodion, latex and other substances which resist digestion or with emulsions and oils which likewise are not digested and also "shed" the intestinal fluid. That these procedures have had indifferent success is attested by the frequency with which skin erosions persist,[1] and the continued search for a better form of treatment.

Treatment involving destruction or inactivation of the proteolytic enzymes has recently been suggested. Since certain detergents, such as sodium lauryl sulfonate, are known to inactivate pepsin and trypsin, the use of detergent ointments has been advocated.[4] However, we[5] have found that the

---

6 Smith, M. I., and Stohlman, E. F.: Further Studies on the Pharmacologic Action of 2,2 Bis(p-Chlorophenyl) 1,1,1 Trichloroethane (DDT), Pub. Health Rep. **60**: 289, 1945.

7 White, W. C., and Sweeney, T. R.: The Metabolism of 2,2 Bis (p-Chlorophenyl) 1,1,1 Trichloroethane (DDT). I. A Metabolite from Rabbit Urine, Di(p-Chlorophenyl) Acetic Acid. Its Isolation, Identification and Synthesis, Pub. Health Rep. **60**: 66, 1945. Stohlman, E. F., and Smith, M. I.: The Isolation of Di(p-Chlorophenyl) Acetic Acid (DDA) from the Urine of Rabbits Poisoned with 2,2 Bis(p-Chlorophenyl) 1,1,1 Trichloroethane (DDT), J. Pharmacol. & Exper. Therap. **84**: 375, 1945.

8 In cats vomiting has been observed not infrequently some hours after the oral administration of DDT.

9 Wigglesworth, V. B.: A Case of DDT Poisoning in Man, Brit. M. J. **1**: 517, 1945.

10 Since this paper was written two other reports have appeared on DDT poisoning in man, one by R. A. M. Case (Toxic Effects of 2,2 Bis [p-Chlorophenyl] 1,1,1 Trichloroethane [DDT] in Man, Brit. M. J. **2**: 842, 1945) showing the absorption of DDT through the skin and the other by K. R. Hill and G. Robinson (A Fatal Case of DDT Poisoning in a Child with an Account of Two Accidental Deaths in Dogs, ibid. **2**: 845, 1945) indicating 150 mg. per kilogram being lethal in a child. The latter is consistent with data on the $LD_{50}$ of DDT in some experimental animals as worked out in this laboratory (Smith and Stohlman, footnotes 2 and 6). Neither of these reports gives any data on the metabolism of DDT in man.

From the Department of Physiology, Jefferson Medical College.

This study was carried out with the cooperation of Dr. A. A. Walkling and the members of the resident staff of Surgery A (Dr. Thomas A. Shallow, chief) of Jefferson Hospital.

1 Gordon-Taylor, G.: Second Thoughts on the Abdominal Surgery of "Total" War, Brit. J. Surg. **32**: 247 (Oct.) 1944. Pilcher, L. S., and Nadeau, O. E.: Extraperitoneal Closure of Colostomy, Mil. Surgeon **97**: 190 (Sept.) 1945. Corbett, R. S.: A Review of the Surgical Treatment of Chronic Ulcerative Colitis, Proc. Roy. Soc. Med. **38**: 289 (April) 1945.

2 Florey, H. W., Wright, R. D., and Jennings, M. A.: The Secretions of the Intestines, Physiol. Rev. **21**: 36 (Jan.) 1941.

3 Wiper, T. B., and Miller, J. M.: Surgical Aspects of Pancreatic Fistula, Ann. Surg. **120**: 52 (July) 1944. Crile, George, Jr.: A Device for Protecting the Skin and Collecting Fluid from Fistulas, J. A. M. A. **129**: 207 (Sept. 15) 1945.

4 Portis, S. A., Block, C. L., and Necheles, H.: Studies on Ulcerative Colitis and on Some Biological Effects of Detergent, Gastroenterology **3**: 106 (Aug.) 1944.

5 Friedman, M. H. F., Feaver, E. R., and Dougherty, I. H.: to be published.

inactivation of trypsin in pancreatic juice by sodium lauryl sulfonate is dependent on the order of application of the enzyme and detergent to the substrate, and hence in practice the results obtained are unpredictable. Furthermore, treatment of 2 colostomy patients with salves containing sodium lauryl sulfonate gave poor results and was unsatisfactory, since the patients complained of extremely severe burning at the site of application

Theoretically it should be possible to control the extent of skin erosions by bathing the affected area in solutions having a $p_H$ unfavorable for digestion Since the optimum $p_H$ for tryptic digestion is between 7 0 and 8 0 (the exact value depends on the nature of the substrate), Selous and Perryman[6] have applied acid buffered gels ($p_H$ 5 0) to the excoriated tissue. At this $p_H$ the digestive action of trypsin is believed to be nil. While the benefits obtained by these English workers clearly show the role of $p_H$ control in digestion, some of their experimental results are more probably explained on the basis of the adsorbing action of the gel (which consisted of gelatin potato and gelatin or polyvinyl alcohol)

Pavlov[7] early called attention to the skin erosions which occur in dogs with experimental pancreatic fistula and noted the value of adsorbents in overcoming the deleterious effects of the pancreatic juice In 1940 the Komarovs[8] reported that colloidal aluminum hydroxide inactivated pepsin, and in some recent studies (unpublished) we found that it also inactivates trypsin in vitro The Komarovs also reported disappearance of ulcerated skin areas around the stoma of Pavlov pouches following routine injections of aluminum hydroxide into the pouch

After verifying in a series of more than 50 dogs equipped with either gastric fistulas or gastric pouches that colloidal aluminum hydroxide prevents the frequently noted serious digestion of skin and underlying tissues by the draining gastric juice, we felt that possibly similar treatment would benefit dogs with excoriation and ulcers due to leakage from intestinal fistulas Professor J Earl Thomas and I have treated some 20 dogs having more or less extensive destruction of the skin and underlying tissues in the vicinity of duodenal and jejunal fistulas The results obtained were so promising that material was made available to members of the surgical staff of Jefferson



Fig 1—Skin erosions around colostomy wound before treatment.

Hospital for treatment of patients with ileostomies or colostomies This brief note is prompted by the gratifying results obtained to date on 23 patients, several of whom are still being studied

The presence of proteolytic enzymes in the bowel drainage fluid of some of these patients was verified by actual determination

The aluminum hydroxide was applied to the ileostomy or colostomy in the form of a thick paste. We found it simplest to prepare this paste from the more liquid aluminum hydroxide gel, which is already available as an acid adsorbent in the



Fig 2—Same area after treatment with aluminum hydroxide paste Healing was complete in ten days The photograph was taken on the nineteenth day

treatment of peptic ulcer[9] Either one of two procedures equally simple, was used. The commercially prepared gel was poured into wide evaporating dishes and allowed to evaporate with occasional stirring at room temperature for thirty-six to forty-eight hours or until the desired consistency was attained or else the proper consistency was reached by low speed centrifugation, the supernatant liquid portion being discarded A third procedure, that of thickening the gel by triturating with powdered calcium carbonate, kaolin, starch and aluminum hydroxide, was also used on numerous occasions, but the paste so prepared, while otherwise satisfactory, was not as smooth as the other pastes and tended to harden and cake much more readily

The paste is applied in thick portions to both the excoriated area and the everted intestinal mucosa, the whole then being covered in the usual manner with several layers of gauze. When the skin is badly eroded or inflamed it is advisable to change the paste dressing every few hours during the first two or three days

Unmistakable objective evidences of healing were noted by the second day of treatment. Subjectively the patients early reported relief from the itching and sensation of burning The paste tends to absorb fluid, and the drier skin was said to be a distinct comfort. Once the skin had healed, we found it sufficient to apply a new layer of paste only when the dressings were changed because of soilage. It is of course unnecessary to emphasize that the wound be cleansed frequently Oils and oily solutions should not be used as cleansing agents since this prevents the aluminum hydroxide from adhering to the skin

In 2 instances sulfathiazole and in 1 instance benzocaine were incorporated in the paste. However, the value of these substances so applied to the 3 patients is doubtful since pain and spread of infection were readily arrested in other patients by the aluminum hydroxide paste alone.

A typical example of the effectiveness of the paste is shown in the accompanying illustrations A woman aged 42 had extensive erosions around the colostomy which had stubbornly refused to heal under treatment with various ointments, petrolatum gauze dressings and metallic paint Aluminum hydroxide paste applied over the area about six times daily produced alleviation of pain on the second day and almost complete healing by the tenth day

We have found that little or no proteolytic enzyme could be detected in the drainage fluids of 2 patients with extensive perifistular erosions It would seem that possibly the digestive

6 Selous C F and Perryman P W Excoriation Around Fistulae Control by Buffered Gels Lancet 1: 240 (Feb 24) 1945

7 Pavlov I P The Work of the Digestive Glands ed 2 London Charles Griffin Company 1910

8. Komarov S A and Komarov Olga The Precipitability of Pepsin by Colloidal Aluminum Hydroxide Am J Digest Dis 7 166 (April) 1940

9 Wyeth Incorporated supplied the aluminum hydroxide gel

fluids from the intestine may have an irritant action in addition to a digestive action These irritant substances may be products of protein cleavage or substances produced by the intestinal flora The adsorbent action of colloidal aluminum hydroxide on bacterial toxins and on prothrombin[10] has been reported Our results would strongly suggest that the irritant substances from the intestine also are rendered inactive by the aluminum hydroxide. Finally it should be pointed out that other adsorbents may possibly prove effective in skin excoriations Certainly in several of their cases the favorable results of Selous and Perryman may be interpreted as being due to adsorption of the intestinal drainage fluid on the dressing material they employed

To the recent comments[11] on the offensive odors from bowel fistulas may be added the fact that aluminum hydroxide gel is an efficient deodorant and that attending nurses have noted the odors from fistulas to be much reduced by application of the aluminum hydroxide paste

Of no little importance is the consideration that the patient might develop a local or systemic reaction to the medications None of our patients have had skin reactions, and no special dermatitis has been reported in pharmaceutical chemists and others engaged in the preparation of aluminum hydroxide gel

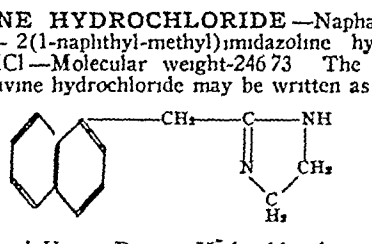
# Council on Pharmacy and Chemistry

## NEW AND NONOFFICIAL REMEDIES

*The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies A copy of the rules on which the Council bases its action will be sent on application*

AUSTIN SMITH, M D, *Secretary*

**PRIVINE HYDROCHLORIDE**—Naphazoline Hydrochloride — 2(1-naphthyl-methyl)imidazoline hydrochloride — $C_{11}H_{12}N_2.HCl$—Molecular weight-246 73 The structural formula of privine hydrochloride may be written as follows



*Actions and Uses*—Privine Hydrochloride is a vasoconstrictor, which, when applied to nasal mucous membranes, causes a prolonged reduction of the local swelling and congestion It is of value in the symptomatic relief of disorders of the upper respiratory tract such as nasal congestion of allergic and inflammatory origin, acute and chronic rhinitis, vasomotor rhinitis and acute and chronic rhinosinusitis Care should be exercised, however, when vasoconstrictors are used for prolonged medication, privine hydrochloride is no exception although the rebound congestion of the mucosa which it may cause can be alleviated within a few days simply by discontinuing all nasal medication Those who respond with rebound congestion may tolerate solutions weaker than the commonly used concentrations The site of action is possibly the peripheral sympathetic nerve endings, a property assumed for epinephrine, although further work is needed to clarify this point. So far, there have been no reports proving that sufficient drug is absorbed following local application to increase the blood pressure, although this possibility should not be forgotten.

*Dosage*—Adults may use several drops of the 0 1 per cent or 0 05 per cent solution, depending on the relief obtained and the sensitivity of the individual mucosa Relief can be expected for several hours Occasionally a smarting sensation and sneezing may develop

For children, the 0 05 per cent solution is suggested

Privine hydrochloride solution is buffered to a *pH* of 6.2-6 3 It is affected by aluminum and should not be used in atomizers made of this material Otherwise the preparation can be employed by any of the conventional methods

*Tests and Standards*—

Privine hydrochloride occurs as a white odorless, crystalline powder possessing a bitter taste It is freely soluble in water and in alcohol very slightly soluble in chloroform and practically insoluble in benzene and in ether

Privine hydrochloride melts between 255 and 260 C. A 1 per cent solution of privine hydrochloride is clear and colorless it has a *pH* of about 6.2 and responds to tests for chloride

Place about 0 5 Gm of privine hydrochloride in a separator, add 25 cc of water saturated with sodium chloride and 5 cc of 10 per cent sodium hydroxide solution Extract the mixture with five 15 cc portions of residue free ether wash the combined ether extracts with two 5 cc portions of water, filter, and evaporate the ether solution to near dryness on a water bath Remove the remainder of the ether in a stream of warm air and dry the residue at 70 C the melting point of a portion of the characteristic crystalline residue is between 117 and 120 C

A 0 05 per cent solution of privine hydrochloride yields a white precipitate with phosphotungstic acid a mauve crystalline precipitate melting at 158 to 160 C with Reinecke s salt and a yellowish crystalline precipitate melting at 193 to 196 C with picric acid

Dry about 0 5 Gm. of privine hydrochloride accurately weighed for four hours at 70 C the loss in weight does not exceed 0 4 per cent Incinerate about 0 5 Gm of privine hydrochloride accurately weighed the residue is not more than 0.2 per cent

Transfer about 0 2 Gm of privine hydrochloride accurately weighed to a suitable Kjeldahl flask and determine the nitrogen content according to the method described in Methods of Analysis of the Association of Official Agricultural Chemists fifth edition page 26 art 23 the amount of nitrogen is not less than 11 15 per cent nor more than 11 40 per cent when calculated to the dried substance

Transfer about 0 2 Gm of privine hydrochloride accurately weighed to a 400 cc beaker and determine the chloride content according to the method as described in Methods of Analysis of the A O A C., fifth edition page 34 art. 49 the amount of chloride found corresponds to not less than 14 15 per cent nor more than 14 40 per cent when calculated to the dried substance

Transfer about 0 2 Gm of privine hydrochloride accurately weighed, to a separator add 5 cc of water to dissolve the salt and then add 10 cc of normal sodium hydroxide previously saturated with sodium chloride Extract the mixture with six portions (25 20 15 10 10 and 10 cc.) of ether wash the combined ether extracts with two 5 cc portions of water extract the water washings with two 10 cc portions of ether and combine these extracts with the main ether extract Evaporate the ether solution contained in an Erlenmeyer flask to near dryness on a water bath and complete the removal of ether in a stream of cool air add 10 cc of neutral alcohol to dissolve the residue dilute to about 50 cc with water and titrate with twentieth normal hydrochloric acid using methyl red as the indicator Each cubic centimeter of twentieth normal hydrochloric acid is equivalent to 0 01234 Gm of privine hydrochloride the privine hydrochloride content found is not less than 97 0 per cent

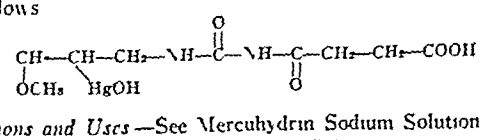
CIBA PHARMACEUTICAL PRODUCTS, INC, SUMMIT, N J

**Solution Privine Hydrochloride 0 1% (For Adults Only)** 30 cc and 480 cc bottles Each 100 cc contains privine hydrochloride 100 mg, exsiccated sodium phosphate 258 mg, sodium chloride 324 mg, potassium chloride 223 mg and potassium biphosphate 742 mg, preserved with merthiolate 1 100,000

**Solution Privine Hydrochloride 0 05% (For Children)** 30 cc and 480 cc bottles Each 100 cc contains privine hydrochloride 50 mg, exsiccated sodium phosphate 258 mg, sodium chloride 331 mg potassium chloride 223 mg and potassium biphosphate 742 mg preserved with merthiolate 1 100,000

**MERCUHYDRIN**—Meralluride—A mercurial compound derived from equimolecular quantities of mercurated allylsuccinylurea and theophylline—Mercuhydrin contains not less than 31 0 per cent and not more than 33 0 per cent of mercury, when dried over sulfuric acid for twenty-four hours—($C_7H_{16}O_4N_2Hg$ + $C_7H_8O_2N_4$)—Molecular weight 629

The structural formula of the mercurated allylsuccinylurea, 1-(methoxy oxymercuripropyl)-3 succinyl urea may be written as follows



*Actions and Uses*—See Mercuhydrin Sodium Solution

*Dosage*—See Mercuhydrin Sodium Solution

*Tests and Standards*—

Mercuhydrin occurs as an odorless white crystalline powder possessing a slightly bitter taste It melts between 197 and 200 C It is gradually decomposed by light and is incompatible with hydrogen sulfide and fumes of strong acids An aqueous suspension of mercuhydrin is acid to litmus

Mercuhydrin is soluble in hot water but is practically insoluble in water alcohol chloroform and ether at 25 C it is soluble in glacial acetic acid in aqueous ammonia solution and in sodium hydroxide solution It is slowly soluble in sodium bicarbonate solution with evolution of carbon dioxide

Place about 0.5 Gm of mercuhydrin in a small flask add 5 cc of water and 3 cc of formic acid boil the mixture under a reflux condenser for ten to fifteen minutes a gray precipitate of metallic mercury is formed Decant the hot solution through a small filter paper and allow the filtrate to cool (chill in ice water) Collect the crystals of allylsuccinylurea on a small filter paper wash with two 5 cc portions of ice water allow to drain and dry the crystals over sulfuric acid in a vacuum desiccator for twenty four hours the crystals melt between 145 and 148 C

10 Quick A J On the Relationship Between Complement and Prothrombin, J Immunol **28** 87 (Jan ) 1935

11 Babcock W W Odorous Wounds and Fistulas J A M A **129** 1094 (Dec. 15) 1945 Narat J K. Odorous Wounds and Fistulas ibid. **130** 238 (Jan 26) 1946

Heat the filtrate and washings obtained in the foregoing test to the boiling point and then pass hydrogen sulfide through the solution for ten minutes filter, cool the filtrate transfer to a small separator add 10 Gm of sodium acetate and extract with three successive 10 cc. portions of chloroform Evaporate the combined chloroform extracts nearly to dryness on a water bath and complete the drying by means of a stream of warm air Suspend the residue in 5 cc of water boil to dissolve the residue filter while hot and cool the filtrate in a bath of ice water to allow crystallization Filter wash the crystals with water allow to drain and dry in a desiccator over sulfuric acid for twenty four hours the crystals melt between 270 and 274 C and respond to identification tests for theophylline

Suspend about 0 5 Gm of mercuhydrin in 5 cc of sodium acetate solution and dissolve by the addition of just sufficient tenth normal sodium hydroxide (about 8 5 cc.) Filter and divide the filtrate into two portions To one portion add 0 2 cc of sodium sulfide solution and compare with the other portion only a very faint coloration of the test solution is noticeable immediately

Dry about 1 Gm of mercuhydrin accurately weighed over sulfuric acid in a vacuum desiccator for twenty four hours the loss in weight does not exceed 3 0 per cent

Ignite about 1 Gm of mercuhydrin accurately weighed in a porcelain crucible the residue is not more than 0 1 per cent

Transfer about 0 1 Gm of mercuhydrin accurately weighed to a 50 cc Erlenmeyer flask fitted with a ground joint, add 15 cc. of nitric acid and a few glass beads connect the flask to a reflux condenser and heat to boiling for one and one half hours Cool rinse the condenser tube with water collecting the washings in the flask transfer the contents of the flask quantitatively to a 400 cc beaker and dilute to approximately 150 cc. with water Add 5 cc. of nitric acid and titrate with fiftieth normal ammonium thiocyanate, using 2 cc of ferric ammonium sulfate solution as the indicator Use a control solution containing 20 cc. of nitric acid and 2 cc. of the indicator solution in 150 cc of water to which exactly 0 3 cc of the fiftieth normal ammonium thiocyanate has been added Titrate the unknown solution to the same color intensity as the control and subtract 0 3 cc from the volume noted in the titration Each cubic centimeter of fiftieth normal ammonium thiocyanate is equivalent to 0 002006 Gm of mercury the amount of mercury found is not less than 31 0 per cent and not more than 33 0 per cent calculated to the dried substance

Transfer about 0 7 Gm of mercuhydrin accurately weighed to a 250 cc Erlenmeyer flask add 125 cc of water and 5 cc of 10 per cent ammonia solution to dissolve the mercuhydrin Add exactly 20 cc. of tenth normal silver nitrate and warm on a steam bath until the white precipitate coagulates cool to 30-40 C and filter through a medium porosity fritted glass crucible transferring the precipitate and washing with five 10 cc portions of warm (40 C) water until the wash water tests free of silver ion with sodium chloride solution acidified with nitric acid. Dissolve the precipitate on the fritted glass filter with 4 to 5 cc of nitric acid allow the nitric acid solution to filter into a clean flask without suction and finally wash the crucible with hot water until the filtrate and washings approximate 150 cc. Cool add 1 cc of ferric ammonium sulfate solution and titrate with tenth normal ammonium thiocyanate solution Use a control containing the same volumes of water and nitric acid with 1 cc of the indicator solution to determine any blank correction Each cubic centimeter of tenth normal ammonium thiocyanate is equivalent to 0 01802 Gm of anhydrous theophylline The amount of anhydrous theophylline found is not less than 29 0 per cent and not more than 31 0 per cent, calculated to the dried substance

# Council on Physical Medicine

*The Council on Physical Medicine has authorized publication of the following report* HOWARD A CARTER, *Secretary*

## SONOTONE MODEL 600 VACUUM TUBE HEARING AID ACCEPTABLE

Manufacturer Sonotone Corporation Elmsford, N Y

The Sonotone Model 600 hearing aid is a three tube instrument consisting of a transmitter and amplifier case, A and B battery unit, and either air or bone conduction reproducer attachments Two different air and two different bone conduction receivers are available for use with this instrument

Physical dimensions Case, 5 9/16 by 2 7/16 by 1 1/16 inches The air and bone conduction receivers and A and B batteries are of conventional size and weight.

Weight Case, 7 ounces with cords and air conduction receiver, 8 ounces Current consumption

| | | |
|---|---|---|
| A battery | (1½ volts) | 80 milliamperes |
| B battery | (45 volts) | 1 4 milliamperes |
| B battery | (33 volts) | 0 92 milliampere |
| B battery | (22½ volts) | 0 48 milliampere |

Frequency response adjustments The Sonotone Model 600 is equipped with a flexible set of tone control adjustments or compensators A basic tone control on the back of the instrument may be adjusted to give wide frequency response (position B) or to attenuate the high frequencies (position A) A six position secondary tone control modifies the frequency response chosen by setting the basic tone control. The low frequencies are progressively attenuated as the secondary tone control is adjusted through positions 6, 5, 4 and 3 Secondary tone control positions 2 and 1 attenuate the middle range of frequencies (approximately 500 to 2 000 cycles) A so-called 'bifocal control' placed next to the volume control and on-off switch at the top of the instrument decreases the gain of the instrument with more attenuation of the low frequencies than the high The bifocal control attenuates the gain 16 5 decibels at 250 cycles, 13 decibels at 1 000, 12 decibels at 2 000 11 decibels at 3 500 and 10 decibels at 5,000 cycles The receivers are made to certain characteristics and are so designated The N2 air conduction receiver has a gradually rising frequency characteristic up to 3,000 cycles with 8 decibels less gain at 5 000 than at 3 000 cycles The N1 receiver 'peaks broadly at 1 500 cycles and has about 17 decibels more output at 1 500 cycles than the N2 receiver Response characteristics were not obtained on the H1 (wide range) and P1 (low frequency) bone conduction receivers

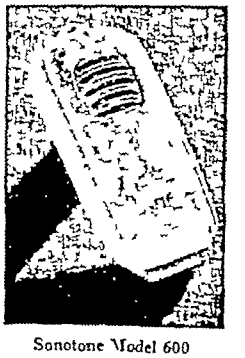
*Acoustical Gain (Maximum) for Pure Tones*

(Air condution only N2 receiver)

| Frequency Adjustment | 250 | 500 | 1 000 | 2 000 | 3 000 | 4 000 | 5 000 | Cycle per Second |
|---|---|---|---|---|---|---|---|---|
| B6 | 49 5 | 48 5 | 50 0 | 63 0 | 59 0 | 55 0 | 37 5 | decibels |
| A6 | 49 5 | 48 0 | 46 5 | 49 0 | 43 0 | 39 5 | 21 0 | decibels |
| B5 | 37 5 | 38 5 | 41 5 | 57 0 | 55 5 | 52 0 | 33 5 | decibels |
| B4 | 30 5 | 32 0 | 36 5 | 54 0 | 52 0 | 49 5 | 31 5 | decibels |
| B3 | 15 0 | 23 0 | 30 5 | 50 0 | 49 0 | 46 0 | 28 0 | decibels |
| B2 | 43 0 | 39 5 | 35 5 | 46 5 | 48 0 | 44 0 | 26 0 | decibels |
| B1 | 38 0 | 32 5 | 24 5 | 47 5 | 48 5 | 44 0 | 27 0 | decibels |

These measurements were obtained with the 45 volt battery The gain is about 7 decibels less with the 33 volt and 18 decibels less with the 22½ volt battery The foregoing gain measurements would have been several decibels higher below 2,500 cycles if the N1 receiver had been used in the measurements The measurements indicate the amplification efficiency of the hearing aid at the frequency levels shown with the indicated battery voltage, receiver and tone control adjustments The 'bifocal control was not in use

Acoustical gain for speech (Bone conduction only) H1 wide range receiver, with maximum gain, 45 volt B battery B6 adjustments 36 decibels This value of 36 decibels represents the average gain for three persons each of whom had losses of from 40 to 50 decibels for air conduction and approximately normal bone conduction acuity from 256 to 2 048 cycles These persons perceived speech with 36 decibels less intensity through a high quality sound amplification system with the hearing aid than without it.



Sonotone Model 600

Physical and mechanical features The case housing the transmitter and amplifier is rectangular, with rounded corners and edges and is constructed of black plastic material The combination volume control and on-off switch and the 'bifocal control are located on the top of the instrument Both the basic and secondary tone controls are located on the back of the instrument and are flush with the case

Performance This instrument operates in an entirely satisfactory manner

Recently advertisements for Sonotone Hearing Aids have appeared in *Life* magazine. In some instances these ads have incorporated quoted statements from users of the hearings aids The use of testimonials in advertising of accepted products is against the rules of the Council

The Council on Physical Medicine voted to accept the Sonotone Model 600 Vacuum Tube Air and Bone Conduction Hearing Aid for inclusion in its list of accepted devices

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - - Chicago 10, Ill

Cable Address 'Medic, Chicago"

Subscription price Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new, always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY, JUNE 8, 1946

## RESEARCH ON CRASH INJURIES

The National Research Council is asking physicians to help in obtaining data on the nature, location and severity of injuries sustained by victims of "survivable" aircraft accidents Except in accidents of hopeless severity, survival can—and often does—occur People frequently survive serious crashes without dangerous injuries, serious or fatal lesions often occur in moderate accidents Study of the factors that allow survival may aid in lessening dangers in aircraft and automobile accidents

Research on injuries in crashes was begun in 1942 by the National Research Council working with the Safety Bureau of the Civil Aeronautics Board and study groups in the Army Air Forces and the Navy The research was pioneered and is being carried on at Cornell University Medical College, in consultation with members of the staff of Cornell and the New York Hospital Results already available indicate that the ability of the human body to withstand crash force has been greatly underestimated

Prior to scientific analysis of accidents, authorities believed that the snubbing action of "thousand pound" safety belts would cut the body in two in severe accidents and cause serious or fatal intra-abdominal injuries in lesser accidents Study now shows that "thousand pound" safety belts frequently are broken by survivors of severe accidents without evidence of injuries of abdominal viscera, this type of injury is reported among less than 1 per cent of survivors when the belt is used A similar belief that restraining harness would snap pilots' necks prevented early use of this safety gear By observing results of accidents the combination of safety belt and shoulder harness in military ships now has been increased in strength to hold the pilot against forces of 8,000 pounds The end point of human tolerance, where crash force is properly distributed, has yet to be determined

Because of the great dangers involved, human subjects cannot be exposed to extreme force in controlled experiments All possible information must therefore be obtained when exposures to force occur accidentally In order to relate resulting injuries to causative structure, Air Safety Investigators of the Civil Aeronautics Board now present special medical forms prepared by the National Research Council to physicians who observe victims of accidents An anatomic chart permits recording of areas of fatal lesions and the site of other injuries The weight of the injured person (an important factor in high speed accidents and safety belt breakages), the degree of concussion (mild, moderate or severe), the period of unconsciousness and evidence of intracranial or other internal injury are noted Clinical facts are the basis for judging the severity of injury in respect to the severity of the accident The location of contused areas on the head or torso in moderate accidents have given significant evidence on causes of fatal lesions under more severe conditions

Reports which physicians have returned to crash injury research of the National Research Council already have brought about notable improvements Instrument panels, for example, which were reinforced so solidly that they demolished the head under heavy impact blows are now being redesigned By using ductile instead of solid structure, the energy of heavy "fatal" blows can be distributed and absorbed without fracturing the skull—frequently with only mild or moderate evidence of "concussion"

Control wheels of cast materials which have been found broken in crashes causing puncture of the chest with intrathoracic lesions now are being replaced by wheels which will support the chest and cause lesser injuries of the chest under extremely severe conditions Structures which repeatedly caused massive injuries of the knees are being eliminated and elements substituted which moderate the chance of such injuries

When accident details and medical details from large numbers of crashes are related and analyzed, many improvements can be made Safety is basically the avoidance of injury Serious and fatal injuries can be avoided in many future accidents when the nature and cause of typical injuries are known Much that is being learned about airplane crashes has applicability in the field of motor car accidents The value of the physician's contribution to future safety through this work cannot be overemphasized

## WARNINGS ON THIOURACIL LABELS

The Food and Drug Administration has announced that pharmacists who dispense thiouracil on prescription must place a warning on the label cautioning the patient that this drug may impair resistance to infection and suggesting that the patient should report to his physician immediately at the first sign of fever, sore throat or other symptoms of a cold The Federal Food, Drug and Cosmetic Act exempts drugs dispensed on a written prescription of a physician from bearing a statement of the quantity of contents and a statement of the

active ingredients on the label The law does not, however, exempt such drugs from the requirement that the labeling bear adequate directions for use or warnings necessary for the protection of users

Thiouracil is a dangerous drug and may cause drug fever, skin rashes, leukopenia and agranulocytosis The most important step in treatment of the complications of thiouracil [1] is early recognition of the complications and prompt institution of appropriate therapy

The Food and Drug Administration is reported to have consulted with experts experienced in thiouracil treatment and to have stated that the consensus of these experts favored the placing of a warning to the patient on the label of the drug when dispensed on prescription This warning apparently is intended to supplement and reinforce warnings given orally by the physician Physicians should recognize that the pharmacist is required by federal law to place this warning on the label of the drug, even though it has been dispensed on written prescription This requirement on the part of the pharmacist may disturb normal pharmacist-physician relationship unless the physician is aware of the ruling Presumably the ruling is intended to prevent, as much as possible, needless deaths from this useful but potentially dangerous drug

## PREVENTION OF ERYTHROBLASTOSIS FETALIS

A study which may in time result in the development of a practical method for the prevention of erythroblastosis fetalis has been reported by Homburger [1] of Harvard Medical School

In 1922 Swift [2] of the Rockefeller Institute showed that rabbits which received sodium salicylate in daily doses of from 0 16 to 0.2 Gm per kilogram of body weight and at the same time were given intravenous injections of Streptococcus viridans or of washed sheep red blood cells had a greatly diminished formation of agglutinins, hemolysins and complement fixing antibodies Homburger immunized groups of guinea pigs and rabbits by repeated intraperitoneal (guinea pigs) or intravenous (rabbits) injection of washed rhesus cells Half of the animals of each group received 0 16 Gm per kilogram of sodium salicylate either by stomach tube (guinea pigs) or by subcutaneous injection (rabbits) Seven days after the final injection the plasmas of all animals were titrated for anti-Rh agglutinins, Rh-positive human erythrocytes being used

Fifteen of the 21 animals that had not received sodium salicylate showed relatively high titer anti-Rh agglutinins Of 18 animals which had received sodium salicylate only 2 showed slight traces of these agglutinins On account of the known toxicity of the drug Homburger [3] does not feel justified in suggesting a trial of salicylate therapy in the prophylaxis of erythroblastosis fetalis in man His experiments, however, do show the possibility of some future chemotherapeutic approach to the control of isoimmunization

Another promising lead is the "opposition factor" or "anti-immunity substance," recently described by Day [4] of the Pathological Institute, St Mary's Hospital, London This presumptive hapten is relatively specific for the pneumococcus It is found in pneumococcus autolysate and in the autolysates of certain other bacteria [5] Injected with pneumococcus vaccine, the "opposition factor" specifically "blocks" or otherwise inhibits the development of pneumococcus immunity Its in vivo action is presumably analogous to the well known in vitro blockade by specific hapten If Day's work is confirmed eventually some Rh hapten may be found that will specifically block the development of sensitivity to the Rh antigen

1 Van Winkle Walton Jr and others The Clinical Toxicity of Thiouracil J A M A 130 343 (Feb. 9) 1946
1 Homburger F Proc. Soc. Exper Biol & Med 61 101 (Feb) 1946
2 Swift H F J Exper Med 36 735 1922
3 Homburger F Am J M Sc., to be published
4 Day, H B J Hyg 42: 532, 1942
5 Day, H B J Hyg 43 330 1943

# Current Comment

## BODY DISPROPORTIONS AND PERSONALITY

The possible relationship between body build and personality is intriguing Recently Seltzer [1] reported an extensive comparison of physical measurements in relation to dominant personality traits The work is based on 258 "normal" young men and includes an analysis of the frequency of certain dominant personality traits with relation to a considerable number of body disproportions The latter included stature tall for body weight, shoulders broad for circumference of chest, head large for size of chest and hands large for body weight Men with the disproportions mentioned (or one of the seven others of a similar type) were found to have a greater frequency of certain dominant personality traits, indicating lesser stability, lesser integration, greater sensitivity and complexity of personality and lesser capacity for making easy social adjustments Seltzer states that some of the traits which go with these bodily disproportions are "unstable autonomic functions," "less well integrated," "mood fluctuations," "bland affect," "inhibited," "cultural," "lack of purpose and values," "inarticulate" and "asocial" Conversely, those men with traits indicating personality soundness or stability had fewer disproportions in their physiques than the average of the group as a whole The author suggests that the disproportions are constitutional and as such may indicate a genetic element in the determination of personality and behavior This hypothesis, as Seltzer himself points out, requires verification and must wait further study with other groups in different age levels and with varying cultural backgrounds Even

1 Seltzer Carl C Body Disproportions and Dominant Personality Traits Psychosom Med. 8 75 (March April) 1946

if correlations of this kind prove to be statistically significant, it would also be worth while to study the many exceptions before drawing any conclusions of a clinical or psychologic nature

## PRESIDENT TRUMAN VETOES OPTOMETRY CORPS BILL

For a number of years optometrists have persistently urged the Congress to enact legislation to establish an Optometry Corps in the Medical Department of the Army During the present Congress they were successful in inducing the Senate and the House of Representatives to pass legislation to create such a corps, H R 3755, introduced by Representative Short of Missouri President Truman, however, has refused to approve this bill and in justification of his action had this to say in his veto message of May 9

In my opinion a separate Optometry Corps would be out of harmony not only with the present structure of the Medical Corps but also with the contemplated organization of the Medical Department of the postwar army

During the course of the war the Army has utilized optometrists to the maximum extent consistent with sound medical practice. The Medical Department of the postwar army will likewise utilize optometrists to the maximum extent practicable It is contemplated that they, together with the other professional and scientific groups included in modern medical service, will constitute a Medical Service Corps with appropriate commissioned rank However, our military personnel are entitled to the best medical care available, and the creation of additional separate corps will, in my opinion, hinder rather than facilitate the accomplishment of this aim. Medical care must be directed and coordinated by officers professionally trained and competent to recognize pathologic conditions and assume complete responsibility for adequate care

Furthermore, H R. 3755 would establish a promotion plan providing more rapid advancement for optometrists than for most other branches of the Army, and no persuasive reason is apparent why this particular group should be afforded more favorable treatment than others similarly situated.

## STANDING ORDERS FOR THE INDUSTRIAL NURSE

The Committee on Education of the American Industrial Nurses' Association has written to the Council on Industrial Health calling attention once again to a curious evasion of responsibility by physicians who direct medical departments of industrial plants These physicians seem reluctant to prepare, sign and administer standing orders for industrial nurses The nurses contend rightfully that without such orders they are often called to perform services for which they are not prepared or which they are not legally entitled to perform A simple refusal by a nurse to provide such an unwarranted service can be misunderstood by an employer If she can point to specific instructions, her position is strengthened tenfold Standing orders in industry as in hospitals constitute the professional status on which professional nursing standards rest The Council on Industrial Health has prepared model standing orders to be modified as the supervising physician and industrial circumstances dictate [1] Yet, even with this kind of assistance, many a nurse testifies that her medical director will not write orders or if prepared under his verbal direction he will not sign them To help the nurse out of her quandary, committees on industrial health in state medical societies should adopt standing orders for use by nurses in industrial dispensaries with the understanding that these will operate unless replaced by specific orders prepared by the physician in charge Only in this way can the chain of responsibility and continuity of professional relations which have existed so successfully in other forms of community medical service be satisfactorily maintained in industry

1 Standing Orders for Nurses in Industry, by Council on Industrial Health, American Medical Association, J A M A 122: 1247 (Aug 28) 1943

## DR. CHANNING FROTHINGHAM'S TELEGRAM

The record of the hearings on the Wagner-Murray-Dingell bill include a telegram sent by Dr Channing Frothingham, who now bears the title of chairman of the Committee for the Nation's Health, Inc. The telegram sent to many who did not answer was submitted with the signatures of fifty physicians who presumably telegraphed to him their approval The hearings brought out, through questioning by Senator Donnell, the opinion that nobody could really understand the telegram since it was phrased in confused diction Now a letter appears in *Philadelphia Medicine* for May 4, signed by Drs Edward B Krumbhaar, Joseph Stokes Jr, Francis D W Lukens, George I Blumstein and T Grier Miller, who say that they do not approve the national health program now under consideration and that they do not approve the Wagner-Murray-Dingell bill Apparently all that Dr Frothingham was able to accomplish by sending his message broadcast was to confuse a good many doctors who wanted to assert their desire to be of the utmost help in a wider distribution of medical care and to place a good many men under false pretense in the record of the hearings as supporting the Wagner-Murray-Dingell bill

## CONFERENCE ON RURAL HEALTH

Elsewhere in this issue (page 553) are published abstracts of the proceedings of the first National Conference on Rural Health This conference was held in the Palmer House in Chicago on March 30, 1946 Representatives attending and taking part in the conference came from almost all sections of the country, thus demonstrating the truly national character of the meeting Differences in point of view on the economic aspects of providing health services for rural areas were manifest Opinions on these matters were freely expressed in a spirit of cooperative endeavor aimed at meeting the medical needs of the large and important rural population The papers and discussions indicate that real progress is being made in developing the technics necessary to supply the benefits of modern medical progress to all

# MEDICINE AND THE WAR

## NAVY

### NAVY PLANS MEDICAL CENTER FOR GUAM

The U S Navy has planned a large medical center for Guam to include a 300 bed memorial hospital for natives and medical schools for native practitioners and nurses, in addition to the naval hospital and a tropical medicine research unit The Guam Medical Center will serve as the headquarters of a medical program designed to furnish medical care for all Pacific islands under navy jurisdiction Until the new hospital is constructed, natives are receiving treatment at a 300 bed quonset hospital operated by the Navy Fourteen outlying dispensaries serve all communities in Guam

### MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA COMMENDED

A Mark of Commendation by the Navy Department was recently presented to the Medical College of the State of South Carolina, Charleston, by Capt. Marvin G Kennedy, commanding officer of the Regional Navy V-12 Unit

### NAVY AWARDS AND COMMENDATIONS

#### Captain Waltman Walters

Capt. Waltman Walters, Rochester, Minn, was recently commended by the Secretary of the Navy 'for outstanding performance of duty as chief of the Surgical Service and as surgeon in charge of the Dependents Unit, United States Naval Hospital, Philadelphia, from Dec. 28, 1944 to Oct. 23, 1945 Captain Walters aided materially in organizing and administering a high type of resident training for medical officers in the Philadelphia Naval Hospital, which achieved the recognition and unqualified approval of the American board for certifying specialists He maintained effective liaison between the surgical service of the Naval Hospital and the teaching institutions and surgical groups of Philadelphia and rendered counsel and guidance to the Rehabilitation Board while serving as a member of that activity His professional skill and tireless efforts on behalf of war casualties reflect the highest credit on himself and the United States Naval Service." Dr Walters graduated from Rush Medical College, Chicago, in 1920 and entered the service July 1, 1942

#### Lieutenant Commander Lawrence J Keenan

Lieut. Comdr Lawrence J Keenan, Fond du Lac, Wis, was recently awarded the commendation ribbon for meritorious service in connection with the early development of Guam as a senior medical officer of the 23d naval construction battalion The citation accompanying the award stated that, "working day and night under difficult conditions, he succeeded in the elimination of all sources of contagion His careful attention given to each man in the battalion kept the maximum number of men working on vitally needed projects such as the Orote field activities and the inner harbor development. His professional skill, leadership and devotion to duty were an inspiration to all with whom he served and were in keeping with the highest traditions of the U S Naval Service' Dr Keenan graduated from Marquette University School of Medicine, Milwaukee, in 1935 and entered the service Jan 18, 1943

#### Lieutenant Commander John H Sulzman

A Letter of Commendation was recently awarded to Lieut. Comdr John H Sulzman, Troy, N Y, for meritorious conduct in the performance of his duties in the Medical Research Department, Submarine Base, New London, Conn., from April 1945 to December 1945 ' The citation stated that, by his comprehensive and tireless studies in the field of visual research and his far sighted planning in connection with a program of visual training, he was of invaluable aid to all branches of the armed forces and contributed materially to the successful prosecution of the mission of this command His conduct throughout was an inspiration to all with whom he served and in keeping with the highest traditions of the Navy of the United States" Dr Sulzman graduated from Columbia University College of Physicians and Surgeons, New York, in 1932

#### Captain George Marshall Lyon

The Legion of Merit was recently awarded to Capt. George Marshall Lyon, Huntington, W Va, "for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States as medical officer in connection with the safety of personnel employed in the Manhattan project An outstanding authority in the field of gas warfare, Captain Lyon readily assumed his weighty responsibilities in connection with the medical aspects of the Manhattan project and, applying with resourceful initiative the principles of his varied scientific knowledge and expert technical skills, effected sound protective measures for the safety control of service personnel and civilian employees engaged in essential duties By his keen foresight, tireless efforts and experienced judgment Captain Lyon greatly facilitated the development of a vital weapon which subsequently proved to be an important factor in the speedy termination of the war, and his loyal cooperation and professional achievements toward this end reflect great credit on himself, the medical profession as a whole and the United States Naval Service." Dr Lyon graduated from Johns Hopkins University School of Medicine, Baltimore, in 1920 and entered the service April 20, 1942

#### Captain Cecil Henry Coggins

The Bronze Star was recently awarded to Capt. Cecil H Coggins, Oroville, Calif, for "meritorious service as a field medical officer with the United States Naval Group in China from Oct. 30, 1943 to April 15, 1945 Participating in raids, ambushes and patrols with guerrillas behind the Japanese lines, Captain Coggins performed various types of medical duties ranging from major surgical operations in the field to organizing medical training classes in first aid, minor surgery and field hygiene, in which he instructed the Chinese doctors and first aid men in the basic principles of his profession. He also organized and operated a small mobile field hospital which was instrumental in saving many American and Chinese lives, thereby rendering valuable and heroic service in this hazardous theater of war His courageous conduct, disregard for his own safety and devotion to duty under difficult and perilous conditions reflect the highest credit on Captain Coggins and the United States Naval Service." Dr Coggins graduated from Jefferson Medical College of Philadelphia in 1930 and entered the service June 16, 1930

#### Lieutenant Commander Herbert R Brown Jr

The Bronze Star was recently awarded to Lieut. Comdr Herbert R Brown Jr, Rochester, N Y, "for meritorious service in connection with operations against the enemy as medical officer in charge of the Naval Whole Blood Distribution Center at Guam, Marianas Islands from Nov 1, 1944 to Sept 21, 1945" Dr Brown graduated from the University of Rochester School of Medicine and Dentistry in 1939 and entered the service June 11, 1942

#### Commander Murray Glusman

The Bronze Star and the Presidential Unit Citation with Oak Leaf Cluster were recently awarded to Comdr Murray Glusman, New York. Dr Glusman graduated from New York University College of Medicine, New York, in 1938 and entered the service July 7 1941

# ARMY

## ARMY AWARDS AND COMMENDATIONS

### Colonel Harold C Lueth

The Army Commendation Ribbon was recently awarded to Col Harold C. Lueth, Chicago According to the citation accompanying the award, "During World War II the Medical Department carried out its mission with outstanding success This achievement was made possible only through the combined efforts of all Medical Department personnel Your service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and I wish to commend you for your outstanding contribution as liaison officer between the Office of the Surgeon General and the American Medical Association from March 15, 1942 to Feb 25, 1945" Dr Lueth graduated from Northwestern University Medical School, Chicago, in 1930 and entered the service Oct. 1, 1940 He was recently appointed dean of the University of Nebraska College of Medicine, Omaha (THE JOURNAL, April 27, p 1253)

### Lieutenant Colonel Laurence Miscall

Lieut Col Laurence Miscall, New York, was recently awarded the Legion of Merit for exceptionally meritorious conduct in the performance of outstanding services as surgical service coordinator and center consultant in thoracic surgery for the 6810th Hospital Center (Provisional) and later for the 804th Hospital Center during the period of July 11, 1944 to March 18, 1945 The citation stated that "Lieutenant Colonel Miscall achieved spectacular results in his determined effort to afford every possible care to wounded and suffering men who came for treatment. His singular professional ability and devoted practice of his profession combined in the development of a peerless thoracic surgical service which contributed a large share to the rehabilitation of men in the fighting forces of the United States" Dr Miscall graduated from Cornell University Medical College, New York, in 1930 and entered the service Aug 24, 1942

### Lieutenant Colonel Charles C Verstandig

The Army Commendation Ribbon was recently awarded to Lieut Col Charles C Verstandig, Hamden, Conn The citation accompanying the award stated that "during World War II the Medical Department carried out its mission with outstanding success This achievement was made possible only through the combined efforts of all Medical Department personnel" Said Major General Kirk "Your service with the Medical Department has been exceptional when compared with others of the same grade of similar position, and I wish to commend you for your outstanding contribution as medical director, Armed Forces Recruiting and Induction Station, New Haven, from March 1, 1943 to Dec 31, 1945" Dr Verstandig graduated from the University of Tennessee College of Medicine, Memphis, in 1939 and entered the service Aug 1, 1940

### Lieutenant Colonel Milton Kissin

Lieut. Col. Milton Kissin, New York, was recently awarded the Soldier's Medal "for heroic actions and services on Aug 19, 1945 On that date, prior to the surrender of the Japanese, he was sent to Canton as a member of one of the Allied emergency liaison teams by direction of the commanding general, U S Forces, China Theater, to establish initial liaison with prisoners of war and civilian internees in that area. This team, consisting of seven other American officers and enlisted men, eight Allied officers and men, landed at the White Cloud Airfield at Canton on Aug 19, 1945, preceded by leaflets dropped to Japanese and Allied personnel in the area and announcing the arrival of the humanitarian mission At the time of this landing the members of the team were told that air strips on all other fields in the area were mined and that the perimeter of the White Cloud strip was heavily mined. Through negotiations with Japanese authorities by American members of the team, arrangements were made for the team to remain as guests, begin a partial performance of their mission and even report by radio so long as messages were approved by the Japanese. However, as Allied members of the team made it obvious, even to the Japanese, that they did not consider it safe to remain, the team commander made the decision to depart and return later with a team made up entirely of American personnel In his heroic performance of a dangerous assignment Major Kissin reflected great credit both on himself and on the United States forces in the China theater" Dr Kissin graduated from Cornell University Medical College, New York, in 1928 and entered the service in November 1942.

### Colonel Cleve C Odom

The Legion of Merit was recently awarded to Col Cleve C. Odom, commanding officer of Mason General Hospital, Brentwood, N Y The citation accompanying the award stated that "Colonel Cleve C Odom, Medical Corps, Army of the United States, while serving as commanding officer of Mason General Hospital, distinguished himself through outstanding service. Colonel Odom expanded Mason General Hospital from a 1,320 to a 3,032 bed hospital during his tenure of command and provided instruction of the highest quality for medical officers and nurses undergoing instruction in the School of Military Neuropsychiatry operated at this station. Through his broad experience in neuropsychiatry and hospital administration, untiring efforts, remarkable initiative and enthusiastic and virile leadership, Mason General Hospital attained a prominent place in military neuropsychiatry and administered the best of care and treatment to the neuropsychiatric patients of the Army His cumulative achievements reflect great credit on himself and the medical corps" Dr Odom graduated from Vanderbilt University School of Medicine, Nashville, in 1916 and entered the service July 1, 1920

### Major Daniel F Crowley

The Silver Star was recently awarded to Major Daniel F Crowley, New York, "for gallantry in action on the afternoon of Nov 1943 near Italy Learning that there were some casualties in a draw about 2,000 yards from the battalion aid station, this officer and three enlisted men proceeded in an ambulance across a large open field, under constant enemy observation and heavy artillery fire. Finding one man dead and the other seriously injured, they administered first aid to the injured man The ambulance had attracted a heavy concentration of enemy fire, and while lifting the litter into the ambulance one man was instantly killed by a shell Undaunted by the continued heavy shelling directed at their ambulance, they drove back across the open field and brought the wounded man to safety The courage under fire and high sense of duty displayed by these individuals on this occasion is in keeping with the highest traditions of the military service." Dr Crowley graduated from the National University of Ireland in 1922 and entered the service April 19, 1943

### Major Philip E Zanfagna

The Army Commendation Award was recently presented to Major Philip E Zanfagna, Lawrence Mass, "for performance of meritorious service while serving as post medical inspector, assistant chief of medical service, prisoner of war dispensaries officer, medical and sanitary supervisor of prisoner of war branch camps, Hospital Center, Camp Forrest, Tenn, from April 1945 to December 1945 Displaying unusual initiative, devotion to duty and administrative ability," said the citation accompanying the award, "Major Zanfagna (then captain) was largely responsible for the high medical and sanitary standards among prisoner of war units and contributed materially to the successful operation of this center" Dr Zanfagna graduated from Boston University School of Medicine in 1934 and entered the service July 29, 1942

### Lieutenant Colonel Bernard J Pisani

Lieut. Col. Bernard J Pisani, New York, was recently awarded the Legion of Merit for "exceptionally meritorious conduct in the performance of outstanding services as director of the Medical Field Service School, European Theater of Operations, from February 1943 to October 1944" The citation

further states that "Lieutenant Colonel Pisani's organization of the curriculum and assembly and instruction of the teaching staff of the special medical department school revealed a competence of the highest type. His supervision of the field training and professional education greatly increased the efficiency of the service of the nurses and medical officers who attended the school Lieut Col Pisani's services during this period reflect the highest credit on himself and the armed forces of the United States"

Lieutenant Colonel Pisani was also honored with the Bronze Star Medal during the period of Feb 13, 1945 to May 8, 1945 for "meritorious service in connection with military operations as executive officer, professional services division, Office of the Surgeon, Communications Zone, European Theater of Operations The citation accompanying this award stated that in addition to his administrative duties Lieutenant Colonel Pisani's professional qualifications as a surgeon and gynecologist have been widely used. His unusual attributes have made him particularly valuable in the field of posthostilities training and proper redeployment of units" Dr Pisani graduated from New York University College of Medicine, New York, in 1933 and entered the service May 5, 1941

### Colonel Donald A Covalt

The Legion of Merit was recently awarded to Col Donald A Covalt, Muncie, Ind, for his services with the Army Air Forces The citation accompanying the award stated that "as convalescent training officer, Army Air Forces Hospital, Miami Beach Training Base, and later as executive officer of the Convalescent Services Program, office of the Air Surgeon, during the period from April 1943 to November 1945, Colonel Covalt rendered outstanding service of tremendous value to the Army Air Forces Medical Department and the military service at large The Convalescent Services Program which Colonel Covalt organized and directed became a model for the Army Air Forces, and the experience of this project was utilized by other branches of the service and by the military services of our Allied nations" Dr Covalt is now the assistant medical director of Medical Rehabilitation of the Veterans Administration He graduated from Indiana University School of Medicine, Indianapolis, in 1933 and entered the service May 11, 1942

### Lieutenant Colonel Paul C Morton

The Legion of Merit was recently awarded to Lieut Col Paul C Morton, New York, "for exceptionally meritorious conduct in the performance of outstanding services as chief of the surgical service, 2d Evacuation Hospital, and surgical consultant, United Kingdom, Base Section, European Theater of Operations, from Feb 22, 1942 to May 30, 1945" The citation accompanying the award further stated that "Lieutenant Colonel Morton has displayed a superior service in his pioneer studies in the relation of the drug penicillin to gas gangrene. His organization of special medical centers to care for unusual injuries were a notable contribution to the care of sick and wounded in this theater and materially assisted the medical field in the efficient performance of a vital mission" Dr Morton graduated from Harvard Medical School, Boston, in 1922 and entered the service Jan 21, 1942

### Captain A Lewis Shure

An Army Commendation Ribbon for meritorious service was recently awarded to Capt. A Lewis Shure, New Haven, Conn., for his services "from May 21, 1944 to Dec. 27, 1945 as chief of the Orthopedic Service Hospital at Fort Knox, Kentucky Accomplishing highly technical assignments with distinction, Captain Shure reflected great credit on his profession and the military service" Dr Shure graduated from Harvard Medical School Boston, in 1927 and entered the service in August 1942

## MISCELLANEOUS

### WHAT GERMAN OCCUPATION DID TO MEDICINE IN CZECHOSLOVAKIA

Francis Shattock, one of four British delegates to the World Students' Congress, visited Czechoslovakia in November 1945 In Prague he found that there were eight hospitals for 1,000,000 inhabitants, at most, he says (*St Bartholomew's Hosp J* **2** 19 [March] 1946), patients have to wait only three weeks for admission There were 9,000 undernourished children At St Anna's Hospital in Brno, of all the patients seen 30 per cent were tuberculous, and of these only 10 per cent could get proper treatment Before the war there were 10,000 doctors in Moravia and Bohemia, but the number has been reduced to 5 000 In Prague there is a center for mass radiography, but this cannot be used as films for it cannot be obtained.

The nursing situation in Czechoslovakia is critical. In 1936 there were three nurses to 30 or 40 patients during the day, and one for the same number at night In the chest and surgical blocks of the Bulovka Hospital there are only two nurses to 300 patients, and during the day only one to each ward, or 20 to 30 nurses for 300 patients

During the occupation all universities were closed and stayed closed for six years Now all the students who would have attended the universities during the war years have entered This leads to impossible conditions In Prague there are 6,000 first year medical students, 3,000 studying law, and 2,000 studying philosophy

The delegates also paid a visit to the Faculty of Medicine and saw the chemistry and physiology departments as well as the department of anatomy and the museum. In the department of anatomy the professor and his assistant were busy preparing wall diagrams and anatomic models to replace those destroyed by the Germans These are of inestimable importance in the absence of textbooks and lack of sufficient subjects for dissection It is impossible to teach anatomy adequately to thousands of students, especially when it is realized that each student may be present in the anatomy dissecting rooms for only three consecutive weeks in the year

Venereal diseases present a problem to the Czechoslovakian medical service on account of the German occupation. The German authorities during the occupation said that the German soldier on leave in Czechoslovakia had to be provided for, of course he was not allowed to produce a child with a woman of the 'low" Czech race, so that they had to find prostitutes Before the war this profession was practically extinct in Czechoslovakia, a condition brought about by an act for the prevention of venereal disease The situation changed completely after the German occupation of the country Figures are quoted in a document produced by the German police which stated that in 1938 in Prague there were only 440 prostitutes In 1941 the number had increased to 5,000 A third of these were German women, this is a fantastically high proportion when it is remembered that the German population in Prague was only 3 per cent.

During a reception given at his palace by President Benes to all the delegates of the World Students' Congress, Shattock had the opportunity of meeting the rector of the Charles University of Prague. He had spent two years in the Terezin concentration camp, where he performed all his operations with a razor His only drugs consisted of a small amount of aspirin.

There is a shortage of penicillin in Czechoslovakia The Koumc Colleges in Brno were visited by the delegates, as it was there that many medical students were killed The delegates placed wreaths around the three gallows, which had accounted for hundreds of lives of students, professors and patriotic Czechoslovakians They saw the Castle of Brno, which would have been the largest underground concentration camp in Europe, it was in the process of construction when the Russians freed the country Here they saw the special death chambers, with their floors sloping to a gutter in the center to carry away the blood, the gas chambers and also the chapel, where the altar had been removed, and in its place there was a colossal German eagle, weighing 51 tons, in front of which was the Holy Writ of the New Order—a copy of Mein Kampf in an illuminated cabinet.

# PHYSICIANS SEPARATED FROM SERVICE

## ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

### Illinois

Roberg O T Jr Lt Col 2339 E North Geneva Ter, Chicago
Was Harold, Major, 10855 Indiana Ave, Chicago

### Louisiana

Tisdale Albert A, Medical Center Bldg Lafayette.
Weed John C, 3517½ Camp St., New Orleans
Welch, James W, 922 6th St, Alexandria

### New Mexico

Malone Earl L, Capt., 306 W 2d, Roswell

### North Carolina

Barringer, Phil L, Capt., 340 10th Ave, Hickory
Braudwell, Leslie J, Capt, Wendell.
Brookshire, Harley G Jr, Major 44 School Rd. Asheville
Brown, Frank R, Capt, 917 Walker Ave., Greensboro
Cekada Emil B, Lt. Col, 1010 Green St, Durham
Cox, Alexander M, Major, Madison.
Heimitsh, George Lt. Col, Fayetteville.
McCall, Robert E Jr, Capt, 236 S Main St, Marion
McCulloch Rudolph P, Capt., 820 Buchanan St., Durham
McGuffin William C, Major, Arcade Bldg, Asheville
Miller, Robert P, Capt, Lincolnton
Moore Roy H, Major, Box 909, Canton
Phillips, Neal J, Capt, P O Box 116, Lattimore
Pittman William A, Capt, 118 Stedman St., Fayetteville
Templeton, Ralph G, Box 80, China Grove
Thomas George J Jr 1420 Hattie Ave, Winston-Salem.
Thompson, John W Jr, Murphy
Way Samuel E., 110 Hammond St., Rocky Mount.
Wilkinson Charles T Wake Forest
Williams, Ernest H, 410 Sunset Ave Rocky Mount

### North Dakota

Barger, James D, Major Linton.
Bonzer, John D Capt., Lidgerwood
Curtis, Claude C Major Beach
Waters, Pattison A, 1233 3d St. N, Fargo
Weller, Lewis J, 1402 2d Ave. N, Grand Forks

### Ohio

Bakos, John, Capt, 10 W Miller Ave., Akron
Bayless, Francis, Lt Col, 2316 Delaware Dr, Cleveland Hgts
Beasley Norris M, Capt, Grandview Heights, Athens
Belmont Morrison H, Capt., 139 Benita Ave., Youngstown.
Berg, Theodore Capt., 115 Eastern Heights, Elyria.
Block Gordon L Jr, Capt., 801 E Mitchell Ave., Cincinnati
Bremner, Elizabeth A Capt, Red Fern Rd., Columbia Station
Brown Charles G Capt. 428 W Park Ave., Mansfield
Burton, Claud C, Lt. Col, U S Vet. Adm., Dayton.
Carson, James H, Lt. Col, 238 N 5th St., Martins Ferry
Cassaday Charles E, Capt., 781 W Town St, Columbus
Clark, Clyde E, Capt, 1112 Oakdale Ave., Dayton.
Clark, John J, 1st Lt., 82 Park Ave. West Mansfield.
Cohen, Jacob Capt., 216 Brabarton Rd., Steubenville.
Collins, James R., Major, 11311 Shaker Blvd., Cleveland
Consolo Charles W Major, 89 E Perry St., Tiffin
Cook, George W, Capt., 328 S Belle Vista, Youngstown.
Fisher, Abe A, Capt, 805 29th N E, Canton.
Fisher Alexander S, Capt, 206 W 7th St, East Liverpool
Forman, Wiley L, Major, 370 E Town St., Columbus
Foy, Paul E. Capt, 115 E Franklin, Troy
Frommeyer, Walter B Jr, Capt., 3526 Mooney Ave., Cincinnati
Garvin, Gilbert E, Capt., Blanchester
Glicklich, Earl A, Major, 3428 Burnet Ave., Cincinnati
Hahn, Carl W, Major, 11228 Harborview Dr, Cleveland.
Hahn, Paul D, Capt., Warsaw
Hardgrove, George L, Lt. Col, P O Box 13, Doylestown
Harris, Samuel, Capt., RR 8, Cincinnati
Hauser, Charles U, Major, 1253 Herschel Ave., Cincinnati
Hawk, Alpha F, Capt., 442 S Main St., Urbana
Headley, Nathan E, Capt, 237 W 8th Ave., Columbus
Hepp, Herman J, Capt., RR 6, Box 26-A, Ridge Rd, Lockland.
Hertz, Harold J, Capt., 2489 Overlook Rd., Cleveland Heights
High, Luther W, Capt., RFD 4 Millersburg

### Ohio—Continued

Hill, Myron G Capt., 81 E 199th St, Euclid
Hill, Willard T, Capt 4134 Lake Ave., Ashtabula
Hoffman, Edward O, Capt., 321 Helen St., Cincinnati
Horger, William J, Major, 110 Pennsylvania Ave, E Liverpool
Hughes, James J, Capt, 205 Wickford Rd., Columbus
Kaufman, Karl F, Capt, 1187 Edgecliff Dr, Bedford
Kersell, Lloyd L, Capt., 550 E. Main St, Lancaster
Maltby, George L, Lt Col, 212 Woolper St, Cincinnati
Marinis, Thomas P, Capt., 405 Marion Ave., Mansfield.
Marks, Matthew O, 1st Lt., 7519 Market St., Youngstown.
Middleton, Richard H, Major, 105 Mill Creek Dr, Youngstown
Mogg, Albert M, Capt., 264 Benita Ave, Youngstown
Molle, Samuel A, Capt, 2460 Putnam St., Toledo
Musta, Walter, Major, Hawthornden State Hosp, Macedonia
Nelson, Gordon G, Major, 251 Berkshire Dr, Youngstown
Palestrant, Munroe W, Capt., 1237 S Ohio Ave, Columbus
Peelle Elias D, Major, 119 E. Locust St, Wilmington.
Petcoff, John E, 1st Lt., 2520 Monroe St., Toledo
Pierce, Robert R. Capt., 421 South St., Alliance.
Price, Frederick F, Capt, Stony Ridge.
Price, John E., Capt, 4714 Hamilton Ave., Cincinnati
Randell, Asher, Major, 725 Bryson St., Youngstown
Reed, Lewis K., Major, 245 Berkshire Dr, Youngstown.
Roth, Dale E, Capt, 377 E. Main St., Newark.
Roush, Carl E., Lt. Col, 1882 Fairfax Ave., Cincinnati
Russell John M, Capt, 4407 Euclid Blvd, Youngstown.
Santurello, Thomas D, Lt. Col, 1059 E Main St., Columbus
Sauer, Richard T, Major, 2628 Benninghofen St, Hamilton
Sawyer, Theodore D, Capt, 116 N Thoman St Crestline.
Schellhase, F L, 1st Lt., 2932 Idlewood Ave., Youngstown.
Schneider, Bernard M, Capt., 11115 Ada Ave., Cleveland
Schulze, Alfred G, Capt, Amelia
Silver, Nathan, Capt., 820 Hutchins Ave., Cincinnati
Skaggs, Marshall L, 1st Lt, 275 McCormick Pl, Cincinnati
Smith, Frederick G, Major 240 E Church St., Marion
Smith, I C, Major, Home Savings & Loan Bldg Youngstown.
Smith, William A, Major, 138 S Diamond St, Mansfield.
Spark, Isadore, Lt Col, Vet Adm. Facility, Chillicothe
Spencer, Newton C, Col, 2429 Goodard Rd, Toledo
Stonehill, Theodore, 2214 Gould Ct, Cleveland
Stoner, Willard C, Box 205, Chagrin Falls
Strain, Shelley M Jr, 227 Market St, Youngstown
Strait, John M Jr, 2174 Arlington Ave., Columbus
Stubbs Samuel P Jr, Lima Memorial Hosp, Lima.
Surdyk, Jerome S, 2517 E 5th St. Dayton.
Taylor, Howard P, 19493 Laurel Ave. Rocky River
Tepe, William R., 4217 Allison St, Norwood.
Thiessen, Norman W, 610 Hanna Bldg, Cleveland
Turner, Oscar A, 3279 Meadowbrook, Cleveland.
Wagner, Richard L, 1552 5th St., Portsmouth
Walzer, Joseph, 3166 Redwood Rd., Cleveland Heights
Wharton, Joseph E, 57 Franklin Ave Athens
Wolpaw, Ralph, 3251 Berkeley Rd Cleveland
Wolpaw, Sidney E, 2777 Edgehill Rd Cleveland Heights
Wright Robert N, 421 N, Market Wooster

### Oklahoma

Waters, Floyd L, Hugo
Wilson, Charles H, 2206 W 14th St Oklahoma City

### Oregon

Anderson, Earl M, Col, 3236 N E Ainsworth Portland
Boals, Robert T Jr, Capt., The Dalles Clinic The Dalles
Christenson, Ralph P, Capt., 1167 E 22d St., Eugene
Coen Robert A. Capt., 118 N Chadwick St, Roseburg
Coyle, Charles L, Capt. 708 Park Ave Medford
Hess Orrin R., Capt Med Arts Bldg Roseburg
Shepard, Willis B Capt., 191 E 19th St, Eugene
Welch, John D, 2212 N E 13th Ave, Portland

### Pennsylvania

Baker, Harold F, Lt. Col, 7 S Main St., Muncy
Ball, Myron H, Major, 531 Clay Ave, Scranton
Bayuk, Anthony J, Capt., 349 Darragh St. Pittsburgh
Belknap Harold P, Major, Wyndham Hills RFD 6, York.
Berg, Philip Jr Capt., 1626 Ruscomb St Philadelphia.

# PHYSICIANS SEPARATED FROM SERVICE

### Pennsylvania—Continued

Berk, Jack E, Capt., 4639 N 12th St, Philadelphia
Bernstein, Alexander A, Major, 1401 Linden St, Scranton
Burnett, George W Major, 609 W 1st St, Oil City
Burns, Charles N, Major, 49 S Washington St., Wilkes-Barre
Buzzerd, Harry W, Major, 416 Pine St, Williamsport
Cantor, Max, Major, 5209 Haverford Ave., Philadelphia
Chiampi, Xavier J, Major, 930 Wyoming Ave., W Pittston
Cohen, Jacob J, Capt, 4855 N 9th St, Philadelphia
Cotter, John J, Capt., 285 W 8th St., Wyoming
Evans, Paul R, Capt., 901 Grand Ave, Tower City
Fleming, William H, Major, Shelocta
Freedman, Meyer, Capt, 748 S 60th St., Philadelphia
Goldman, Gilbert S, Major, 2015 Wightman St, Pittsburgh
Heazlett, William A, Major, 721 Hill Ave., Wilkinsburg
Heck, Harry J Jr, Capt., 1906 Lowrie St, Pittsburgh
Heineman, Richard W, Capt, 1066 10th Ave, Brackenridge.
Henderson, Theodore A, Major, Loch Alsh Ave., Ambler
House, Benjamin, Capt, 6701 Castor Ave, Philadelphia
Houser, Ben P, Capt., 214 W Broad St, Tamaqua.
Hoyt, Ralph C, Major, 101 Wheatland Ave., Shillington.
Hughes, John C, Capt, 751 Franklin Ave., Wilkinsburg
McConnell, Irvin W, Capt, 275 W Louther St., Carlisle.
McCoy, Orlo G, Capt, 19 Park Pl, Corry
McDermott, Robert W, Major, 117 22d St, Munhall
McEvilly, James P J, Capt, 2428 S Alder St, Philadelphia
MacNeal, Herbert P, Lt Col, 726 Vernon Rd, Philadelphia
Madigan, Thomas J, Major, 419 Emerson Ave., Aspinwall
Meade, Richard H Jr, Lt. Col, Miquon.
Medoff, Joseph, Capt, 5232 W Berks St, Philadelphia
Millard, Joseph D, Capt, 217 E Sunbury St., Shamokin
Miller, G W III, Capt, 5305 Germantown Ave., Philadelphia
Miller, Russel F, Lt Col, 3148 N Broad St., Philadelphia
Millington, John T, Capt, 34 N Welles St., Wilkes-Barre.
Milliron, Joseph W, Capt, N Jefferson St, Kittanning
Moffses, Garabed H, Capt, 1216 Foulkrod St., Philadelphia
Morrissey, George E., 1st Lt, Clinton Hotel, Philadelphia
Nevertts, Matthew A, Capt, 30 N Ballnet St., Frackville
Nichols, Harold, Capt, 240 Pine St., Philadelphia
Nichols, Thomas W, Capt., 3538 Fleming Ave. N S, Pittsburgh
North, John P, Lt Col, Gypsy Lane, Wynnewood
Pellerin, Alcide D, 1st Lt., 222 Avon Rd., Upper Darby
Ramik, Otto E., Major, RFD 3, Bellefonte.
Rogers, Arthur M, Capt., 1415 Delancey St., Philadelphia
Rothman, Sidney Capt., 105 E. 7th St, Lansdale
Sabow, Ladislas T, Capt., 2821 Beechwood Blvd, Pittsburgh
Sacks, Charles L., Capt, 347 E. Roosevelt Blvd, Philadelphia
Sales Phoenix M, Capt., 7914 Heather Rd, Elkins Park
Sandhaus, Harold S, Capt., 426 W King St, Lancaster
Santarsiero, Donato A, Major, 228 E. Drinker St, Dunmore.
Scarf, Maxwell, Major, 1834 Pine St, Philadelphia.
Scheie, Harold G, Major, 313 S 17th St., Philadelphia.
Schlesinger, Samuel, Major, 42 N Wyoming St., Hazelton
Scott, James P, Capt., Hill Crest, Philipsburg
Sedwick, Jack D, Major, Brockway
Shovlin, John P, Major, Farview State Hosp, Waymart.
Shubert, Roman J, Capt, 759 E. 21st St., Erie.
Smith, George S, Capt, 818 Berwick St, Easton
Steele, L. H, Lt Col, St. James Pl, Fox Chapel, Pittsburgh
Steinberg Abraam, Capt, 3419 Louisa St., Pittsburgh
Stern, Francis H, Capt, 2421 S 5th St, Philadelphia
Stubbs, John J, 1381 N Sheridan Ave., Pittsburgh
Stutch, Reuben, 3301 Juliet St, Pittsburgh
Testa, John W, 86½ Lambert St., Pittston
Thomas, Henry W, 1912 Arlington Ave., Pittsburgh
Tompkins, Harry E., 904 W Main St, Norristown
Walker, Cletus B, 253 Congress St., Bradford
Wilcox, Wilfred W, 370 Broad St., Montoursville
Wissler, Robert U, 115 Washington Ave., Ephrata
Woodruff, Marston T, 5006 Castor Ave., Philadelphia

### Texas

Adriance, Carroll T, Capt, 1715 Broadway, Galveston
Ashmore, Alvin J, Major, 601 Med Prof Bldg, Corpus Christi.
Bailey, Charles W, Capt. 2201 Bridle Path, Austin
Bosshardt, Carl E, Major, 340 Lamont St San Antonio
Brin, Alfred R, Capt, 306 W Brin Ave., Terrell
Brindley, Hanes H, Capt, 600 W Garfield Temple.
Brown C H, Major, Wichita Falls State Hosp, Wichita Falls

### Texas—Continued

Carter, Louian C, Major, 403 Capps, Marlin
Crain, Lovell B, Capt, 4312 Garrett St, Houston
Creel, Wylie F, Capt, 203 North Blvd, Galveston
Ford, Hamilton F, Major, 1510 Avenue O, Galveston
Garrett, John C., Capt, 1220 20th St, Huntsville
Goldston, Alton B, Capt, 2805 Hayden St, Amarillo
Goodwin, Francis C, Lt Col, 925 Rim Rd, El Paso
Heard, Jesse G, Lt Col, 3059 Reba Dr, Houston
Herndon, Charles H, Capt, Dublin
Holshouser, Charles A, Major, 226 W Gramercy, San Antonio
Hood, John G, Lt. Col, Vet. Adm Hosp, Amarillo
Hyslop, James R., Major, 317 E Yandell St, El Paso
Jordan, Gerald H, Major, 4517 Cumberland, El Paso
Koberg, Frederick J, Major, 710 Runnels St, Big Spring
McComb, Asher R, Major, 415 Casino Club Bldg, San Antonio
McReynolds, Issac S, Major, 2247 Bartlett St., Houston
Maxfield, Jack G S, Major, 1700 Morrow St, Waco
Mewhinney, Logan U, Capt, Holland
Mondrick, Frank V, Capt., Marshall
Nicholson, William D, Capt., Rosebud
Nickerson, Samuel H, Lt Col, 831 S E 12th St., Paris
Portman, Robert K., Capt., 1025 Haines St, Dallas
Robbins, Jacob B, Major, 408 Blacker St, El Paso
Scarborough, Lee F, Capt, Rusk
Shields, Thomas L., Major, 2508 Shelby St, Apt. 2, Dallas
Simms, Otho M, Capt., Normangee.
Small, Andrew B, Major, 4128 McFarlin Blvd, Dallas
Stiles, Wendell A, Major, 3218 Bryn Mawr, Dallas
Swan, Joseph J, 4728 Dexter, Fort Worth
Terrell, Charles J, 813 Medical Arts Bldg, Fort Worth
Trevino, Saul S, 2811 Buena Vista, San Antonio
Tuck, Vernon L, 902 S Travis St, Sherman
Tumbleson, Talbot, 705 5th St., Beaumont.
Turboff, Sidney W, 4315 Siegel St, Houston
Wertz, Royal F, 1315 Broadmoor St., Amarillo
Williams, William H Jr, 602 Meander, Abilene
Williams, William O, 1601 Sul Ross Ave., Houston
Williamson, Lee, 109 Johnson, Terrell
Winstead, Dabney E., 712 Brazos, Graham.
Witcher, Seth L, Clifton
Wood, Joe B, 521 College St., Sulphur Springs
Wright, John L. Jr, 20 E Avenue H, San Angelo

### Washington

Turley, Gerald W, Box 357, Goldendale
Webster, Bruce J, Box 485, Omak.

### West Virginia

Thornton, Jack T Jr, Woodale, Wheeling
Wilson, Paul R, 111 Ashfield St, Piedmont.

### Wisconsin

Thayer, Richard A, 1306 Chapin St, Beloit
Wegmann, George H., 2960 N 70th, Milwaukee.
Weissmiller, Lester L, 221 Clifford Ct., Madison

### Wyoming

Stratton, Richard C, Green River

### Puerto Rico

Babb, Donald F, Capt, 3 Duarte St, Stop 20, Santurce

### Canada

Bryan, William W, Lt. Col, London, Ontario

---

## RECALLED TO ACTIVE DUTY OR NOT RELIEVED

Croll, Leo J, Major, 18605 Fairfield Detroit
Drisoll, Robert H, Col, 915 Glenn St., Newberry, S C
Gordon, Hirsch L., Capt, Veterans Hosp, Northport, N Y
Krichbaum, C E., Lt Col, 63 Myrtle Ave, Montclair, N J
Murphy, James H, Capt, High St., Curwensville, Pa
Schwartz Edward D, 1st Lt., 1720 Middlehurst Rd, Cleveland Heights, Ohio

# ORGANIZATION SECTION

## National Health Program

### PLATFORM ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

*One of the ten points in this platform will be published each week*

**9 The services rendered by volunteer philanthropic health agencies such as the American Cancer Society, the National Tuberculosis Association, the National Foundation for Infantile Paralysis, Inc, and by philanthropic agencies such as the Commonwealth Fund and the Rockefeller Foundation and similar bodies have been of vast benefit to the American people and are a natural outgrowth of the system of free enterprise and democracy that prevail in the United States Their participation in a national health program should be encouraged, and the growth of such agencies when properly administered should be commended**

## Washington Letter

*(From a Special Correspondent)*

June 3, 1946

### Poliomyelitis Funds Appropriated for Public Health Personnel

Dr Thomas Parran, Surgeon General of the U S Public Health Service, and Basil O'Connor, president of the National Foundation for Infantile Paralysis, announced that $278,400 of infantile paralysis funds will be used for the training of public health personnel Dr Parran said that $228,400 of the appropriation would provide fellowships for recruits to meet the need for 1,200 physicians and sanitary engineers in state and local health departments "We believe," he explained, "that the conduct of successful programs of control and alleviation of poliomyelitis will be aided materially by the presence in health departments of well trained health officers and sanitary engineers"

### Veteran Patients to Share in Community Activities

Patients in Veterans Administration hospitals will be able to take active part in the life of the communities where their hospitals are located The Special Services Division of the agency said the plan has been adopted to help restore the confidence of sick patients through normal association with the civilian population The plan will bring to the hospitals recreational and entertainment programs, informal visits, assistance in letter writing and shopping and other services Patients will take part in civic and social activities of the communities

### Navy Nurses Would Retain Wartime Ranks

Legislation is now before Congress which would permit navy nurses to retain permanently commission rank which Congress granted to them for the duration and six months The Navy Nurse Corps was credited on its thirty-eighth anniversary by Secretary of the Navy James Forrestal with "a substantial share of credit for the Navy's low death rate of casualties" Capt Nellie Jane DeWitt is superintendent of the corps, which has 7,500 members

### Veterans Warned of Continuing Danger of Syphilis

Dr Donald M Pillsbury, chief of the Veterans Administration medical section on dermatology and syphilis, advised the 400,000 men who contracted syphilis in the armed forces during the war to visit their own doctors or public clinics to make sure that they had been cured He described the disease as the "most serious long term medical problem" continuing from the war He estimated that between 80 and 90 per cent had been cured but warned of the danger of relapse without adequate treatment and periodic checkups

### Magicians Help Fund for Nurses Memorial

Some 500 members of the Society of American Magicians will help raise funds for the war memorial in Washington for Nurses of the Armed Forces The magicians will stage a performance in Constitution Hall on May 31 during their annual convention in Washington, and the proceeds will go toward the nurses' memorial Mrs Norman Kirk is heading the memorial campaign

### Hospital Supplies Endangered by Strikes

The railway strike, which was terminated after President Truman appealed to a joint session of Congress for strike control legislation, threatened fresh food supplies of District of Columbia hospitals whose patients require a high protein diet Other hospital supplies such as medicine, x-ray equipment and bandages were reported adequate for three weeks

### Congressional Approval of Mental Institute Expected

The Senate Education and Labor Committee has approved and forwarded to the Senate floor the bill advocating a new mental health research institute at Bethesda, Md A similar bill passed the house last March, increasing the amount available for building the institute from 4 5 to 10 million dollars

### Anti-Vice Legislation Made Permanent

President Truman has signed legislation making permanent the wartime regulations prohibiting prostitution in the vicinity of military and naval establishments

## Bureau of Information

Of the several thousand medical officers who have consulted the Bureau of Information for areas needing physicians, few are inclined to establish themselves in areas where there are inadequate hospital facilities or where the community may be financially unable to support a doctor Realizing that the needs of these areas must be carefully evaluated, the House of Delegates during its meeting in December 1945 suggested that each state medical society should be urged to establish an information service This state office should at all times be in a position to furnish information concerning areas in need of physicians and a complete picture of the medical facilities and the physical and economic aspects of any community within the state The Bureau of Information should also, by the establishment of a cooperative monthly reporting system with state societies, be kept informed of areas needing physicians and from time to time seek information, either directly or *through* state medical societies, from individual physicians concerning location, type of practice and other relative data

Dr Robert Anderson of Texas, chairman of the Advisory Council to the Bureau of Information, has already sent to each state office a copy of a directive that the Texas State Medical Association sent to the county societies urging the appointment of county committees to survey regarding the present medical and hospital situation in each county and requesting the opinion of the committee regarding the need of any additional physicians or hospitals The Texas Association brought out in its letter to the county societies that no other subject is more important to the preservation of the independent practice of medicine in the state The state association must know on a statewide basis what is needed to be certain that all the people of the state have adequate medical and hospital facilities and be able to support its contentions in that regard with accurate facts and figures, carefully and thoughtfully assembled by those qualified to advise in local areas throughout the state As soon as the Texas Association receives these county reports, Dr Anderson forwards a copy for the files of the Bureau of Information at the headquarters office of the American Medical Association If this procedure

is followed in each state we shall have at all times at the central office accurate data regarding the medical care situation in each state so that studies can be made for the country as a whole.

# Official Notes

## TELEVISION PROGRAMS

The Bureau of Health Education announces changes and additional titles in the experimental pioneer telecasts over television station WKBK, Chicago, which began April 2 and which are believed to be the first telecasts sponsored by organized medicine.

Owing to the power curtailment during the coal strike, television stations were shut down The following schedule supersedes any previously published announcements

June 20 Contagious disease precautions in the home.
Dr W W Bauer
July 4 No telecast
July 18 Methods for administering drugs
Dr Austin E. Smith
August 1 Strange medical fakes
Thomas G Hull Ph D
August 15 Anesthesia.
Telecaster to be announced.

The programs are being telecast on a sustaining basis, that is, the station will derive no revenue Credit will be given on the program to Chicago medical supply firms which lend apparatus for demonstration, but there will be no other advertising Scripts will be prepared in cooperation with each medical demonstrator and coordinated by the Bureau of Health Education. Dr W W Bauer will summarize the odd numbered programs and Dr William W Bolton the even numbered programs

# Medical Legislation

## STATE LEGISLATION

### Louisiana

*Bill Introduced*—H 264, relating to the taxing powers of municipalities throughout the state, proposes to authorize, among other things, the power to levy and collect a license tax on and regulate all professions and occupations conducted within the limits of a municipality

### Massachusetts

*Bill Introduced*—H 1898 proposes the creation of a board of registration of opticians and defines an optician as "a person engaged in the filling compounding or reproducing of prescriptions of physicians or optometrists for ophthalmic lenses, eyeglasses or other optical appliances prescribed for the correction of defective vision or ocular anomalies of the human eye, and the mounting and fitting of the same to frames or supporting materials, and the adjusting of such lenses, eyeglasses and appliances to the use of the wearer" Exempted from this proposal would be licensed physicians and optometrists

*Bill Passed*—H 1922 passed the house May 10 To amend the law relative to the regulation of hospitals, it proposes to authorize the department of public health to license persons desiring to establish or maintain a hospital, sanatorium, convalescent home or nursing home. A hospital or sanatorium is defined by the proposal to be an institution, however named, whether conducted for charity or for profit, which is advertised, announced or maintained for the express or implied purpose of caring for persons admitted thereto for purposes of diagnosis or medical or surgical treatment which is rendered within said institution, except an institution caring exclusively for cases of mental diseases and licensed by or under the general supervision of the department of mental health. A convalescent home or nursing home would be defined as an institution, however named, whether conducted for charity or profit, which is advertised, announced or maintained for the express or implied purpose of caring for three or more persons, not acutely ill, admitted thereto for the purpose of chronic or convalescent care

*Bills Enacted*—H 230 has become chapter 365 of the Laws of 1946 It amends the medical practice act by authorizing the board of medical examiners to grant certificates of registration, without examination, to such persons as shall furnish with their applications satisfactory proof that they have the qualifications required in Massachusetts to entitle them to be examined and have been licensed or registered on a written examination in another state whose standards, in the opinion of the board, are equivalent to those in Massachusetts The law also provides that no person shall be registered without an examination if he is a graduate of a medical school not approved by the approving authority H 1749 has become chapter 364 of the Laws of 1946 It provides that the College of Physicians and Surgeons, a Massachusetts corporation duly organized and established in 1880, be dissolved

### Missouri

*Bills Enacted*—H 830 was approved May 17, 1946 It authorizes county courts to promulgate such rules, regulations or ordinances as will tend to enhance the public health and prevent the entrance of infectious, contagious, communicable or dangerous diseases into such county H 912 was approved May 24, 1946 It authorizes the county court of any county to levy an annual tax for the purpose of operating or maintaining a public county hospital within the county

# Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St, Chicago 10 Secretary

American Academy of Tuberculosis Physicians, San Francisco, June 30 Dr Oscar S Levin, P O Box 7011, Denver 6, Colo Secretary

American Association for the Study of Goiter, Chicago June 20-23 Dr Thomas C Davison 478 Peachtree St N E, Atlanta 3, Ga, Secretary

American Association for the Surgery of Trauma San Antonio Texas, June 26-28 Dr Gordon M. Morrison 520 Commonwealth Ave., Boston Secretary

American Association of Genito Urinary Surgeons, Stockbridge, Mass. June 20-22 Dr Charles C Higgins 2020 E 93d St. Cleveland 6 Secretary

American College of Allergists, San Francisco June 28 30 Dr Fred W Wittich, 401 LaSalle Medical Bldg Minneapolis 2 Secretary

American College of Chest Physicians San Francisco, June 27 30 Mr Murray Kornfeld 500 N Dearborn St. Chicago 10 Executive Secretary

American College of Radiology, San Francisco June 29 Mr Mac F Cahal, 20 N Wacker Drive Chicago 6 Secretary

American Dermatological Association Hot Springs Va. June 10-14 Dr Harry R. Foerster 208 E. Wisconsin Ave. Milwaukee Secretary

American Medical Women s Association San Francisco June 29 30 Dr Beulah Cushman 25 E Washington St. Chicago, Secretary

American Neurological Association San Francisco June 26-28 Dr Henry Alsop Riley, 117 E 72d St New York 21 Secretary

American Ophthalmological Society San Francisco, June 26-28 Dr Walter S Atkinson 129 Clinton St, Watertown N Y Secretary

American Orthopedic Association Hot Springs Va June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2 Secretary

American Physiotherapy Association Black Mountain N C June 16-22 Miss Margaret A. O Neill 1790 Broadway, New York 19 Secretary

American Proctologic Society, San Francisco June 30. Dr Harry E. Bacon 2031 Locust St Philadelphia 3 Secretary

American Radium Society San Francisco June 28 29 Dr Edward H Skinner 1103 Grand Ave Kansas City 6 Mo. Secretary

American Society of Clinical Pathologists San Francisco June 27 30 Dr A S Giordano, 531 N Main St South Bend Ind Secretary

American Urological Association Cincinnati July 22 25 Dr Thomas D Moore 899 Madison Ave, Memphis 3 Tenn, Secretary

Association for the Study of Internal Secretions San Francisco June 28-29 Dr Henry H Turner, 1200 N Walker St., Oklahoma City, Secretary

Idaho State Medical Association Boise, June 17 20 Dr F B Jeppesen 105 N 8th St Boise, Secretary

Maine Medical Association Poland Spring June 23 25 Dr Frederick R. Carter, 142 High Street Portland 3, Secretary

Montana Medical Association of Great Falls July 18-20 Dr Raymond F Peterson 9 W Granite St. Butte Secretary

National Gastroenterological Association New York, June 19 21 Dr G Randolph Manning, 819 Broadway, New York 23 Secretary

National Tuberculosis Association Buffalo N Y June 11 13 Dr Charles J Hatfield 1790 Broadway, New York 19 Secretary

Society for Investigative Dermatology San Francisco June 30 Dr S William Becker, 55 E Washington St. Chicago 2 Secretary

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*—ED.)

*(Continued from page 469)*

United States Senate, Committee on Education and Labor

APRIL 23, 1946

HONORABLE JAMES E. MURRAY Presiding

PRESENT Senators Murray, Ellender and Donnell

### Statement of Dr John P Peters, Secretary, Committee of Physicians for Improvement of Medical Care

DR PETERS *In order to save the time of the senatorial* committee I should like to present for incorporation in the record of these hearings the official statement of the Committee of Physicians dealing with the bill S 1606, together with their statement about the previous bill, S 1050 The Committee of Physicians has consistently opposed the fee-for-service method of payment in public medical care programs because it engenders abuses, is not conducive to economy and does not promote cooperative effort. If this were allowed to become the chief or sole method of payment, existing groups and teaching hospitals would be threatened and the further formation of groups would be halted. The immediate and complete elimination of fee-for-service payment, on the other hand, would involve a revolution of the existing system of practice that might delay the development of the program The general principles on which this controversial matter is treated in title II have been wisely conceived

(*Senator Donnell brought out that Dr Peters is a full time salaried physician*)

SENATOR DONNELL *You* are appearing, *I understand*, on behalf of the Committee of Physicians for the Improvement of Medical Care DR PETERS Yes

SENATOR DONNELL How large a committee is that? DR. PETERS The committee itself is about fifty

SENATOR DONNELL Doctor, do you know of any organizations of physicians except the Physicians Forum and the committee for which you speak today who favor officially the enactment of S 1606 into law? DR PETERS Yes There are several small ones There is a group of physicians organized under the Independent Citizens Committee of the Arts, Sciences and Professions, and there are several other smaller groups One in Hollywood, that, by the way, is a branch of the Independent Citizens group There is a small one in St Louis, the committee of Physicians for the Study of Medical Care I cannot identify many of them I have a great many requests from them in correspondence continually for information from our committee.

SENATOR MURRAY Do you know of many individual physicians and surgeons who do not belong to any particular group who recognize the need of legislation? DR PETERS There is an enormous number of them, especially among the young men I would like to call attention to and put on the record the vote taken by the New York County Medical Society yesterday that shows at least there is a large minority favoring legislation The vote was 503 against the Wagner-Murray-Dingell bill for compulsory health insurance and 152 for it. That at least is not a negligible minority, and when you consider that, besides the younger men and a great many of the older men are afraid to express themselves, *you may enlarge that* minority considerably

SENATOR DONNELL As I figured hastily the vote that you refer to, 500 against and 152 for, it means that approximately 76 per cent of those voting in New York County Association were against the enactment of S 1606 Is that right? DR. PETERS I think it is significant when you ask whether there are individual physicians or groups of them that you have at the present time, after all the propaganda that has been brought about, practically 25 per cent in a medical association of that kind who can stand up and vote for the Murray-Wagner Dingell bill

SENATOR DONNELL In your statement No 15 Doctor that is the one that is filed here under that number, there appears on page 2 the statement "Compulsory insurance bills have been presented to the Congress of the United States and numerous state legislatures The popular demand for legislation of this nature is steadily increasing" Would you tell us, please, is there any state legislature in the United States to your knowledge that has thus far enacted any legislation providing for compulsory health insurance? DR PETERS Not unless they have done it very recently

SENATOR DONNELL Do you favor a revolution in the method of practice personally? DR. PETERS I think it must be changed if we are going to have the quality of care we require And I think the fact that medicine is more and more gravitating toward hospitals is one indication that we will have it

SENATOR DONNELL I asked you a little while ago, and I know you said you could not tell us, the aggregate number of associations which have affirmatively approved compulsory health insurance Would you say that in your judgment it would run as high as 10 000? DR. PETERS Well, what kind of organization?

SENATOR DONNELL I should have qualified that I meant any organizations of physicians or surgeons or both, would there be as many? I will put it this way Are there associations of physicians and surgeons in this country, including the Physicians Forum and your own committee, and any others, are there such organizations the aggregate of membership of which would in your opinion be as great as 10,000 who have expressed themselves by official action as favoring compulsory health insurance in this country? DR PETERS My opinion is that there would be that many

SENATOR DONNELL That there would be that many? DR PETERS In my opinion, and it is only an opinion, and therefore I do not know just how much it is worth I will say this *that at the end of these hearings I hope we will have a better* basis for opinion

SENATOR DONNELL The Physicians Forum, as I recall it and I may be in error in this, has 2,000 or 2,500 members somewhere in there, possibly even less than that Is that correct? DR. PETERS I do not know

SENATOR DONNELL Are you a member of that organization? DR. PETERS I am not a member of that organization

SENATOR DONNELL At any rate, the testimony of Dr Boas tells us the membership, whatever it may be SENATOR ELLENDER If you will permit me, there were a thousand in that

SENATOR DONNELL Senator Ellender calls my attention to the fact that there were only one thousand.

SENATOR ELLENDER Six hundred and some odd came out of New York and the rest are scattered throughout the country

SENATOR DONNELL I remember that very distinctly, and I thank you for mentioning that. Do you know of any other organization of physicians and surgeons that you can give us *the name of here this morning*, other than the Physicians Forum or the Committee of Physicians for the Improvement of Medical Care, which have taken any official action favorable to compulsory health insurance in this country? DR. PETERS Yes but they are very small

SENATOR DONNELL Could you give us their names? DR PETERS The Committee of House Physicians for the Study of House Care

SENATOR DONNELL That is the one that you are here appearing for? DR. PETERS House Physicians

SENATOR DONNELL How large an organization is that? DR. PETERS I do not know at the present time It is a very small one.

SENATOR DONNELL A thousand? DR PETERS Oh, no

SENATOR DONNELL A hundred? DR. PETERS I do not think so

SENATOR DONNELL Less than a hundred, you think, that is the Committee of House Physicians What is the next one? By the way, where is that committee located? DR. PETERS In St Louis

SENATOR DONNELL *Who is the head of that?* DR. PETERS Richard M Peters

SENATOR DONNELL Is he related to you? DR. PETERS Yes

SENATOR DONNELL What relationship? DR PETERS My son.

SENATOR DONNELL And when was it organized? DR PETERS It is less than a year ago

SENATOR DONNELL Was it organized to advocate the passage of legislation of this kind? DR PETERS It was organized as a study group first You asked for all the organizations I know, and it is a small group of house physicians that is expanding, and I do not think it is of great significance except to show the spirit among the younger men On the other hand, there are not organizations of that age group They are not possible, any more than there are among the veterans groups and the other younger men

SENATOR DONNELL And that is that organization We have then the Physicians Forum and this committee for which you appear the Forum constituted of a thousand members, as Senator Ellender points out, 600 of whom are in New York State and your organization that you appear for here this morning, with about 50 members, or I should say 1,500 who are in a sense associates, but the 50 is the active committee, is that right? DR PETERS Yes

SENATOR DONNELL So we have those two organizations We will count that as 1,500 for your committee, so as to be perfectly fair on it Then the House Physicians have a maximum of 100 What other organizations of physicians or surgeons in this country have passed official action favorable to compulsory health insurance? DR PETERS It is not really an association of physicians and surgeons, there is a council, medical council, and a large medical group or division in the Independent Citizens Committee which has favored it

SENATOR DONNELL Where? DR. PETERS In the Arts and Sciences branch of the Independent Citizens Committee of the Arts, Sciences and Professions

SENATOR DONNELL That is the one of which Mr Ickes is head? DR. PETERS Yes

SENATOR DONNELL I remember Frank Sinatra is in that He is not a physician DR. PETERS No, I say within that there is a division of physicians

SENATOR DONNELL Yes I did not mean any reflection on Mr Sinatra in the slightest. Undoubtedly a man of great capacity in his profession but he is not a physician is what I am getting at DR PETERS But there is a large group of physicians in their organized division.

SENATOR DONNELL How many are there? DR PETERS You would have to inquire from the offices there.

SENATOR DONNELL My recollection, Doctor, subject of course to correction by either of these other gentlemen, is that the testimony of Dr Butler or Mr Ickes, one or the other, is about 200 one of them had seen them coming together in a meeting Do you know whether there is a larger number of doctors than that? DR. PETERS There are more than that.

SENATOR DONNELL Are there 500? DR. PETERS I would have to get the figures from New York.

SENATOR DONNELL Do you think there are as many as 500 in that committee of doctors, I should say? DR. PETERS I should suspect that.

SENATOR DONNELL You think that is a fair figure, an estimate of 500? DR. PETERS Yes

SENATOR DONNELL That is what we call the organization represented here by Mr Ickes the other day What other organization in this country that you know of of physicians or surgeons has given official sanction to compulsory health insurance? DR. PETERS I do not know of any

SENATOR DONNELL You do not know of any others? Dr Peters taking your figure, first the figure of 1 000 for the Physicians Forum, taking your own organization at 1 500 which I think is perfectly liberal, because the active, as I understand it more or less active, membership is much smaller, that is right, is it not? DR. PETERS It has to be in any organization You cannot make 1,500 write a statement.

SENATOR DONNELL The actual operating membership of your organization is only about 50, but I want to ask you what the other 1 450 do which will come to that as an organization. But taking your organization as 1 500 the Forum so many, the House of Physicians of which your son is the head, and the medical components that enter into this organization of which Mr Ickes is the head, 500, we get a total of 3,100 That of course counts yours at 1,500 But let me ask you about the 1,450 in your organization who are not included in this committee of 50 What do they do in connection with the affairs of your organization? DR. PETERS They subscribe to our principles That is not the end of our mailing list. I am talking about the physicians in there They subscribe to our principles and have asked for and receive the letters

SENATOR DONNELL Are those 1,500 physicians? DR PETERS I cannot say whether somewhere between 1,400 and 1 500 at the present time We are at a loss in two respects One, we are getting new members, and the other is that servicemen are turning up that we thought were lost, and we cannot absolutely be sure what our list of servicemen is, but it is between 1,400 and 1,500

SENATOR DONNELL And do those 1,400 to 1,500 men come together in annual convention? DR. PETERS No

SENATOR DONNELL Your convention consists of about 50, is that right, sir? DR. PETERS Yes

SENATOR DONNELL And that is the committee, generally speaking, the names of whom are on this letterhead? DR PETERS That is the committee

SENATOR DONNELL Doctor, do these 1,400 or 1,500 people participate in committee memberships of your organization, or do they just subscribe and get the benefit of information? DR PETERS There is not any subscription

SENATOR DONNELL How do they join? DR PETERS They ask to join and state that they would support us and are interested in furthering our work

SENATOR DONNELL Have you taken any poll of those people to see whether or not they approve statements 16, 15 and the other statement which has been filed here? DR. PETERS Except that we send them out and ask for their criticism

SENATOR DONNELL Have you taken a poll of them to see whether they approve it? DR. PETERS No

**Statement of Dr Carl O Flagstad, Chairman, Legislative Committee, American Dental Association, Accompanied by Dr Allen O Gruebbel, Secretary of the Council on Dental Health, American Dental Association, Dr Harold Hillenbrand, Editor of the Journal of The American Dental Association, and Mr George H Fox, General Counsel of the American Dental Association and Secretary of the Committee on Legislation of the American Dental Association**

DR FLAGSTAD I am Dr Carl O Flagstad of Minneapolis, chairman of the Committee on Legislation of the American Dental Association. I have been engaged in private dental practice for thirty-five years and am a professor and chairman of the Division of Prosthetic Dentistry at the University of Minnesota The American Dental Association, whose headquarters are in Chicago, has a membership of 56 000 dentists This represents more than two thirds of the 75,000 dentists registered in the United States The Committee on Legislation, of which I am chairman, has its members elected by the House of Delegates and we serve without personal remuneration. This democratic pattern of organization with extensive membership in every state of the Union unquestionably gives the American Dental Association the right to voice the opinion of the great majority of dentists in the United States

In legislation of the type of S 1606 there has been a tendency to include dental practice and treatment under the categorical head of 'medical service." It is true that close cooperation between dental and medical practitioners exists in routine and special practice, but it does not follow that the needs and program of the two professions are identical There are some specific facts about dental disease and dental practice which must be taken into consideration before an intelligent and long-range program can be planned

1 Dentistry must include in its program provisions for treating a disease that is almost universal It is almost axiomatic that 95 per cent of our population suffer from dental diseases at some point or other in life and that an extremely high percentage need annual dental care.

2 Because of the extremely high prevalence of untreated dental defects, it is impossible to apply the insurance principle

3 The real causes of the chief dental diseases, dental caries and periodontoclasia, are not entirely known, so it is impossible to prevent them in the true sense of the word by attacking the cause. The best methods of control that are known to date are early and regular dental treatment

4 If such early dental treatment is not sought, the ensuing dental neglect becomes much more costly than timely dental treatment.

5 If early and regular dental treatment can be given to children it will assure a definite lowering of serious dental defects later in life and the production of a generation of adults comparatively free from the accumulated defects caused by early neglect.

6 The cost of providing such essential dental service for children is according to present estimates, less than one-half the cost of providing essential dental service for adults

7 Since many people do not seek dental care until great damage has occurred, it is absolutely essential to maintain a continuing program of dental health education to inform all of the importance of dental health and to motivate them to secure dental care.

8 Because of the limited number of dentists, it is impossible to carry out any program that promises complete dental care to both children and adults

9 In the face of this dental personnel problem, it is obvious that the most efficient use should be made of the present number of dentists It is the opinion of competent dental authorities that in public dental health programs the most efficient use of available dental services is to devote all needed attention to dental disease in children and provide additionally as much service as possible for adults

10 One of the reasons for dental neglect besides those already mentioned is that the prevention and control of dental diseases have never been given continuing financial support by either public or private agencies

All these factors are brought to your attention to demonstrate that legislation, even if it may be well designed to meet medical problems and conditions, is not necessarily as well adapted to meet dental problems which are quite different in nature The attitude of the American Dental Association toward the current bill, S 1606, is based largely on the fact that it does not take into sufficient account the unique complex problem of providing adequate dental care

The American Dental Association is opposed to the enactment of S 1606 because

1 The American Dental Association believes that compulsory health insurance for a majority of the population should not be established in this country without preliminary scientific experimentation involving less extensive groups of the population

2 The American Dental Association believes that it is unsound administration to disperse responsibility for health among the three agencies mentioned by the bill the U S Public Health Service, the Children's Bureau of the Department of Labor and the Social Security Board

3 The American Dental Association believes that a compulsory health insurance system basically similar to the systems in effect in foreign countries should not be established on a national basis until there is incontrovertible evidence that the American pattern is an improvement and that the errors of the foreign systems will not be perpetuated in the American program

4 The American Dental Association believes that a program the size of the one proposed should not be established without directly facing the problem of expense. This expense should be clearly enunciated in terms of both cost to the individual and cost to the nation

5 The American Dental Association believes that the grants-in-aid system has been effective in meeting certain health needs under the Social Security Act The American Dental Association believes that this system should be enlarged to meet all health needs and that there is no necessity for enacting a national compulsory prepayment plan

6 The American Dental Association believes that the right of a state to determine the methods of meeting its health needs should not be taken away

7 The American Dental Association believes that a program as comprehensive as the one proposed should not be designed without seeking the official cooperation of all agencies and professions involved.

S 1606 proposes to make emergency dental care available to larger groups of the population This proposal involves a false concept in public dental health practice because, if only emergency dental treatment is given the problem of dental disease will be as great ten or fifty years from now as it is today In contrast to this uneconomic and unscientific approach, the dental profession of this country supports the view that the problem can be solved through a coordinated program of disease prevention and dental care for children. The reasons behind this belief are realistic and practical If we cannot prevent the occurrence of dental disease, we must concentrate our efforts on dental research If we cannot provide services to all persons (which is obviously the case) the benefits of the plan must be limited to the age groups in which dental disease begins

S 1606 provides that dental benefits shall have such restricted content as the Surgeon General may determine "provided, that on and after July 1, 1947, the restricted content of general dental or special dental benefit shall include at least (1) examination (including x-ray survey) and diagnosis, (2) prophylaxis (3) extraction of teeth which are considered by the dentist and an attending physician to be or likely to be injurious to the general health of the individual, and (4) treatment of acute diseases of the teeth, their supporting structures and adjacent parts, including fractures of the teeth or jaws'

Contrast this limited, emergency type of program in S 1606 with that proposed by the Council on Dental Health for the 12-18 year age group

1 Examination using posterior bitewing roentgenograms at least once a year and other roentgenograms as may be needed.

2 Prophylaxis at intervals depending on patient need and susceptibility

3 Restoration of carious teeth with silver amalgam, silicate cement and gold

4 Pulp treatments including pulp capping, pulpectomy of vital exposed pulps and treatment of putrescent teeth in young patients

5 Restoration and appliances including prosthetic restorations to replace missing teeth and appliances to maintain space so as to prevent malocclusion

6 Treatment of mouth infection

7 Extraction of infected teeth, supernumerary teeth and impacted teeth, using local or general anesthesia

8 Surgery as may be necessary to maintain health including if necessary, root resection of infected permanent teeth

9 Health education of the patient

Authorities in the field of dentistry have agreed after a careful study that the services listed would be considered minimum services for the protection and maintenance of dental health Any amount less than that would be inconsistent with modern dental practice.

The vast difference in dental benefits of the two proposals emphasizes again the need for technical advice in planning health legislation Such advice obviously was not sought or taken into account in drafting the dental provisions of S 1606

There are other valid reasons for seriously questioning the dental benefits in the proposed legislation S 1606 provides, for example, that every insured person will be entitled to receive 'treatment of acute diseases of the teeth ' A careful reading of the bill does not disclose what is meant by the term 'acute diseases of the teeth" If dental decay is an "acute disease" of the teeth, and many authorities believe that it should be so classified then the bill promises that all types of dental procedures for treating diseased teeth would be included in the plan and only prosthetic dentistry would be excluded Under this provision the American people would not know the amount of dental health service to which they would be entitled Such vague and indefinite wordings constitute a basic objection to the proposal

The American Dental Association also wishes to raise another objection to the dental provisions of S 1606 Experience in foreign countries reveals that effective dental health programs have not been developed under the compulsory health insurance system

The following short quotations are taken from the report of an official committee of Parliament appointed to study the British dental program "Roughly, two thirds of the insured population that is between 13 and 14 million people are entitled to dental benefit, but only 800,000 (less than 7 per cent) of these claim it on an average each year ' It is the contention of the American Dental Association that there is something intrinsically wrong with a program which compels 13 or 14 million people to contribute for a service which only 800 000 receive.

Another quotation from the committee's report "The state of the dental health of our population is bad and its effect on their general health is bad" The American Dental Association does not believe that any program which must make such an admission after several decades of existence gives any indication that it will aid in rearing a generation of adults less afflicted with dental disease.

Perhaps it might be impressive to add the general opinion expressed by our veterans of the Dental Corps stationed in England during the war Their opinion is 'The Dental health of the people of England is very poor and so is their dentistry

The American Dental Association would be reluctant to end its testimony with mere opposition to the proposal that is now before this committee. So intense have been the interest and activity of the American Dental Association in this great problem of better dental health for our people that it has sponsored two measures which are also pending before this very committee S 190 and S 1099 These bills provide, as has been stated, federal grants-in-aid for intensified dental research and experimental programs in all phases of dental health education and care.

### Statement of Dr Maurice Kaufman, Accompanied By Seymour J Schoenfeld, Secretary, Dentists Committee for the Passage of the Wagner-Murray-Dingell Bill

DR KAUFMAN I am Dr Maurice Kaufman I represent the Dentists Committee for the Passage of the Wagner-Murray-Lingell bill

The Dentists Committee for the Passage of the Wagner-Murray-Dingell bill is a very new organization. It was formed out of necessity Owing to the stifling of democratic procedure within the American Dental Association, there was no other way to give public notice to proponents of the bill This new committee is composed exclusively of members of the American Dental Association and is supported entirely by contributions of dentists The chairman of the committee is Dr John Oppie McCall, who is also director of the Murray and Leonie Guggenheim Dental Clinic of New York City Among our sponsors are men who have held the most honored and trusted positions in the American Dental Association and its components We favor the Wagner-Murray-Dingell bill, S 1606, because it provides a much needed and wide coverage of essential health care to the American people It links dental care with health care, which in our opinion is its proper orientation The bill is not socialized medicine, retains free choice and protects the dentist with assurance of adequate compensation It provides incentive for dentists and protects the public against threat of deterioration of service The Dentist Committee for the Passage of the Wagner-Murray-Dingell bill fully supports this proposed legislation

---

APRIL 24, 1946

HONORABLE CLAUDE PEPPER Presiding

PRESENT Senators Murray, Pepper, Smith and Donnell

### Statement of Katharine J Densford, R N, President, American Nurses' Association

MISS DENSFORD My name is Katharine J Densford, director of the School of Nursing in the University of Minnesota and President of the American Nurses' Association The opinions which I am about to express do not necessarily reflect my personal views but are the opinions of the association as made known through boards of directors and other representatives of state nurses' associations The house of delegates of the American Nurses' Association on June 7 1944 adopted a recommendation which favors "the expansion of health insurance plans and providing for nursing service including nursing care in the home. It is believed that, in addition to voluntary effort, governmental assistance is necessary for attaining adequate distribution of health services" In order to secure definite action regarding specific legislation on the subject of a national health program now pending before Congress, it would be necessary to present the matter to the American Nurses' Association house of delegates which will convene Sept 23, 1946 The American Nurses' Association has made continuous study of all proposed legislation dealing with such matters and has through its official publication, the *American Journal of Nursing*, and otherwise, kept its constituent associations and members abreast of developments No program of health care or of health insurance, whether voluntary or compulsory, can be considered complete unless the program includes necessary nursing care Any such program should contain provisions adequate to insure that the nursing services rendered will be of high professional quality If a federal health insurance program is adopted, the administrator, namely the Surgeon General of the United States Public Health Service, should of course, be a duly licensed physician, and the program relating to nursing service and nursing education should be administered through federal and state councils composed predominantly of qualified graduate registered professional nurses

Attached hereto are statements which are being filed by the National League of Nursing Education and the National Organization for Public Health Nursing

SENATOR SMITH Just one question Miss Densford, does this imply that you are supporting the compulsory health insurance plan compulsory contributions? MISS DENSFORD Mr Chairman, before Senator Smith was able to be here, the statement as given here indicated that the House of Delegates on page 1 of my testimony, the house of delegates of the American Nurses Association on June 7, 1944 adopted a recommendation which favors "the expansion of health insurance plans and providing for nursing service, including nursing care in the home It is believed that, in addition to voluntary effort, governmental assistance is necessary for attaining adequate distribution of health services" That is the only action, Senator, that has been taken by the American Nurses' Association, with no specific action taken regarding any specific bill

SENATOR SMITH I see. They are not necessarily endorsing this bill but just the general principle of governmental assistance to the health program? MISS DENSFORD The American Nurses' Association has not taken action regarding S 1606 The only action it has taken is quoted here

SENATOR DONNELL It has taken no action affirmatively in favor of compulsory health insurance? MISS DENSFORD Neither affirmatively nor negatively There has been no action

### Statement of Mrs Beatrice F Jacobs, Chairman of the Health and Education Committee, League of Women Shoppers, Inc

MRS JACOBS It is my privilege to represent the League of Women Shoppers, a national consumers' organization. The purposes and activities of our organization have always been directed toward the improvement and protection of the American standard of living Since good health is vital and essential to that standard, we support Senate bill 1606, which will do much to promote the physical and mental well-being of our population and so insure a higher standard of living for all Americans

(*Senator Donnell brought out that the league has nine branches and that Mrs Jacobs had not seen any resolutions passed by them*)

### Statement of Mrs Sophie Anzel

MRS ANZEL I am a member of the League of Women Shoppers, and so far as I know the national executive board determines what is to be supported, and anything that the national executive board decides on is binding on the local leagues, regardless of whether they have originally passed a local resolution or not. They may have individually passed on them locally, but the national board speaks for the league always as a whole throughout

---

APRIL 25, 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Donnell and Thomas of Utah

SENATOR MURRAY I would like to insert in the record at this point the report to the Education and Labor Committee on the pending bill from the Secretary of Agriculture, Hon Clinton P Anderson

(*Secretary Anderson wrote in behalf of the bill He said in part*)

SECRETARY ANDERSON The states could pay insurance contributions in behalf of their needy citizens Such an arrangement, which is permitted in the bill, would avoid the development of a dual system of medical care in which the system worked out for the needy might well be at a generally lower level of quality than for the rest of the population

With respect to inclusion of farmers and farm workers in this program, the administrative technics in collecting contributions from this group present no insurmountable difficulties The Department of Agriculture, with the aid and cooperation of the Social Security Board of the Federal Security Agency, has been working on these problems It is my understanding that what appears to be workable methods are available in assessing incomes of farmers and collecting their contributions for the insurance program

(*Secretary Anderson emphasized the shortage of medical facilities and personnel in rural areas*)

### Statement of Charles F Brannan, Assistant Secretary of Agriculture

MR. BRANNAN The 57 million Americans who live in rural areas have a tremendous stake in any program that serves the national interest. Forty-three per cent of the nation's population live in communities of less than 2,500 persons Only about 400 of our 3,070 counties are really urban, and it surprises many to learn that such an urban state as New York has a greater farm population than the five rural states of North and South Dakota, Nebraska, Wyoming and Montana combined Indeed, rural America is the continuing source of

city populations, the urban birth rate is far lower than that of farm families, and it is only the farm-to-city migration that maintains the size and growth of our cities Medical experts tell us that illness is most prevalent in the early and the waning years of life It is, thus significant in any evaluation of the rural benefits of a national health program to remember that more than half of all the nation's children under 15 years of age, and a higher proportion of persons over 65, live in rural areas

In 1940 the Farm Security Administration made a survey of low income farm families and discovered an average of more than three significant physical defects for each man, woman and child examined. Anemia, malnutrition defective vision, dental caries, hernias, childbirth injuries—such was the repeated pattern Only four out of every hundred were free of significant defects

Perhaps the most sensitive indicator of health standards is the infant mortality rate Rural areas have a rate one-fourth higher than that in large cities and in addition have a maternal mortality rate that is one-third higher Over 3,000 infants could have been saved in 1943 in Texas alone if this state had the infant death rate of urban Connecticut. That 9 more rural than urban infants die out of every thousand born alive is a reflection in part of the fact that less than half the births in rural areas occur in hospitals and many are unattended by a doctor or nurse.

The voluntary health agencies that are helpful in the cities too seldom penetrate to the farmer, and rural sections and whole rural states cannot provide the kind of public welfare services that the industrial centers are able to establish The Bureau of Human Nutrition and Home Economics has shown that less than 10 per cent of any farm income group receives free medical care Here again the less wealthy rural states are at a disadvantage from the current 50-50 matching grant formula of federal assistance

The rural needy are further handicapped by existing state statutory maxima on cash benefits and by the present legal restrictions on the use of federal funds for direct payment for medical services While in 1942 the most urban state was spending $2 92 per capita for general assistance, the most rural one could afford only $0 25

Despite the fact that 43 per cent of the population is rural, only 18 per cent of all professional medical and related personnel are in the farm and village localities Our most rural counties had, before the war, an average of 1 doctor to every 1,700 persons while the big city ratio was 1 to 650 Although it is generally agreed that the minimum proportion should be 1 to 1 000 many farm counties have been struggling with ratios of 1 to 3,000 to 1 to 5 000 or even worse, indeed, the war left eighty-one counties in the nation without any doctor at all

The lowest figures suggested for the average cost of good family medical care, about $100 a year, are beyond the reach of some 80 per cent of all farm families So lack of purchasing power results in continued deficiencies of medical care, which in turn is the forerunner of poor health Then inevitably, illness and poor health affect earning capacity and work efficiency thereby further lowering income and the ability to purchase needed care Thus the vicious circle completes itself The circle must be broken at some point And the effective means is prepayment scaled to income—health insurance for all In this way the catastrophic consequences of unexpected illness can be avoided

The fundamental solution of the problem of payment for medical services is the one proposed in title II of this bill—that of a single national plan of compulsory health insurance supplemented with general tax funds Only a nationwide plan has the actuarial soundness to provide equally comprehensive medical care to those in the cities and those in the country to those in rural as well as in urban states to the economically insecure as well as to the prosperous Only such a national plan can offer complete medical care at rates within the reach of all The limitations of the voluntary approach are overcome while exploiting to the full the principle of spreading of risks and sharing of costs

### Statement of Dr Frederick D Mott, Chief Medical Officer, Farm Security Administration, Department of Agriculture

DR. MOTT The Farm Security borrower families, who are typically in a quite low income group, have been helped to receive needed care through these programs They have had through the programs, I think, a degree of security which it is hard to overemphasize even though the services have had to be limited Of course from a hardboiled point of view this program has helped to secure government loans, something we sometimes forget. There have been other good sides of it, I mean a great deal of health experience with health insurance has been gained by farm people, some farm leaders, and by local professional medical people in over a third of the counties in the United States On the other side, though, I think our outstanding experience has been that not enough families join these plans, even when they have been organized and are right there ready to join In fact, even though there are supervisory possibilities in the Farm Security program, that is, we have county supervisors and a program of education farm and home management, and in spite of educational efforts of the county staff and the assistance of loans and so on, not nearly enough farmers tend to join the plans There were less than one third of the borrowers eligible for the plans who joined

There are other disturbing features I will be brief One is the tremendous turnover A study made by people at Ohio State University of several plans in Ohio over a period of a little over three years showed that of the families who started in the program only 24 per cent were still members at the end of a three year period In fact, of all of the families who were members at one time or another during the three years only 8 per cent had been members throughout the whole period from beginning to the end That type of turnover, of course tends to leave poor risks in the plan and that same study revealed something very interesting there They showed that the families who stayed in in continuous membership required much more service than the other families The families who stayed in throughout the three years received over 3 000 office and home calls a year per thousand people. The figure for those who were in for one year periods was 2,000, about 2,027 almost 3,000 and 2,000 showing the effect of leaving poor risks in a voluntary plan, thus keeping costs high and services low

There have been other points, such as that when people pay just from their own resources on the basis of their ability to pay benefits have to be quite rigidly limited and it has not been possible to have comprehensive plans The effect of the plans too has not been to do anything fundamental about improving local resources They simply do not mobilize the purchasing power that would bring physicians into an area or enable a hospital to be maintained better

Those I think, are some of the major points in our experience. The plans have done some good but these inherent weaknesses have certainly been perplexing and we see no other answer except a more or less universal program for the whole population, both rural and urban

SENATOR MURRAY Some complaints have been made against the system proposed under this legislation as limiting the free choice of doctors Have you any comment on that, Dr Mott? DR. MOTT Of course one point that I might bring out right at the start is that there is extremely little choice and very often no choice at all for rural people in many areas First there is the economic side. When you cannot afford medical care, it happens in the case of many of these farmers that they simply do not get the care, and that could hardly be called a choice of physicians

SENATOR MURRAY The doctors often live considerable distances from the homes of these rural people DR MOTT The distance factor comes into that raising the cost I mean we still tend to keep to what was a horse and buggy institution of a dollar a mile one way and making costs prohibitive.

SENATOR MURRAY Sometimes a single call will cost $25 in some rural areas where you have to use an automobile and go a considerable distance DR. MOTT There is another point there on this question of choice if I may say so, and that is we have of course many counties in which there is not even a single physician Towards the end of the war there were some eighty one counties with no physicians at all There were another twenty counties, which had populations of over 10,000 people, with only one doctor There is hardly much choice there. There were another fifty counties with only one doctor with populations from 5 000 to 10 000 people. There were another fifty one with only one doctor, with populations of from 3 000 to 5,000 people. Of course, I believe that under this bill freedom of choice will be increased and enhanced In the first place the economic barriers are removed, and you can go to your physician.

SENATOR MURRAY Your department has had much experience in medical care plans sponsored by state medical societies Will you give us your experience with those kinds of plans?

DR MOTT We have had some experience, sir, along those lines Of course in certain states it has been most excellent for us to work out contractual arrangements, with medical society plans In some states it has been the only way in which we could bring any protection to our borrowers, because of state enabling, or we sometimes think of them as disabling acts, making it possible for a medical care system at this time to be the only one dominated by the organized profession We have had arrangements with medical societies' plans in several states, in New Jersey, in western New York, in North Carolina, in Oregon and in California

Two or three points about our experience I think might be worth bringing out. To me one of the discouraging things about the development of plans sponsored by the organized profession is that the very group which should believe most in the high quality of service and should put every ounce of effort behind the development of programs that would produce services of high quality are doing the least They are doing the least in this way, that the plans being sponsored are restricted in the main to care received in hospitals Usually it is the end result of illness or disability of some kind or another that puts you in the hospital, not always by any means, but when one thinks of what medical service of real quality would be, preventive services, early care, diagnostic services of various kind laboratory, x-rays, consultation all the patients usually go through before being in the hospital, or frequently so, these plans are wofully weak in that respect

That brings me more closely to our own experience Virtually the only medical society plans in the United States today offering any kind of general medical service, including home and office care, are the special arrangements which we have induced the medical society plans to put into effect, often for our borrowers or for a low income group of farmers It has taken constant struggle and effort year after year and often every quarter of the year for us to keep these plans going The whole tendency of the organization is to drop plans of that type. I might cite the California Physicians Service, for example I believe there has been some testimony with respect to that organization here. We have had a plan or an agreement with the California Physicians Service for a period of something like four years There is a special contract for all farm families who wish to join, or join in groups, who have net incomes of under $2,000 The plan has been confined almost entirely to our borrowers however The rates were forced up at one stage during the last three or four years to the point where the families are now paying around $60 a year for a family of three or more for a somewhat limited service but one that does include home and office care, some hospitalization and surgical care, except for chronic conditions That is the only plan administered by the California Physicians Service for families which provides a general medical service, including home and office care.

They now are threatening, and this has gone on for some months to close out each of our local health associations at the end of the fiscal year, offering in return higher rates for less service in a contract that is almost precisely like this so-called commercial contract It is not a happy prospect for our families They will not pay more for less service, dropping home and office care, and I suppose the more or less monopoly situation is such that no other plan will be open to them if they are dropped from that program

*(In his questions Senator Donnell took Mr Brannan over the rights of the Surgeon General and other administrative agencies in the bill)*

*(By his questions Senator Donnell elucidated the opinion that the bill would require three billion three hundred million dollars a year)*

SENATOR DONNELL Doctor, there would be the necessity of having under the jurisdiction of the Surgeon General, and finally back under the direction and supervision of the federal security administrator, such employees in every city of any size in the country, would there not? That is, in the administration of this? DR. MOTT Any city of any size, I would think you are right

SENATOR DONNELL Wouldn't it be necessary almost to have somebody in every town in the country as a representative to make quick decisions as to matters arising under the compulsory insurance act? DR. MOTT I would not think so, sir Knowing rural counties fairly well, and I have not given a great deal of thought to this, but I might say, sir, that I would think that an employee in a single county would often be excessive If we get into the kind of a district organization of health services which most of us hope for, with coordination of public health and medical care services in districts, the rural district will often comprise, let us say, three counties I am not sure how much detail would be involved in this bill I would think in terms of a full time employee at such a level, that would be more logical perhaps once the system was under way

SENATOR DONNELL On page 14 of your statement you say "In a voluntary program there is little incentive for preventive medical practice and little inducement to improve the quality of medical care" Do you not think that, as a matter of fact, under the voluntary program that we have had of the administration of medicine in this country, for the entire history of the country, that there has been some incentive for doctors to advance and to progress and that there has been advancement in the country? MR BRANNAN Senator, I am a profound admirer of the medical profession, and I do think they have done wonderful things with limited facilities, but I think it is time this nation ceased to impose on them We should make adequate facilities to do the type of a job they are doing and not ask them to take on unlimited numbers of charity patients or patients from whom they cannot reasonably expect to get adequate remuneration

AFTER RECESS

### Statement of James G Patton, President, National Farmers Union

MR PATTON For many years the National Farmers Union and I personally have contended for the use of the full power of the national government to bring to rural America the facilities and lacks that are so deplorable as to shame the great nation of which we are a part I appreciate doubly, therefore, the opportunity to appear before the committee today to give unqualifiedly the endorsement of my organization and myself to the national health bill, S 1606

*(Mr Patton covered much the same statistics as had been covered by previous testimony)*

These vast needs are not being met now In the 1,000 most rural and isolated counties before the war there was only one doctor to 1 750 persons, whereas in cities there was a doctor for each 650 persons During the war the situation became even more alarming In hundreds of rural counties the war caused the ratios to rise to one physician to 3,000 to 5,000 or even in extreme cases to 10,000 persons The same thing is true of dentists and of nurses Before the war there was one dentist for 1,400 persons in the cities and but one to 4,200 in the country As to nurses, the rural state of Mississippi in 1940 had but 62 active nurses per hundred thousand persons, whereas Massachusetts, largely industrialized, had 403

The key to this situation lies in the universal compulsory prepayment plan embodied in this bill Only on such a base will it be possible to erect the structure that is needed in rural areas The most altruistic of doctors must, after all, earn a living, and a hospital cannot operate without an economic base That base does not exist in rural areas and will not exist unless a prepayment plan of the kind proposed here is adopted As Dr Henry B Richardson, chairman of the Physicians' Committee on Research, an eminent physician himself has said "You can hardly expect a doctor to settle in a small community if it is contrary to his professional growth, or if it is contrary to the interests of his family and the education of his children" Voluntary plans will not do the job This is not to condemn their efforts Indeed, the National Farmers Union not long ago inaugurated its own voluntary prepayment plan, the Triangle Health Insurance Plan, and naturally I would not have urged the adoption of that plan if I held any bias against voluntary programs But at their best such plans cannot give complete coverage Those most in need of insurance against disease are the very people who fail to benefit from voluntary programs Both membership and services of such plans are restricted, in most instances necessarily, in order to protect the structure of the program itself Then too the costs of such plans are always much higher than a universal compulsory prepayment plan, if for no other reason than that they cannot achieve the coverage that a national program can achieve. Moreover, many of those who are attracted to voluntary programs are those who expect to require medical treatment or hospital care, and hence costs are inevitably increased for all participants There is no graduation of costs in voluntary plans on the basis of the ability of those taking part to pay, whereas under the proposed national program charges are based on ability to pay Finally, many of the existing voluntary programs fail to give any representation in management to the participants, those who after all are the ones whose needs are supposed to be met. I do not believe that the adoption of the bill would mean that exist-

ing voluntary programs would be damaged, since S 1606 provides for the utilization wherever possible of existing programs

In conclusion I wish to appeal to the committee to proceed as rapidly as possible to the approval of the bill and to Congress to enact it speedily It has been said that the bill is 'state socialism," which of course is nonsense. Every advance in the use of governmental power for the people has been greeted with the same phrase Democracy does not mean impotence or lethargy To me it means the right of the people to use their government to their own ends "Government of the people, by the people and for the people" would be a futile array of words if "for the people" was omitted I think that this bill is an illustration of government not only "by the people" but "for the people" and as such illustrates the workings of democracy at its best

It has been said that the bill may restrict the freedom of choice of patients in choosing their doctors, or of doctors in choosing whether to stay in or out of the program These objections seem to me to be quibbling The bill has been carefully drawn to protect these rights within any reasonable interpretation Moreover I ask, what choice does a farmer have now in the hundreds of counties where there is no doctor at all? His only choice is made for him He must die or get well without benefit of choice.

(*Senator Donnell in his questions covered the total cost of the measure and its method of administration*)

SENATOR DONNELL At any rate your organization never has passed a resolution endorsing S 1606, that is correct, is it not? MR PATTON Yes, that is correct And I doubt that we will, until it is, that is, until it becomes the law We know what goes on up in this place and how many different times it can be twisted before it gets through, so we are not going to endorse something until we know what we are buying

SENATOR DONNELL I understand, however, if I read the language correctly, you do endorse it here today MR PATTON As it is now constituted We will also refuse to endorse it the minute it gets some bad amendments in it which we do not agree with

SENATOR MURRAY And you feel that it is only through a *universal prepayment plan of some kind* that adequate health care can be brought to the people of the United States? MR. PATTON I do

SENATOR MURRAY You do not believe that it is possible to accomplish that by voluntary systems? MR PATTON You know, Senator, out in the West, you are from the West, we tried hail insurance First the Farmers Union and some of the cooperatives tried hail insurance and as long as we had it so that to put it on their tax roll, you see the cost was away down but when we got to it so that it was a voluntary business the man who lived in a hail area always insured, but the fellow who did not would try and loop in and loop out, with the result that our cost began to go up very drastically, and the whole proposition of insurance is predicated on getting a broad enough risk to get an actuarial or an adequate, at least, sampling

SENATOR MURRAY The people who join the voluntary system are usually prompted by the fear that they are going to suffer ill health in their family MR PATTON Yes

### Statement of Mrs Jerome Evanson, Director of Education, North Dakota Farmers Union

MRS EVANSON Rural people can have adequate medical care and health services World War II proved that hitherto debatable point. During World War II we saw modern health facilities and services—the best in the world—brought to our farthest desolate outposts on the Aleutian Islands in the North Pacific. Our government provided medical care and services on the most inaccessible islands of the South Pacific, in the impenetrable jungles of Burma and India and over the "hump" to the natives in the interior of China. No spot in the world was too remote. It gladdened our hearts and made us proud, but it also made us think.

No longer can these same services be denied to our own people here at home. No longer can any one say it is not feasible to establish good medical care and services in our rural areas The war provided these services wherever there was a need for them at the war front. The peace shall provide these services wherever there is need for them on the home front, and the greatest need on the home front today is in rural areas. What a pity that it had to take a world war to awaken us to the realization that "medical care for rural people can be complete and it can be good."

To shock people out of their complacency, I would like to suggest that for every area posted as disease free for cattle we should have posted the list of needless cases of illness and deaths among the people in that area who have not had the same consideration as our cattle It may awaken some people to an awareness that even though our children haven't the cold dollars and cents value of cattle they should and must warrant the same protection that is given our cattle. That protection has definitely not been given our people in rural areas to date Shocking? Yes So are the high rejections of rural boys for the services—the highest of any major occupational group Shocking too are the figures for maternal and infant death rates and for death rates in all age groups in rural areas

We the people want to participate in the formulation of a health program We believe that those who receive services as well as those who give services should have the right of representation on councils determining quality, cost distribution of hospital care and health services Medical people seem to resent participation by lay people and seem to look on it as interference It would seem that to many people the sole responsibility of the consumer should be to furnish the patient and the fee To justify their insistence on control of programs they speak of their past record and point to the high standard of services rendered. We can only think of how bad the services are for so many of our people. They talk of the high quality, and, important as quality is, we think quantity and distribution are important too, for what good is quality when it is out of reach of the people who are ill and need it? These problems will not be overcome until lay people actively participate in the formulation of health programs

The American Medical Association is particularly opposed to the matter of compulsion—'it is so undemocratic" Would they take away compulsion in the matter of education and let every child volunteer to attend school? Would they take away compulsion in the matter of contagious diseases and leave it to the individual to isolate himself voluntarily? Would they take away the compulsion of sanitation laws, doctors' licenses or intern training or even the years one must study before one can practice medicine? Isn't compulsion a necessary safeguard where the welfare of all is at stake? The shocking revelation of health conditions in rural areas most certainly justifies compulsion in the matter of health care

SENATOR DONNELL Were you on the committee which drew up this statement of principles that Mr Patton referred to? MRS EVANSON No, I was not a member of the resolutions committee However, I was a participant in the discussions

SENATOR DONNELL You were familiar with S 1606 at the time? MRS EVANSON That is right

SENATOR DONNELL And that particular bill was not in express terms at any rate endorsed in those resolutions, was it? MRS EVANSON No

SENATOR DONNELL Simply there was a commendation of President Truman for his courage and vision in calling for a universal prepayment medical care program and calling on Congress to pass legislation to put that into effect?

MRS EVANSON However, at this meeting at this discussion we stated that we would go out and work for any health compulsory health act, as it would give expression to our objectives and we did state at that time it was the Wagner-Murray-Dingell bill and this new bill which we had not felt that we had not given the study to, that we should, but that we would endorse it as it gave expression to the objectives of our program

SENATOR DONNELL *You refer in the conclusion of your* remarks to new ideas. You say it takes courage to sponsor new ideas, to chart new courses You do not undertake to say that this idea of compulsory health insurance is a new idea, do you? MRS EVANSON No, I do not, but it is a new idea to many, many people, and it seems to be a very new idea and a dangerous new idea, seemingly, to the medical association

SENATOR DONNELL On the matter of this hail insurance that you speak of in Dakota, I presume we would agree that there are very many different problems applicable to hail insurance as distinguished from health insurance, would we not? MRS EVANSON I do not see why there should be too many

SENATOR DONNELL Just to illustrate, without going into detail, the matter of hail insurance involves first the payment of a premium, and in the second place if there is a loss by hail the ascertainment of the damage and then in the third place the collection of the damage, that boiled down is hail insurance, is it not? MRS EVANSON Yes

SENATOR DONNELL Whereas health insurance involves the matter of the selection of doctors, the question of the quality of doctors whether or not initiative of the doctors is or is not encouraged, the question as to the best means of encouraging advancement in the medical profession, the question as to whether or not there is to be a national control of health insurance, and of the selection of doctors away down the line out in your state and mine, all of those things differ from hail insurance, do they not? MRS EVANSON That is right.

SENATOR DONNELL However, that may be North Dakota tried the compulsory hail insurance, did it not? MRS EVANSON It did, that is right.

SENATOR DONNELL And later on the legislature had the matter of repeal of that up before it, did it not? MRS EVANSON Yes, it did

SENATOR DONNELL Did it repeal it? MRS EVANSON It changed, it did not repeal the law It changed it from compulsory to voluntary

SENATOR DONNELL So the question of whether or not you should retain compulsory hail insurance was in the first instance presented to the legislature, which passed a law providing for compulsory hail insurance and in the second place, later on, the legislature had before it the question as to whether compulsory hail insurance should be abandoned and voluntary hail insurance be substituted, is that not correct? MRS EVANSON That is right

SENATOR DONNELL And the legislature, whether for good or for bad reasons decided to abandon the compulsory hail insurance and substitute voluntary insurance is that not right? MRS EVANSON That is right.

SENATOR DONNELL On page 4, where you make the statement that I am wondering just what you mean by it You say "Since most diseases are preventable, then why are they not prevented? Is it because certain groups have a stake in our illness?" Do you mean to imply by that that the doctors of our country are trying to hold back this country from solving the health problems because they are going to make more money out of it if we have sickness than if we do not have it? Is that what you mean? MRS EVANSON No, but I was reminded of the experience in Manitoba, where they are hiring doctors in municipalities, where he said that he had a stake in the health of the people so it was his job to keep them healthy, and he had gone into the preventive phase of health care had developed much greater in that community, and he said it was because he had a stake in their health instead of their illness It was his job to keep them well

SENATOR DONNELL I understand, but that does not quite answer the question I had in mind and that I tried to state to you. You say "Science says that most diseases are preventable Then why are they not prevented? Is it because certain groups have a stake in our illness?" Let me say Who did you mean by "certain groups"? MRS EVANSON I would say the medical people.

SENATOR DONNELL The medical profession? MRS EVANSON They are the ones that have the stake in our illness

*(Mrs Evanson described two doctors who refused to see patients unless assured of their fees)*

SENATOR DONNELL Are those the only two doctors that you personally know of who have been guilty of this kind of unkind conduct? MRS EVANSON No, in our discussions of health out in the rural areas I have heard enough stories that made me sick,

SENATOR DONNELL You do not— MRS EVANSON Sick at heart and sick to my stomach for the things that have been done.

SENATOR DONNELL You feel that the medical profession is in many instances guilty of very reprehensible conduct, is that your thought? MRS EVANSON Yes, indeed

SENATOR DONNELL As you have indicated, you think there is this clique that places dollars above health? MRS EVANSON I want to say this— SENATOR DONNELL Just a minute. Is that right? MRS EVANSON Yes

SENATOR DONNELL I am curious to know what the difference is if any, between the underlying principles of the National Farmers Union and the underlying principles of the Grange and of the Farm Bureau Federation Do you know what the difference is, the underlying differences between them?

MRS EVANSON I can speak as far as the health program is concerned, of course. The Farm Federation, the Farm Bureau, and you very likely know their stand but they do not believe in compulsory health insurance.

SENATOR DONNELL I wanted to know what the underlying differences are between the National Farmers Union and the Grange and the Farm Bureau MRS EVANSON We believe in the security of the family type farm and a more satisfactory way of life for the farm family on the land

SENATOR DONNELL Does the Grange believe in the same thing? MRS EVANSON I think the Grange is very much socialistic, that is, I mean it is more of a brotherhood fellowship society I do not know too much of their stand I think the Farm Bureau works among the people, the larger land owners, and are concerned about them Of course this is just my own personal observation as I have seen it. We are working for the small family type farmer, and the general welfare always is considered in whatever program we take up

### Statement by Harold Aaron, M D

DR AARON I am Harold Aaron, M D I appear here as the medical adviser of Consumers Union of United States, a nonprofit organization supplying technical information on goods and services to more than 100,000 American families I am a family practitioner and have practiced medicine in hospitals and clinics as well as in private practice since 1929 In common with an ever increasing number of physicians, I am convinced that high quality medical care can be obtained only if the financial barrier to such care is removed by a system of prepayment compulsory insurance. If S 1606 is enacted into law, the great majority of American families could obtain all the services necessary for high quality care at a price that they could afford to pay

SENATOR DONNELL Doctor, you are the medical adviser of Consumers Union of the United States? DR AARON Yes, sir

SENATOR DONNELL What is that organization? DR. AARON A technical organization, nonprofit, which supplies information on goods and services to those who subscribe or belong to the organization

SENATOR DONNELL Do you know how many persons either subscribe or belong to it? DR. AARON At the present time about 105,000 people subscribe to it, or families, if you will

SENATOR DONNELL What is the annual charge that the subscribers pay? DR AARON It varies from $4 to $5 When you come in in a group, I think it is $3.50 I think if you do not come in with a group it is about $4 or $4 50 I am not altogether sure of the exact figure.

SENATOR DONNELL So there is an annual income of this organization of somewhere in the neighborhood of $425,000, is that right? DR AARON Approximately, yes, sir

SENATOR DONNELL Who are the officers of that organization, Doctor? DR. AARON Well, I do not have a statement of all the officers I have a list of the executive committee, which authorized me to appear here.

SENATOR DONNELL Will you tell us who is on that committee? DR AARON Myself, Dr Frank Beube, who is a dentist an assistant professor of dentistry at the College of Physicians and Surgeons of Columbia University, Mr Jerome H Hellerstein, an attorney, Dr Emanuel Klein, a psychiatrist, formerly on the New York Psychiatric Board, Dr Edward Reich, who is an educator, Mr Bernard Reis, a certified public accountant and executive secretary of the American Investors' Union Miss Adelaid Schulkind of the League for Mutual Aid, Dr Colston E Warne, professor at Connecticut College, Arthur Kallet, and Miss Madeline Ross

SENATOR DONNELL You say you are authorized and directed, I take it, by this executive board to come here to testify? DR. AARON The executive committee of the board

SENATOR DONNELL Do you know whether or not the organization holds meetings or conventions of its members or delegates? DR. AARON We have a yearly convention

SENATOR DONNELL When was the most recent one held? DR. AARON The most recent one was held in June of last year

SENATOR DONNELL Approximately how many people attended it? DR. AARON I do not know Approximately about fifty or sixty It was a very hot day

SENATOR DONNELL And they represented this approximately 105,000 members? DR AARON No They did not represent these 105,000 members We get the will of the 105,000 members through an annual questionnaire which we send to all our members every year, asking them for their opinion about the services, the way we have been giving them service, what criticism they have, and so on And we tabulate the answers, that is, the questions and the answers, and we also tabulate at the same time their votes for members of the board That represents the opinion of the membership

*(To be continued)*

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION AND PUBLIC HEALTH)

## ALABAMA

**Physician Sentenced for Income Tax Evasion**—The Birmingham *News* reported on April 1 that Dr Haickel A Elkourie, Birmingham, was sentenced to one year and one day imprisonment and fined $2 500 on charges of income tax evasion by Federal Judge Clarence Mullins in the U S District Court in Birmingham Dr Elkourie was also placed on two year probation on a third count of the indictment. The fine and prison sentence were for two other counts The prison sentence was to begin on May 31, the Birmingham *News* stated. In addition to the fine Dr Elkourie will have to pay $27 000, which represents $18 000 the government claims he owes in taxes plus a $9 000 penalty The physician was given the two years probation on one of the counts on the condition that he pay this sum Dr Elkourie was charged with evading income tax payments for 1941 1942 and 1943 He failed to report $67,000 income for these three years according to the indictment.

## CALIFORNIA

**Dr Swartout Resigns as Health Officer**—Dr Hubert O Swartout, Los Angeles has resigned as health officer of Los Angeles County, effective at the end of June He held the position for three years Dr Swartout plans to locate in Santa Maria

**The Dock Lecture**—Dr Donald I Frick, Los Angeles, gave the annual George Dock Lecture of the Barlow Society for the History of Medicine April 4 at a joint meeting with the Los Angeles County Medical Association. His subject was "Carlos Finlay and Yellow Fever"

**Cosmic Ray Healers**—On April 13 police raided open air cosmic ray centers and arrested three men on suspicion of violating the State Medical Practice Act, the Los Angeles *Times* reported. Nearly a hundred persons, most of them aged and scores of cars were clustered around the trailer establishment operated by Paul and Charles Beebe Those taking treatments clutched bare wires or wrapped them around legs arms or their neck while supposedly absorbing cosmic rays from the sun, according to the *Times* The theory on which the operators offered the treatment was that the rays were transmitted directly to affected parts of the body after being picked out of the air by wires and 'reduced' to health-giving strength. No charge was asked for being permitted to hold one of the wires but gifts of money were accepted Sandwiches, wheat, water ice cream and other food which the operators claimed had been treated by cosmic rays also were seized as evidence

**Physicians and Horticulture**—The *Bulletin* of the Alameda County Medical Association for May discusses the horticultural activities of some of its members Dr Warren B Allen Oakland president of the county society is one of the founders of the Orchid Society of California Dr Michael A Torrano is a charter member and Dr Lloyd H Hawkinson both of Oakland, is present president of the orchid group and associate editor of its quarterly magazine the *Orchid Digest* At a recent camellia show in San Francisco Dr Walker M Wells, Oakland won first prize Dr Noble H Logan, Oakland, who is official photographer of the exhibit in San Francisco and elsewhere, has won prizes for camellias roses and other flowers Other members of the county medical society engaged in horticulture as an avocation include Drs Stanley R Truman, Herman V Allington George F Calvin, Evelyn H Case, Brooks P Stephens, Demetrio E Jeffry, George V Van de Vert Kenneth A Nielson Harold A. Morse Stanley S Davis, Kenneth J Thompson, John I Phillips and Philip N Baxter, all of Oakland.

## FLORIDA

**New Director of Laboratories**—Dr Albert V Hardy who has been serving with the Office of Scientific Research and Development and the National Institute of Health, Washington, D C, has been appointed director of the bureau of laboratories of the Florida State Board of Health Dr Hardy graduated at the University of Toronto Faculty of Medicine in 1924 He once served as epidemiologist with the Iowa State Department of Health, as associate professor of preventive medicine at the State University of Iowa College of Medicine, Iowa City and as associate professor of epidemiology, Columbia University College of Physicians and Surgeons New York.

## IDAHO

**Hospital News**—The Sisters of St Francis are planning construction of an $800 000 hospital in Idaho Falls The site has been purchased and a finance committee has been appointed

**State Medical Meeting**—The Idaho State Medical Association will hold its 1946 meeting in Boise, June 17-20 Among the speakers will be

Dr James J Waring Denver Various Aspects of Tuberculosis
Dr Kenneth C Sawyer Denver Carcinoma and Gastrointestinal Complications
Dr Ward Darley Jr Denver Diagnosis of Rheumatic Fever and Rheumatic Heart Disease.
Dr Edwin Stewart Taylor Worthington Minn Practical Gynecologic Endocrinology
Dr Harry C Hughes Denver Low Back Pain and Fractures

**Educational Program for Cancer**—The Idaho State Medical Association proposes to cooperate in the following five point educational program sponsored by the Idaho division of the American Cancer Society

Continued education of the public by the physician regarding the importance of an early cancer diagnosis
Distribution to the physician and the general public of the booklet entitled How Your Doctor Detects Cancer which explains in detail the various steps taken by the physician to determine the presence of cancer
Establishment of a reference circulating library for physicians containing the latest information on the diagnosis and treatment of malignant cancer and diseases
Formulation of a program of graduate education for selected physicians practicing medicine in Idaho
A survey of the entire state to determine the number of persons having cancer and the various types prevalent in the state of Idaho

## ILLINOIS

**Examination for Health Commissioner**—A competitive examination for the purpose of filling the positions of health officer of the Champaign-Urbana health district, Champaign, and the Sticknev District Health Department, Stickney, will be held in Chicago on July 20 Admission to the examination will be limited to persons possessing minimum qualifications of education and experience Further information may be obtained by writing to Dr Roland R Cross, Director, Illinois Department of Public Health Springfield

### Chicago

**Conference on Exceptional Children.**—"The Community's Opportunity' will be the theme of the third Governor's Conference on Exceptional Children at the LaSalle Hotel, June 14 The program is under the auspices of the Illinois Commission for Handicapped Children 211 West Wacker Drive, and is open to all persons, whether they are parents or teachers health or welfare workers members of service clubs or church or civic groups, who are interested in improved state and local facilities for handicapped children

## IOWA

**Personal**—Dr Raymond J Brink Ayrshire, was elected mayor of Ayrshire recently——Dr Pierre Sartor, Titonka recently completed fifty years in the practice of medicine.——Dr Nunzio J Carrozzo Staten Island, N Y has been assigned from the U S Public Health Service as acting medical director for the Iowa state division of industrial hygiene

## KANSAS

**New Editor for State Journal**—Dr William M Mills Topeka has resigned as editor of the *Journal of the Kansas Medical Society* a position he held for eleven years to become president of the state society Dr Lucien R. Pyle Topeka a member of the editorial board for eleven years, has been named editor

## KENTUCKY

**Changes in Health Personnel**—Dr Paul F Orr, U S Public Health Service, has resigned as health officer for Nelson Bullitt and Spencer counties to enter private practice in Toledo effective April 1——Dr Mildred E B Gabbard, Harrodsburg has resigned as health officer of the Mercer County Health Department, effective April 1——Dr George M Jewell Mayfield has resigned as health officer of Graves County, effective March 23——Dr Benjamin F Reynolds Carlisle, has been appointed health officer of Nicholas County succeeding Dr Robert L Loftin Cynthiana, who accepted a similar position in Bay City Mich——Dr Harland V Usher, Sedalia has been named health officer of Graves County succeeding Dr George M Jewell, who has entered private practice in Kokomo Ind.——Dr Russell E Teague, Louisville has resigned as director of tuberculosis control for the Kentucky State Department of Health to carry on similar activities for the U S Public Health Service, it was reported April 25

**Nutrition Survey**—The Hardin County Health Department on April 19 began a nutrition survey. Under the supervision of Dr. Charles H. Blandford, Elizabethtown, director of the county health department, the survey will extend over a five year period with children now in the second, third and fourth grades of two county schools. Each child will be given physical examinations annually, dietary and other recommendations will be given to the parents and the annual examination will be used to determine the beneficial effects on the physical progress of the child.

## MAINE

**State Medical Meeting**—The Maine Medical Association will hold its ninety-second session at the Poland Spring House, Poland Spring, June 23-25, under the presidency of Dr. Adam P. Leighton, Portland. Included among the speakers will be:

Dr. Walter G. Dixon, Norway, Internal Derangements of the Knee Joints
Dr. Reginald H. Smithwick, Boston, Surgical Treatment of Hypertension
Dr. Elton R. Blaisdell, Portland, Infectious Hepatitis
Dr. Wilfrid J. Comeau, Bangor, Therapeutic Procedures in Cardiac Disease
Dr. Charles W. Steele, Lewiston, Infectious Mononucleosis
Dr. Theodore C. Bramhall, Portland, Diagnosis of Cancer of the Cervix
Dr. Edward I. Herlihy, Bangor, Small Bowel Obstructions
Dr. Edward H. Risley, Waterville, Progress in Handling Surgical Diseases of the Colon
Dr. James M. Parker, Portland, Deep Thrombophlebitis
Dr. Leo J. McDermott, Portland, Epiphysial Injuries
Dr. Thomas A. Martin, Portland, Colles's Fracture
Dr. Chester S. Keefer, Boston, Streptomycin
Dr. Joe Vincent Meigs, Boston, Wertheim's Hysterectomy

In addition the program will include a symposium on gastrointestinal bleeding. Dinner and luncheon speakers will include Mr. John O'Connell, Bangor, editor, Bangor *Daily News*, Dr. Harry C. Loos, Ross-Loos Medical Group Clinic, Los Angeles, and Dr. Charles G. Heyd, New York, past President of the American Medical Association.

## MASSACHUSETTS

**Walter Cannon Memorial to Be in France**—A memorial to Dr. Walter B. Cannon, late George Higginson professor of physiology at Harvard Medical School, Boston, is to be established in Toulouse, France. A hospital there, organized and staffed by Spanish refugees from Franco to serve their fellow refugees in France, is to be expanded and operated under its new name, the Dr. Walter B. Cannon Memorial Hospital. Dr. Cannon, who was president of the American Association for the Advancement of Science in 1939, actively aided the Spanish Republicans from the start of the Civil War in 1936 to the end of his life. He became chairman of the Medical Bureau to Aid Spanish Democracy in 1937 and at his death was honorary co-chairman, Boston chapter, Joint Anti-Fascist Refugee Committee. Through the Unitarian Service Committee the Joint Anti-Fascist Refugee Committee has been helping the 150,000 or so Spanish refugees remaining in France after three years of war and seven years of destitution and suffering. Ineligible for aid from the Red Cross, UNRRA or the French government, these 'people without a country" are said to be as acutely in need of medical care as almost any one in the world. They depend entirely on American charity. Some 150 prominent Boston citizens, including thirty-seven physicians, have just started a drive for $75,000 to buy some of the necessary equipment for the hospital in Toulouse and to safeguard its continued operation. All funds are managed and spent in France by the Unitarian Service Committee. After Spain returns to democracy, the memorial to Dr. Cannon will be perpetuated there. Co-chairmen of the drive are Dr. George R. Minot, professor of medicine, Harvard Medical School, Boston, Frederick May Eliot, D.D., president American Unitarian Association, Ralph Barton Perry, professor of philosophy, Harvard University, Boston, and Paul T. Smith, attorney. Headquarters of the Dr. Walter B. Cannon Memorial Fund are at 14 Beacon Street, Boston.

## NEW YORK

**Rochester Academy Awards Prizes**—Dr. William W. Percy, Rochester, executive director of the Rochester Academy of Medicine since 1939, was given life fellowship in the academy at a meeting, May 14. The honor was accompanied with a citation for "outstanding services to the academy." Formerly president of the Rochester Medical Association, Dr. Percy was instrumental in joining that organization with the Academy of Medicine to form the present Rochester Academy of Medicine. The academy also presented the following prizes to Rochester physicians for the work indicated: Dr. Searns S. Bullen, the Albert Kaiser Medal for his work in the field of allergy; Dr. Jacob W. Holler, the John W. MacCauley Prize for his paper "Potassium Deficiency Occurring During the Treatment of Diabetic Acidosis'; Dr. George P. Heckel, The Paine Drug Company Prize for his paper on "The Association of Ovarian Pain with Ovarian Dysfunction, the Role of Estrogen and the Importance of Conserving Ovarian Tissue," and Dr. Herbert R. Brown, Jr., the Taylor Instrument Company's prize for his paper on "The History and Analysis of Human Whole Blood Distribution in the Pacific Area."

### New York City

***George Humphreys Named Professor of Surgery***—Dr. George H. Humphreys has been appointed Valentine Mott professor of surgery at the Columbia University College of Physicians and Surgeons and director of surgical service of Presbyterian Hospital, it was announced May 28. Dr. Humphreys succeeds Dr. Allen O. Whipple, who will retire in September after twenty-five years' service. Dr. Humphreys graduated at Harvard Medical School, Boston, in 1929 and is currently assistant professor of clinical surgery at Columbia, a position he has held since 1940. He is also assisting attending surgeon at Vanderbilt Clinic and the Babies and Presbyterian hospitals.

**State Plans Mental Hygiene Expansion.**—A mental hospital to cost $15,000,000, with beds for 3,160 patients, will be erected on Ward's Island in the East River as part of the state's postwar public works program, according to the New York *Times*. The project contemplates an outlay of $10,005,000 for the first group, which will be a medical and surgical building, a unit for the care of disturbed and continued-treatment patients, two admission service blocks, administration quarters and a central kitchen. Preliminary plans for fourteen additions proposed by the department of mental hygiene are under preparation for the planning commission. The estimated cost of these is in excess of $5,000,000.

**Physicians Warned of Sending Patients to Arizona**—The New York Tuberculosis and Health Association has informed the five medical societies of New York City of an exchange of communications with Arizona health and business organizations. The information is given as a warning to physicians who are sending their patients in search of an ideal climate to hasten their cure from asthma and other conditions. The housing shortage is still acute in Arizona, it was stated, with no immediate relief in sight. The chambers of commerce in Arizona are cooperating in an effort to locate suitable facilities for patients. One chamber of commerce issued a special monthly housing bulletin in which it reported 343 applications for housing in March 1946 and only 127 placements. No furnished houses were available and there were only two apartments during the month. C. Edgar Goyette, secretary of the Tucson Chamber of Commerce, in reply to a query from the New York Tuberculosis and Health Association stated that 'during the past year we have had the most difficult and acute housing shortage in our history,' and Mr. Goyette adds, 'we would earnestly suggest, in view of conditions, that definite arrangements be made for housing before coming to Tucson."

**Israel Weinstein Named Health Commissioner**—Dr. Israel Weinstein, acting health commissioner of New York, has been appointed health commissioner, filling the vacancy that occurred when Dr. Edward M. Bernecker resigned (THE JOURNAL, March 23, p. 805). Dr. Weinstein graduated at Columbia University College of Physicians and Surgeons in 1926. He has been associated with the health department since 1924, serving in a full time capacity since 1936. At the time he was named acting health commissioner, Dr. Weinstein was first deputy commissioner. On the resignation of Dr. Ernest L. Stebbins, Dr. Edward M. Bernecker was on March 4 appointed by Mayor William O'Dwyer as commissioner of health. The selection invited considerable protest primarily because it was believed that Dr. Bernecker, in his position as commissioner of hospitals of the city health department, did not have the proper qualifications and practical experience for a public health administrator and his name had not been included in a group of candidates recommended by a specially appointed committee or in a group recommended by the board of health. The recommendations totaled some thirty-eight names. Dr. Bernecker resigned the position on March 13 and was immediately reappointed to his former position as commissioner of hospitals. Following the appointment of Dr. Weinstein as acting commissioner, March 13, press reports indicated that Drs. Dean A. Clark and Leonard Greenburg were being considered for the appointment but on May 24 Dr. Weinstein was named to the post. Prior to his appointment as deputy health commissioner Dr. Weinstein had been released from military service with the rank of lieutenant colonel.

## NORTH CAROLINA

**Valy Menkin Goes to Philadelphia**—Dr Valy Menkin, assistant professor of pathology at Duke University School of Medicine, Durham, has been appointed associate professor of experimental pathology in the newly created department of surgical research at Temple University School of Medicine, Philadelphia (THE JOURNAL, Dec. 1, 1945, p 972)

**Good Health Association.**—The North Carolina Good Health Association was organized in Thomasville March 14 with Mr I G Greer superintendent of the Baptist Orphanage, Thomasville, as president. Lieut Col Charles R Jones was elected executive vice president Objectives of the program are

State assistance in the care of indigent sick
State assistance, in accordance with wise provisions for building or enlarging local hospitals and establishing and equipping rural health centers.
A medical education loan fund to help worthy North Carolina young men and women who pledge themselves to practice in a rural community for four years
The expansion of the two year medical school of the University of North Carolina into a standard four year school
A special study of the medical education of Negroes
The promotion of voluntary or Blue Cross group insurance plans

**Endowment Fund of Ten Million Approved**—March 26 the board of trustees of the Wake Forest College acted favorably on an offer from the Z Smith Reynolds Foundation of an endowment fund with the present market value of $10,500,000 According to the *North Carolina Medical Journal* the charter of the foundation provides that 20 per cent of the income be added to the principal until, through this and other contributions it reaches $50,000,000 The offer stipulated that Wake Forest College be moved to Winston Salem, where the Bowman Gray School of Medicine of Wake Forest College and the North Carolina Baptist Hospital are now located Final decision in the matter will be made by the North Carolina Baptist state convention Officers and directors of the Z Smith Reynolds Foundation are W N Reynolds president Stratton Coyner, secretary, Richard J Reynolds, Mary Reynolds Babcock, Nancy Reynolds Bagley and W R Hubner

## NORTH DAKOTA

**Public Health Meeting**—The third annual meeting of the North Dakota Public Health Association was held in Bismarck, May 28-29 under the presidency of Francis C Lawler, Sc D, Grand Forks Among the speakers were

Dr Gaylord W Anderson Minneapolis Public Health an Expenditure or an Investment.
Dr James F Hanna Fargo North Dakota Physician s Service in Cass County
Mrs Marguerite L. Ingram Fargo, and Carlyle D Onsrud Bismarck The Current Hospital Survey and Hospital Planning in North Dakota
Mr A L Bavone Minot The Environmental Sanitation Program Carried Out in the First District Health Unit
Dr William M Smith Bismarck, The Tuberculosis Control Program in North Dakota
Mr John A Page Grand Forks The Proposed Medical Center—Its Program and Plans

## UTAH

**Medical Activities at Utah**—The radiologic service, which has heretofore been a part of the department of medicine has been given full time departmental status Dr Henry H Lerner formerly a major in the medical corps, Army of the United States, at the Station Hospital, Kearns, has been named professor and head of this department Dr Walter S Loewe of Cornell University Medical College has been appointed research professor of pharmacology Recent research donations to the medical school include

Abbott Laboratories North Chicago Ill $1,500 to Dr Louis S Goodman for continuation of studies on anticonvulsants and $2 000 to the department of pharmacology for research fellowships
John and Mary R Markle Foundation $1,250 to Leo T Samuels Ph D professor of biochemistry for the study of the adjustment of organisms to diet $2,500 to Horace W Davenport Ph.D for studies of intracellular enzymes of the gastric mucosa
Ciba Pharmaceutical Products Inc., $3 000 to the department of pharmacology for research fellowships
Winthrop Chemical Company $1 500 for continuation of its fellowship fund for the years 1946 1947 in the department of pharmacology
Sandoz Chemical Company $1,000 to the department of pharmacology as an unattached grant for research in the field of epilepsy under the direction of Dr Goodman
Committee on Scientific Research American Medical Association, $1,000 to Dr George Sayers Ph D assistant professor of pharmacology for research on pituitary adrenocorticotropic activity

Dr Cecil J Watson, professor of medicine, University of Minnesota Medical School, Minneapolis, delivered the second annual William R. Tyndale Lecture at the school recently on "Clinical Aspects of Hemoglobin Degradation" and "Recent Studies of Hepatitis and Cirrhosis"

## WISCONSIN

**The Helmholz Lecture**—Dr Thomas Francis Jr, Ann Arbor, will deliver the fourth annual A C Helmholz Lecture at the University of Wisconsin Medical School Madison, June 20, on "The Conquest of Influenza." The lectureship was endowed in 1941 by the four children of Mr and Mrs A C Helmholz of Milwaukee

## GENERAL

**Will Braun's Testimonial Open to Every One**—An open invitation is extended to any one wishing to attend the reception and testimonial in honor of Will C Braun at the St Francis Hotel, San Francisco, July 3 In the San Francisco number of THE JOURNAL, page 300 it was erroneously stated that the dinner is being given by Mead Johnson & Company, an inaccuracy arising from the fact that the details of the dinner are being handled by Mr A L Rose of Mead Johnson & Company, Evansville, Ind Mr Rose is acting in behalf of the sponsors of the event, who are Mr Braun's many friends in the profession and in industries serving the medical profession Any one wishing to attend the dinner should write to Mr Rose for complete details

**Medical Memorial Fund**—Establishment of a Medical Memorial Fund to provide financial aid for medical research was announced on May 14 To obtain from $5,000,000 to $10,000 000 a year, it will accept contributions in any amount as memorial gifts Harlow Shapley, Sc D, director of the Harvard College Observatory, is chairman of the board of trustees and in a statement to the press said that the fund will conduct a continuing campaign to raise as much of this sum as possible He explained that gifts to the fund may be made at any time, either immediately after the death of a relative or friend or to honor some one who has died in the past To make a gift the Medical Memorial Fund should be addressed at 630 West 168th Street, New York 32 with the name of the person in whose memory the gift is made and the name and address of the bereaved person to whom the memorial certificate should be sent In addition to Dr Shapley, officers of the Medical Memorial Fund are Henry S Simms, Ph D, president, Drs Russell L Cecil and John M Steele, vice presidents, Marvin R Thompson, Ph D, secretary, and Guy Emerson, treasurer all of New York

**Program in Pharmaceutical Education**—On May 9 the American Council on Education announced that it is undertaking a nationwide survey of pharmaceutical education About $100,000 has been provided by the American Foundation for Pharmaceutical Education to finance the survey under the direction of Edward C Elliott, Ph D., formerly president of Purdue University, with the assistance of a technical staff The plans for the survey include a study of the supply and future demand for trained pharmacists, the practices of the colleges of pharmacy as to the admission, guidance selection and training of students, analysis of present day prescriptions to determine the knowledge required of the professionally trained pharmacist, the relation of pharmaceutical education to business and industry, the role of pharmacy in medical care the qualifications of faculty members and the conditions of faculty service in the colleges of pharmacy, and the relation of the requirements for licenses to the programs of training and practical needs Special attention will be given to methods and means for the training of the scientific specialist now required by the rapidly growing pharmaceutical industries and for pharmaceutical research

**Grants and Fellowships in Cancer Research**—The Committee on Growth of the National Research Council acting for the American Cancer Society, announces that it will entertain applications for grants in cancer research to become effective July 1, 1947 Applications will be received until Sept 15, 1946 Applications for fellowships and senior fellowships in cancer research of the American Cancer Society for the ensuing year will be received until Dec 1, 1946 To date the Committee on Growth has recommended to the American Cancer Society a total of seventy-five research grants and fourteen fellowships The committee will continue to recommend support of research in the basic sciences and in clinical investigative medicine broadly pertaining to problems of growth It will continue also to rely heavily for counsel on its advisory divisions of chemistry, biology, physics and clinical investigations and their subjacent panels in specialized areas of research Applications for research grants for the current year will no longer be entertained Communications should be addressed to the Committee on Growth, Division of Medical Sciences National Research Council 2101 Constitution Avenue, Washington 25, D C

**Radio Series Dedicated to Medical Profession**—Development of wider public understanding and appreciation of the contribution made by the medical profession and by medical research to the world's health and welfare is the objective of a new series of radio programs which was launched over the Columbia Broadcasting System, June 4, at 9 30 p m, Eastern daylight saving time The half hour program known as "Encore Theater," presents radio dramatizations of famous films, novels and biographies dealing with medicine s immortals, as well as with the work, achievements and struggles of thousands of members of the medical profession who, although bypassed by fame, daily are making substantial contributions to the prevention and cure of disease often at great personal sacrifice Sponsor of the program is Schenley Laboratories Inc which for the past two years has sponsored a somewhat similar program dedicated to the medical profession, "The Doctor Fights" The programs are designed to underline the scientific achievements of the medical profession while stressing the human warmth and sympathy which often prompt members of the profession to sacrifice health and even life in order to serve others

**The Third Phase of Medical Care**—A report has been issued by the Baruch Committee on Physical Medicine discussing the need for additional rehabilitation services and centers where the disabled and handicapped can receive post-hospital physical rehabilitation, psychosocial adjustment and vocational guidance and retraining Model community rehabilitation centers discussed in the report would not provide definitive medical treatment but would bridge the gap between the bed and the job by following preventive and curative medicine and surgery with what the committee terms "the third phase of medical care" The model center outlined in the Baruch plan is based on an estimated load of 50 dormitory and 200 outpatients They estimate the average patient stay at two months which would result in a case load of 1,500 patients a year Total program costs for physical therapy, occupational therapy, medical services, vocational testing, guidance and retraining and psychosocial adjustment are estimated at $125 per patient, exclusive of dormitory care and food services Such centers once established the committee believes, would be relatively self supporting as fees would be received from private patients, the Veterans Administration, state rehabilitation programs, industry and insurance companies Copies of the complete report are available from the Baruch Committee on Physical Medicine, Room 3500, 597 Madison Avenue, New York 22

## LATIN AMERICA

**Health Activities in Latin America**—*Personal*—The Legion of Merit was conferred on Col Harold B Gotaas, acting director of the Office of Inter-American Affairs and president of the Institute of Inter American Affairs, at special ceremonies in Washington recently for "exceptional meritorious conduct in the performance of outstanding services in conducting the health and sanitation work of the institute

*Bolivia Establishes National Blood Bank*—The Bolivia National Blood Bank is to be set up in the city of Cochabamba, Bolivia Two Bolivian physicians are in training by the Institute of Inter-American Affairs to take charge of the national plasma project and train other technicians who may be needed

*Chile Opens New Hospitals*—Dr Theodore I Gandy, chief of the six man Institute of Inter-American Affairs medical mission to the South American republic reports that a large modern center of preventive medicine has been completed in the port of Antofagasta and that the 500 bed Trudeau Tuberculosis Hospital in Santiago will be ready for use shortly The United States field party working with Chilean health officials in the Inter-American Cooperative Department of Public Health, helped to plan both of these institutions

*New Minister of Education and Health*—Dr Ernesto de Souza Campos, formerly professor of bacteriology, São Paulo School of Medicine, Brazil, has been appointed minister of education and health of Brazil According to the *News Letter* of the Health and Sanitation Division Institute of Inter-American Affairs the new minister informed Dr Eugene P Campbell, chief of the Institute of Inter-American Affairs field party in Brazil, that no changes are planned in regard to the administration of Servicio Especial de Saude Publica, the cooperative public health program in Brazil, now almost 4 years old

*Sanitation Engineer Honored*—A new modern hospital in the jungle city of Guayamerin will be named for Major Curtis E Richey of Des Moines "as a tribute to the work he performed in our tropical region as a member of the Institute of Inter-American Affairs, and of the Bolivian Servicio Cooperativo Inter-Americano de Salud Publica' Major Richey a former official of the Iowa State Public Health Department went to Bolivia with the Inter-American Affairs medical field party in 1943 He helped to set up small modern hospitals in Guayamerin and Riberalta at the headwaters of the Amazon and directed a campaign against tropical disease in both areas, which were important producers of wild rubber during the early part of the war According to reports published recently in the La Paz press, the health work which Major Richey directed was instrumental in transforming Guayamerin from a malaria ridden small town of a few hundred people into a thriving city about three times its former size Malaria is no longer a problem there, and the general death and morbidity rates are lower in the jungle settlement than they are in towns in "healthful" regions

*Inter-American Medical Congress*—The National Academy of Medicine, Rio de Janeiro, Brazil, will sponsor the first Inter-American Medical Congress, September 7-15 Information may be obtained from Dr A Austregesilo, president of the congress, or Dr Al Cumplido de Sant Anna, general secretary

*First Regional Conference on Sanitary Engineering*—The Pan American Sanitary Bureau in cooperation with the Institute of Inter-American Affairs is planning to inaugurate the first regional conference on sanitary engineering in Latin America This conference is scheduled to be held in Rio de Janeiro, Brazil, the week of June 10 It is planned that sanitary engineers from Argentina, Bolivia, Brazil, Chile, Paraguay Peru, Uruguay and the United States of America will participate in the conference The objectives of the conference are advancement of the profession of sanitary engineering, exchange of scientific data and ideas in the development of sanitary engineering in the Americas, to promote the development of standards for sanitation in regard to international travel, to accelerate the development of sanitation in the Americas to aid in the economic development, to create a better understanding between the engineers of the American republics and to organize a permanent Pan American organization of sanitary engineers

*Congress on Cardiology*—The second Inter-American Congress of Cardiology will be held in Mexico City, October 6-12 at the National Institute of Cardiology, Calzada de la Piedad 300, Mexico, D F, under the auspices of the Inter-American Society of Cardiology, American Heart Association, Argentine Society of Cardiology Cuban Society of Cardiology, Mexican Society of Cardiology, National Institute of Cardiology of Mexico, Ministry of Health of Mexico, Ministry of Foreign Relations of Mexico and the National University of Mexico Additional information may be obtained from Dr Mario Salazar Mallen, general secretary of the congress

## FOREIGN

**Model Medical Centers in China**—Plans to establish model medical centers in China to rebuild the country s medical system were announced by the press on April 23 The program is sponsored by the Chinese government with the cooperation of the American Bureau for Medical Aid to China The first medical centers will be built in Shanghai and places to be designated in North and South China Later units are planned for western and central China

**Effect of War on Russian Health**—The American Society for Russian Relief reports that 40 000 hospitals clinics and other medical institutions were destroyed by the Nazis during their invasion and occupation of the Soviet Union, giving implication for an estimated 15 000,000 war wounded, 4,000 000 children orphaned and war shocked, 1 000,000 youngsters suffering from rickets and other diseases of malnutrition and 1 000,000 amputation cases in which rehabilitation cannot be effected in the immediate future. The statement is released in the society s 1945 program for Russian relief The campaign hopes to obtain $25 000,000 for the purchase of medical supplies and hospital equipment Also as part of its medical campaign Russian relief will undertake to equip a network of hospitals and workshops and an affiliated factory specifically for the treatment of 1 000,000 civilian and military amputees in the Soviet Union Detailed information on this program may be obtained by writing to the American Society for Russian Relief, 5 Cedar Street, New York 5

---

## CORRECTION

**Jaundice Following Yellow Fever Vaccination.**—In the third line of the editorial with this title (THE JOURNAL, May 11), page 142, the words "increase in the" should follow the word "thirty-six-fold." Also the second word in the sentence beginning just below should read 'incubation' instead of "inoculation"

# Deaths

**Robert Wilson** ⊕ Charleston, S C, born in Stateburg, S C Aug 23, 1867, Medical College of the State of South Carolina, Charleston, 1892, joined the faculty of his alma mater in 1893, serving as instructor in bacteriology until 1900, from 1901 to 1903 adjunct professor, later professor of medicine and dean and since 1943 dean emeritus and professor emeritus and special lecturer on medical history chairman of the state board of health from 1907 to 1931, First Vice President of the American Medical Association 1909-1910, president of the South Carolina Medical Association 1904-1905, of which he had been an honorary member the Southern Medical Association, 1915-1916 and the Tri-State Medical Association of the Carolinas and Virginia 1927-1928, member of the American Clinical and Climatological Association, American Heart Association and the National Tuberculosis Association, fellow of the American College of Physicians on the staff of the Roper Hospital, specialist certified by the American Board of Internal Medicine in 1939 the American Legion, department of South Carolina presented him with its plaque for distinguished service to South Carolina received honorary degrees from the University of South Carolina and the University of the South in Sewanee died May 20, aged 78, of coronary thrombosis complicated with pneumonia

**James Watson White** ⊕ New York Albany (N Y) Medical College 1905, born in Dutchess County, N Y, July 3 1876 professor of clinical ophthalmology at the New York Post-Graduate Medical School and Hospital, Columbia University where he was director of the service specialist certified by the American Board of Ophthalmology, member of the American Academy of Ophthalmology and Otolaryngology American Ophthalmological Society, New York Ophthalmological Society and the Association for Research in Ophthalmology fellow of the New York Academy of Medicine formerly associated with the Herman Knapp Memorial Hospital in New York, on the consulting staffs of the Newark (N J) Eye and Ear Infirmary, Brooklyn Eye and Ear Hospital Essex County Contagious Disease Hospital in Belleville N J Roosevelt Hospital in New York and the Mountainside Hospital in Montclair, N J, where he died May 15, aged 69

**Lucius Arthur Wing** ⊕ New York Cornell University Medical College, New York 1907, born in 1882 associate professor of clinical obstetrics and gynecology at his alma mater specialist certified by the American Board of Obstetrics and Gynecology, Inc member of the American Association of Obstetricians Gynecologists and Abdominal Surgeons, fellow of the American College of Surgeons associate attending obstetrician and gynecologist at the New York Hospital, consulting obstetrician to the Margaret Hague Maternity Hospital Jersey City N J and the Nassau Hospital, Mineola N Y, died in Southfield, Mass, February 17, aged 63 of coronary thrombosis

**Edward E Barlow** ⊕ Dermott Ark Memphis (Tenn) Hospital Medical College 1902, born in Laton, Ill, in 1873, member of the House of Delegates of the American Medical Association from 1939 to 1943, past president of the Arkansas Medical Society fellow of the American College of Surgeons past president of the local school board founder of the Barlow Clinic and leader in the building of the Dermott Municipal Hospital first secretary of the Dermott Chamber of Commerce and a charter member and past president of the local Rotary Club, died in the Baptist Hospital Memphis, Tenn, February 6, aged 72 of coronary thrombosis

**Walter De Witt Shelden** ⊕ Rochester, Minn, Rush Medical College, Chicago, 1895, professor emeritus of neurology and psychiatry at the University of Minnesota Graduate School, member of the American Neurological Association, of which he had been vice president, Minnesota Society of Neurology and Psychiatry, Central Neuropsychiatric Association, Osler Medical Historical Society and the Alumni Association of the Mayo Foundation, died February 13, aged 76, of dilatation of the left ventricle and healed rheumatic endocarditis

**John Winston Adams Sr**, ⊕ Chandler, Okla, University of Louisville Medical Department, 1905, served as medical director of the Chandler Sanitarium died February 24, aged 67, of cerebral hemorrhage

**Belle Jane Allen**, Kasauli, India, Boston University School of Medicine, 1904, served as a missionary, died January 24, aged 84

**John Pearl Allen**, Cairo Mo, Barnes Medical College St Louis, 1904, member of the American Medical Association, died February 9, aged 69, of carcinoma

**William Wesley Anderson** ⊕ Fort Thomas, Ky Medical College of Ohio, Cincinnati 1893, born in Weisburg, Ind, Oct. 9, 1866, a major in the medical corps of the U S Army during World War I, fellow of the American College of Physicians, formerly affiliated with U S Veterans Bureau in Cincinnati, died in the Speer s Hospital, Dayton, April 2, aged 79, of anterior coronary occlusion

**Edward Young Anthony**, Omaha Texas (licensed in Texas under the Act of 1903), member of the American Medical Association, for many years secretary of the Morris County Medical Society, member of the Selective Service examining board during World War II, died January 23, aged 75, of uremia

**George Edgar Armour**, St Ignatius Mont, Sioux City (Iowa) College of Medicine, 1905, also a graduate in pharmacy member of the American Medical Association had been affiliated with the Indian Service, died in January, aged 65, of cerebral hemorrhage

**Herbert Burr Bailey** ⊕ Fairmont, Minn University of Minnesota Medical School, Minneapolis, 1913, died in the Community Hospital February 11, aged 62, of coronary thrombosis and hypertensive heart disease

**Louis Andrew Balcke** ⊕ Pekin, Ill, Northwestern University Medical School, Chicago, 1932 entered the medical corps of the U S Naval Reserve on May 10, 1943, served nine months on a small island off Australia later stationed in Bloomington, Ill, where he was an examining physician for the V-12 candidates at Illinois State Normal University, recently released from active duty died in St Louis February 24, aged 41

**James Asher Caldwell** ⊕ Southgate Ky, Medical College of Ohio, Cincinnati, 1901 formerly member of the county board of health staff member and member of the board of trustees of the Speer s Memorial Hospital, Dayton, where he died February 26 aged 74, of cerebral hemorrhage

**Lewis Walter Frank Carpenter**, Reasnor Iowa, Drake University College of Medicine Des Moines, 1904, member of the American Medical Association, died February 24, aged 78, of coronary sclerosis

**Henry Charles**, Brooklyn Medizinische Fakultät der Universität Wien, Vienna Austria, 1921, died in January, aged 56

**Thompson Coberth** ⊕ The Dalles, Ore University of Oregon Medical School, Portland, 1911, fellow of the American College of Surgeons, past president and vice president of the Oregon State Medical Society, formerly member of the state board of health, served in France during World War I, for many years associated with The Dalles Hospital died January 13, aged 57, of dilatation of the heart

**F Homer Curtiss**, Washington, D C, University of Pennsylvania School of Medicine, Philadelphia 1909 died in the Doctors Hospital February 5, aged 70, of cerebral hemorrhage and coronary occlusion

**James David Daniel**, Daniels Landing, Tenn, University of Tennessee College of Medicine Nashville, 1896, also a druggist, died in the General Hospital, Nashville, February 11, aged 77 of massive pulmonary hemorrhage.

**Charles King Dutton**, Moberly, Mo, Marion-Sims College of Medicine St Louis 1895, vice president and director of the City Bank and Trust Company, found dead February 18 aged 75, of heart disease.

**Walter Harmon Dyer** ⊕ Tampa, Fla Atlanta College of Physicians and Surgeons, 1911, died February 9, aged 57, of coronary thrombosis

**Louis Lee Edwards** ⊕ San Marcos, Texas Memphis (Tenn) Hospital Medical College, 1910, fellow of the American College of Surgeons, on the staff of the Soldiers and Sailors' Memorial Hospital, died January 14, aged 64, of coronary thrombosis

**Henry S Fendler**, Santa Monica Calif Baltimore University School of Medicine, 1898 veteran of the Spanish-American War died January 7, aged 72

**James Watkins Fennell**, Missoula, Mont., University of Nashville Medical Department, 1907, member of the American Medical Association, served with a Johns Hopkins unit in World War I, affiliated with the Northern Pacific Beneficial Association Hospital, died February 23, aged 60, of virus pneumonia

**Harry L Fiscus**, Reinersville, Ohio, Baltimore University School of Medicine, 1897, served as county coroner and on the staff of Marietta (Ohio) Hospital, died January 6, aged 75, of coronary thrombosis

**William Ernest Floyd**, Holdenville, Okla., Vanderbilt University School of Medicine, Nashville, Tenn, 1903, member of the American Medical Association, county superintendent of public health, died near Lincoln, Ark., January 22, aged 65, of virus pneumonia

**William Henry Gilbert** ⊕ Los Angeles Bellevue Hospital Medical College, New York 1889, an Affiliate Fellow of the American Medical Association, fellow of the American College of Surgeons, served during World War I, died in the Veterans Administration Facility Sawtelle, February 3, aged 78, of arteriosclerotic heart disease

**Enea Augusto Gius** ⊕ San Francisco, Regia Universita degli Studi di Firenze Facolta di Medicina e Chirurgia, Italy, 1921 member of the hospital corps of the Italian army during World War I, served as clinical instructor in pediatrics at the University of California Medical School, died January 5, aged 52, of acute bronchial obstruction and pulmonary atelectasis

**John Henry Goebel**, Racine, Wis , Wisconsin College of Physicians and Surgeons, Milwaukee, 1909, on the staff of St. Lukes Hospital died February 1, aged 62, of lobar pneumonia and chronic nephritis

**Martin Luther Golberg**, Minneapolis Minneapolis College of Physicians and Surgeons 1901, member of the American Medical Association, died February 26, aged 69, of coronary thrombosis

**Harry Templar Guss**, St. Petersburg, Fla., Jefferson Medical College of Philadelphia, 1886 formerly employed in the insurance medical section of the U S Veterans Bureau, died January 19, aged 86

**Morris H Herzman** ⊕ Chicago, Jenner Medical College, Chicago 1898 died February 4, aged 78, of coronary thrombosis

**George Yerger Hicks**, Dallas Texas Tulane University of Louisiana School of Medicine, New Orleans, 1932, interned at the Southern Baptist Hospital in New Orleans, served a residency at the Mississippi State Charity Hospital, Vicksburg, Miss , served in the medical corps, Army of the United States, during World War II formerly associated with the city health department died in a local hospital January 11, aged 39, of gastric hemorrhage.

**Albertus Tribue Hoxie**, Dearborn Mich , University of Michigan Homeopathic Medical School, Ann Arbor, 1901, died in the Wayne County General Hospital, Eloise, February 8, aged 85, of arteriosclerosis

**John Rogers Hudson**, St. Louis, College of Physicians and Surgeons of Chicago, 1896 served during the Spanish-American War, died January 3 aged 89

**Frank Orville Hunt**, Fall River, Wis Bennett College of Eclectic Medicine and Surgery Chicago 1890 member of the American Medical Association, served as health officer of Fall River, died February 8, aged 78, of coronary thrombosis

**Fayette Lane Inslee** ⊕ Le Raysville, Pa., Medico-Chirurgical College of Philadelphia, 1898, past president of the Bradford County Medical Society, examining physician for the draft board during World War I, for many years school director and physician for the board of health, died February 8, aged 74, of angina pectoris

**George Wiley King**, Atlanta Ga., University of the South Medical Department, Sewanee, Tenn., 1896, died January 12, aged 73, of cardiovascular renal disease

**Arthur Lewis Loebel**, New Orleans Chicago Medical School, 1945 assistant surgeon U S Public Health Service, Reserve, died January 12, aged 28

**Charles Hodge Lyon** ⊕ Phillipsburg, N J University of Pennsylvania Department of Medicine, Philadelphia, 1898, formerly a medical missionary served during World War I, for many years designated medical examiner for Phillipsburg for the Veterans Administration on the staff of the Warren Hospital, died April 19, aged 72, of carcinoma of the liver

**William Tarlton McCurdy**, Stone Mountain, Ga., Atlanta Medical College, 1897, died February 13, aged 70, of myocardial heart disease.

**Jesse H Martin**, Selma, Ala Mississippi Medical College, Meridian 1909, Memphis (Tenn.) Hospital Medical College, 1910 member of the American Medical Association, died January 31, aged 64

**Clarence Warren Mehlhop**, Washington, D C , University of Michigan Department of Medicine and Surgery, Ann Arbor, 1899, served during World War I, for many years affiliated with Veterans Administration, died in the U S Naval Hospital, Bethesda, Md, January 19, aged 73

**Wendell Holmes Montgomery** ⊕ Louisville, Ohio, University of Pittsburgh School of Medicine, 1921, served during World War I, died January 20, aged 53

**Francis Joseph Mulligan**, Newton, Mass , Boston University School of Medicine 1928, member of the American Medical Association, examining physician for the city health department, on the courtesy staff of the Waltham (Mass ) Hospital, on the staffs of Newton-Wellesley Hospital in Newton and St Elizabeth's Hospital in Boston, where he died February 5, aged 44, of rheumatic heart disease.

**Pirl B Myers** ⊕ El Reno, Okla , National University of Arts and Sciences Medical Department, St. Louis, 1912, died March 24, aged 57, of coronary occlusion

**Leo Lewis Newfield**, Los Angeles, University of Michigan Medical School, Ann Arbor, 1921, died January 3, aged 51

**Elmer Ree Newland** ⊕ Drakesville, Iowa, Keokuk Medical College, College of Physicians and Surgeons, 1904, died February 6, aged 66, of coronary thrombosis

**Charles Hannibal Nims** ⊕ Hot Springs National Park Ark., University of Michigan Department of Medicine and Surgery, Ann Arbor, 1897 member of the Radiological Society of North America, Inc served during World War I, died February 6, aged 75, of paralysis agitans with progressive degenerative myocarditis

**George Henry Noble**, St Augustine, Fla. Columbia University College of Physicians and Surgeons, New York 1917, died February 11 aged 55, of coronary thrombosis

**Richard Smith Pickler** ⊕ Beloit, Kan., John A. Creighton Medical College Omaha, 1912, served in France during World War I, died February 23, aged 61, of heart disease.

**Frederick James Port** ⊕ Peoria, Ill College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois 1912, past president of the Christian County Medical Society, formerly surgeon for the Peabody Coal Company in Taylorville, died February 15, aged 59, of coronary thrombosis

**Samuel P Radin** ⊕ Aliquippa, Pa., Western Pennsylvania Medical College, Pittsburgh, 1906, died February 11, aged 64, of coronary thrombosis

**Charles Clay Reed Sr**, ⊕ Little Rock, Ark. University of Arkansas School of Medicine, Little Rock, 1906, on the staffs of the Baptist State Hospital and St. Vincent s Infirmary, where he died February 16, aged 71 of coronary occlusion

**Joseph Loram Reed**, Wilmot, Ohio Ohio Medical University, Columbus, 1897, died January 17, aged 78

**Charles Washington Reid**, Pelham, Ga. Atlanta Medical College, 1882, member of the American Medical Association, served as president and secretary of the Mitchell County Medical Society, charter member of the local board of education, died January 1, aged 87

**William Gifford Rice**, Cheboygan Mich University of Michigan Department of Medicine and Surgery, Ann Arbor, 1891, served on the staff of the Little Traverse Hospital in Petoskey died February 4, aged 76, of coronary occlusion

**Edgar T Riley**, Frenchburg, Ky , University of Louisville Medical Department, 1896, member of the American Medical Association, health officer of Menifee County for many years, died February 15 at Elkton, aged 71, of cerebral hemorrhage

**Herman Call Runyan**, Alexandria, Ind., Rush Medical College, Chicago, 1906 member of the American Medical Association, served during World War I, health officer, died January 8 aged 68, of acute circulatory collapse

**James H Sanderson**, Detroit Michigan College of Medicine and Surgery, Detroit, 1890, member of the American Medical Association formerly secretary of the Wayne County Medical Society, died January 30, aged 84, of carcinoma

**Bernard Schloasmann** ⊕ Milwaukee Rush Medical College Chicago, 1919 died in the Mount Sinai Hospital January 27, aged 53 of carcinoma of the rectum.

**Irvin William Sherwood**, Columbus, Ohio, Starling Medical College, Columbus, 1901 member of the American Medical Association, died December 31, aged 76

**George Francis Shiley** ⊕ Seattle, State University of Iowa College of Medicine, Iowa City, 1903, for many years affiliated with the city health department, died in February, aged 69, of pneumonia.

**James Rex Sholl,** St Petersburg, Fla , Chicago Homeopathic Medical College 1904, also a D D S , served during World War I , at one time health officer of Peoria, Ill , died February 21, aged 65, of carcinoma of the cecum

**Charles Sherman Smith,** Clarkesville, Ga , University of the City of New York Medical Department, New York, 1892, member of the American Medical Association and the Rhode Island Medical Society, died February 11, aged 82, of organic heart disease.

**Albert L Smither,** Chaplin, Ky , University of Louisville (Ky ) Medical Department, 1888, died February 25, aged 84, of injuries received in an automobile accident

**A H Sorrelle,** Brownsville, Tenn , Memphis Hospital Medical College, 1907, member of the American Medical Association, died January 10, aged 64

**Lester James Spinharney,** Cherokee, Iowa, Creighton University School of Medicine, Omaha, 1923, member of the American Medical Association, served as city health officer, died February 14, aged 46, of coronary thrombosis

**Robert Sponner,** Milwaukee, Medizinische Fakultät der Universität Wein Vienna, Austria, 1904, member of the American Medical Association, died in Tucson, Ariz, February 3, aged 66, of arteriosclerotic heart disease.

**Harry Frank Stamos** ⊕ Detroit, University of Michigan Medical School, Ann Arbor, 1929, interned at St. Joseph's Mercy Hospital, where he was staff consultant, began active duty as lieutenant commander in the medical corps of the U S Naval Reserve, April 1, 1942, retired June 29, 1943, died December 12, aged 42

**Edmund Arthur Steenburg** ⊕ Aurora, Neb Rush Medical College, Chicago, 1887 served as president of the Hamilton County Medical Society, died February 1, aged 80, of pulmonary embolism

**Frank Stockman,** New York, Long Island College Hospital, Brooklyn, 1905, died January 7, aged 68, of carcinoma of the stomach

**Charles Wright Stoughton,** Westerville, Ohio, Ohio Medical University, Columbus, 1901, died February 23, aged 72, of diabetes mellitus

**Charles Clifton Stroup,** Bloomington, Ind , Rush Medical College, Chicago 1900 for many years school physician, died February 14, aged 74, of arterial hypertension.

**Longin Tabenski** ⊕ Chicago, Chicago College of Medicine and Surgery, 1914, served during World War I , member of the staff of St. Mary of Nazareth Hospital, died in the Veterans Administration Facility, Hines, February 15, aged 59, of coronary heart disease.

**Oliver P Templeton,** Fairfax, Mo Physio-Medical Institute, Cincinnati, 1878, also a druggist, died in the Missouri Methodist Hospital, St. Joseph, February 2, aged 91, of uremia

**Michael H Thielen,** Grundy Center, Iowa, State University of Iowa College of Medicine, Iowa City, 1898, member of the American Medical Association, died in St Francis Hospital, Waterloo, February 24, aged 79, of pneumonia and uremia

**William C Thompson,** Waterloo, S C., Chattanooga Medical College, 1900, died December 19, aged 71

**John William Tinder,** Detroit, Medical College of Indiana, Indianapolis, 1892, served during World War I , died February 5, aged 81, of cerebral hemorrhage.

**William Marshall Trowbridge** ⊕ Viroqua, Wis , Chicago Homeopathic Medical College, 1893, member of the board of pension examiners for Vernon County, died in Rochester Minn , January 23, aged 79, of pneumonia

**Eldridge Curts Turner,** Sacramento, Calif , University of California Medical Department, San Francisco, 1905, member of the American Medical Association, on the staff of the Mercy Hospital, where he died February 9, aged 62, of heart disease.

**Wilson Lewis Vickers** ⊕ Franklin, Ky Vanderbilt University School of Medicine Nashville, 1915 owner of the Vickers Hospital, where he died February 13, aged 61, of bronchopneumonia

**Frederick Symonds Wakefield,** Lewiston, Maine, Columbia University College of Physicians and Surgeons, New York 1899, member of the American Medical Association, ophthalmic surgeon emeritus at the Central Maine General Hospital, where he died January 20 aged 72, of chronic uremia, bilateral hydronephrosis due to chronic urinary retention and prostatic hypertrophy

**Wiley H Ward,** Cumby, Texas (licensed in Texas under the Act of 1907) died February 13, aged 79, of coronary heart disease

**Charles Thomas Way** ⊕ Cleveland, Western Reserve University School of Medicine, Cleveland, 1921, assistant clinical professor of medicine at his alma mater specialist certified by the American Board of Internal Medicine, fellow of the American College of Physicians, past president of the Academy of Medicine of Cleveland, on the staff of St Luke s Hospital, died in the University Hospitals February 4, aged 58 of bronchopneumonia and cardiovascular renal disease.

**Henry Emerson Wetherill,** Audubon, Pa., University of Pennsylvania Department of Medicine, Philadelphia, 1893, died March 4, aged 74, of heart disease.

**Carl C White,** Mathews, Va , Baltimore Medical College, 1897, secretary of the county board of health, died February 3, aged 77, from a fracture of the hip incurred in a fall

**James D Whittaker,** Cannel City, Ky , Kentucky School of Medicine, Louisville, 1894, member of the American Medical Association, formerly state senator, died January 23, aged 74, of arteriosclerotic heart disease.

**Ozion Price Wilson,** Moundsville, W Va , Kentucky University Medical Department, Louisville, 1904, member of the American Medical Association, member of the staff of the Reynolds Memorial Hospital in Glen Dale, for many years physician for the West Virginia Penitentiary, died February 16, aged 68, of coronary thrombosis and hypertensive heart disease

**Alfred Millard Wose** ⊕ Syracuse, N Y , Harvard Medical School, Boston, 1901, assistant professor of clinical surgery (urology) at the Syracuse University College of Medicine, member of the American Urological Association and the Syracuse Academy of Medicine, on the staffs of St Joseph's and Syracuse Memorial hospitals, died February 13, aged 69, of coronary occlusion

**H Sanford Yost,** Fairmont, W Va Indiana Eclectic Medical College, Indianapolis, 1890, died February 17, aged 77, of cerebral hemorrhage.

## PUBLIC HEALTH SERVICE

**Carl Michel** ⊕ Rear Admiral Assistant Surgeon General, U S Public Health Service, Washington, D C , College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1912, born in Chicago May 4, 1890, following his internship in the U S Marine Hospital in Chicago was detailed to assist the Indiana State Board of Health during the floods of 1913 appointed an instructor in bacteriology at his alma mater, later detailed work on plague eradication measures in New Orleans and studied the etiology of pellagra at Rankin State Farm Mississippi, later assigned at Ellis Island N Y , on declaration of World War I was temporarily transferred from the public health service to assignment as medical officer in the Coast Guard, this duty terminated in February 1918, when he was attached to the hospital division of the public health service, Washington, D C , in 1921, at the request of the Mexican government, he was ordered to Tampico, Mexico to institute control measures in an outbreak of bubonic plague, an outbreak of plague in Los Angeles in July 1925 resulted in duty at that city, to be followed by another detail at Seattle, in August 1927 was transferred to Arkansas for flood relief work and the organization of twenty-three county health units during an assignment to Miami, Fla in the summer of 1930, organized a standard airplane quarantine system and was first to call attention to the fact that airplanes may carry mosquitoes, bringing such diseases as yellow fever and was instrumental in establishing a system of inspection of airplanes to eliminate this danger in 1932 in conjunction with Pan American Airways, designed plans for airplane quarantine stations which were incorporated into a new airplane terminal at Miami, after five years as chief medical officer of the U S Coast Guard Academy at New London Conn, reported to Coast Guard headquarters in July 1940 for duty as chief medical officer, since that time the medical division has expanded to many times its former size and much progress has been made under his direction in relation to constructing additional medical and dental facilities for the wartime personnel of this branch of the service, in November 1943 became assistant surgeon general with the rank of rear admiral, died in the U S Naval Hospital Bethesda, Md, January 3 aged 55, of cerebral hemorrhage.

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

May 4, 1945

### Second Reading of National Health Service Bill

The minister of health, Mr Aneurin Bevan has at last published his proposals for a national health service In moving the second reading of the bill in the House of Commons he said that the first reason why a health scheme was necessary was that all parties agreed that money ought not to stand in the way of obtaining an efficient health service The national health insurance system already provided a general practitioner service for 21 million, but the rest of the people had to pay whenever they desired the services of a doctor A person ought not to be financially deterred from seeking medical assistance at the earliest stage. One of the evils of having to buy medical advice was anxiety about doctors bills In an overwhelming number of cases the services of specialists were not available to poor people Further, our hospital organization had grown up with no plan or system It was unevenly distributed over the country, and often the best hospital facilities were available where least needed Many hospitals were much too small About 70 per cent had fewer than 100 beds and over 30 per cent fewer than 30 To be efficient a hospital must provide specialist services which small hospitals could not In other respects the health of the people was not properly looked after Their teeth were a reproach, and there was a woful shortage of dentists Only 25 per cent of the people could get their eyes tested and obtain spectacles Sufficient attention had not been paid to deafness and the provision of cheap hearing aids

One of the first merits of the bill was that it provided a universal health service and was intended to universalize the best health advice and treatment The three main instruments were the hospitals general practitioners and health centers The hospitals in many ways were the vertebrae of the health system, but it was repugnant that they should have to rely on private charity In the future 80 to 90 per cent of the revenue of the voluntary hospitals would be provided by public funds, and they could no longer be called voluntary His decision that the voluntary system must go had given rise to considerable resentment. How could the voluntary hospitals be articulated with the municipal ones? The only course was to create an entirely new hospital service to take over both By grouping the hospitals round the medical schools they would provide what was badly needed—means by which the general practitioner would be kept in more intimate association with new medical thought, practice and training One of the shortcomings of the existing medical service was the intellectual isolation of the general practitioner in many areas The appropriate hospital unit was 1 000 beds Specialist service could be provided only with a grouping of that size The hospitals would be administered by regional boards drawn from members of the medical profession, major public health authorities in the area, medical schools and those experienced in voluntary hospital administrations

As to the general practitioner service, his proposal was that general practitioners should not be in direct contact with the Ministry of Health but in contact with new bodies, on which doctors dentists and pharmacists would have half representation The whole scheme would give a greater degree of medical representation than ever before. It would strengthen democracy by giving doctors full participation in the administration of their own profession. They would not become civil servants Regarding the distribution of doctors, he regarded the present condition as most harmful to the health of the people. He gave figures showing a variation in different towns from one doctor to 4,100 persons to one to 1,200 If the country was to get doctors where they were most needed, it could not allow a doctor to go to a particular area because he had bought a practice He always regarded the sale of medical practices as an evil, it was tantamount to the sale of patients With regard to remuneration, the profession was not ripe for a fully salaried service There must be some reward for zeal He therefore proposed that capitation should remain the main source of income, but there would be a basic salary

Health centers would vary in size There would be larger ones with dental clinics, maternity and welfare services and general practitioner consultative facilities, and smaller ones where the practitioner could see his patients

#### OPPOSITION TO THE BILL

Mr Willink, minister of health in the coalition government, moved an amendment "That this House, while wishing to establish a comprehensive health service, declines to give second reading to a bill which prejudices the patient's right to an independent family doctor, which retards the development of hospital services by destroying local ownership and gravely menaces all charitable foundations by diverting to purposes other than those intended by the donors the trust funds of the voluntary hospitals and which weakens the responsibility of the local authorities without planning the health service as a whole" Mr Willink said that the opposition totally disagreed with the intention of the labor party to organize the medical profession as a national full time, salaried pensionable service The bill would enable this to be accomplished in time. This view is confirmed by a reply made later in the debate by Mr Bevan When challenged on the point he said "There is all the difference in the world between plucking fruit when it is ripe and plucking it when it is green" Another argument used against the bill was opposition of the great majority of the medical profession and of the three Royal Colleges of Physicians, Surgeons and Obstetrics and Gynecology After a protracted debate extending over three days the opposition amendment was negative by 359 votes to 172, and the bill was read a second time

## MOSCOW

*(From Our Regular Correspondent)*

April 2, 1946

### Thirty-Six Days of Starvation in the Open Sea

An interesting case of prolonged starvation was recently reported in the *Naval Military Surgeon* by Capt. P Yeressko Jr of the Naval Medical Corps of the Black Sea Captain Yeressko left the Crimea in July 1942 when the Nazi troops invaded the peninsula, in a small boat with three comrades, they had only one small flask of fresh water and three cans of preserved fish for food The crew rowed in turn during the first three days, but rowing soon became impossible They decided to lie quietly without moving or speaking The feeling of hunger was very strong for the first week, but later it diminished, nevertheless, the thoughts of the crew were continually about eating By the end of the third day all fresh water was gone Captain Yeressko proposed that they drink sea water, to which all four men gradually became accustomed By chance it was noticed that tablets for chlorinating water gave it a somewhat better taste Later the four men became so accustomed to sea water that on the fifth day all could drink about a quart and a half daily However, when it was possible the crew enthusiastically drank rain water

During the first fifteen days there was a keen feeling of starvation backache, ache in the muscles of feet, fatigue, shortening of work capacity, reduction of weight, decrease of the pulse rate *(about 56 per minute)*, decreased sweating, and dryness of the skin These symptoms became more intense after the fifteenth day, and nervous and psychic symptoms such

as hallucinations and loss of consciousness were added The first member of the crew died on the nineteenth day, the second on the twenty-fourth day and the third on the thirtieth day of starvation Captain Yeressko was rescued unconscious by a passing ship on the thirty-sixth day of starvation He lost 22 Kg during those five weeks On the seventh day after rescue, when eating meat for the first time instead of the usual tea, gastric distress with diarrhea developed and was controlled only after treatment with hydrochloric acid and pepsin

Although more than two years have passed Captain Yeressko notes that fresh water and ordinary food still taste undersalted

### The Death of Alexis Zavarzin

Prof Alexis Zavarzin died on July 25, 1945 after a disease of long duration He received his scientific education from the Russian histologist A Dogel and soon became a brilliant research worker In 1914 he became a privatdozent in the University of St Petersburg, and in 1916 he was elected professor at the University of Perm In 1922 he assumed the chair of histology and embryology in the Military Medical Academy and later in the Naval Medical Academy He was one of the founders of the All-Union Institute of Experimental Medicine, where he headed the anatomy department until his death Zavarzin's principal work, 'Essays on Evolutional Histology of the Nervous System," is considered the best monograph of Soviet scientific literature He received for this work the Stalin Award In 1943 he was elected a member of the Soviet Academy of Sciences He did not cease work during the war and though evacuated to Tomsk in Siberia began to write a monograph on the evolution of the connective tissue He published more than a hundred scientific works

## COPENHAGEN

*(From a Special Correspondent)*

April 24, 1946

### BCG Vaccination in Denmark

Much work on BCG vaccination against tuberculosis was carried out in different parts of Denmark during the war, and if it had not been for the inhibitory influence of the German occupation and the engrossing interest of diphtheria immunization BCG vaccination would have been carried out on a nationwide scale. Even so, the experience gained during the war has proved far reaching and instructive. There are two main reasons why this measure has gained so much ground of late The first concerns its intrinsic merits The second hinges on the fact that it has been sponsored by the State Serum Institute and other influential bodies representing the most expert talent in the country In December 1945 the public health authorities conferred with the Danish National Association against Tuberculosis with a view to calling a representative conference early in 1946 When it was held in February of this year its members included a representative cross section of the Danish medical profession One of the reports presented to this conference dealt with the experiences of all the tuberculosis dispensaries in the country This report showed that BCG vaccination was carried out so systematically among tuberculin negative school children between 1940 and 1945 that in another two years all school children between the ages of 10 and 14 requiring such immunization will have undergone it

### New Maternity Welfare Legislation

For some years before the second world war Danish medical practitioners had united in a voluntary system of maternity welfare with special reference to prophylactic measures during pregnancy This movement was outside the scope of the health insurance societies which were pledged to therapeutic but not to prophylactic activities on behalf of expectant mothers The movement has now been changed from an unofficial and voluntary basis to an official footing by the adoption of the Pregnancy Hygiene Law on Oct 1, 1945 by the Rigsdag This law came into force in December last year and provides for three prophylactic medical examinations by a doctor and up to seven examinations by a midwife for every pregnant woman requesting such examination free of charge The state, not the health insurance societies, defrays the expenses of this measure, the adoption of which so soon after the end of the war was hastened by the great increase of syphilis during the war After discussions with the Danish Medical Association and the Danish Association of Midwives, the government fixed the remuneration for doctors at 10 kroner for the first examination, 5 kroner for each of the two following examinations and 3 kroner for each examination by a midwife The medical examination includes a Wassermann test at the State Serum Institute free of charge There is not any fee for medical examination if pregnancy is not demonstrable The first medical examination is to be made at the beginning of pregnancy and is to include the Wassermann test The second examination should be about the middle of pregnancy and the third examination about six weeks before confinement is expected The framers of this law have been careful to invoke the aid of the general practitioner rather than that of a selected group of specialists in this scheme This will maintain the interest of general practitioners in the movement and they will be encouraged more than ever to link preventive with therapeutic measures

### Diphtheria Immunization in Copenhagen

The work of the State Serum Institute and of the Blegdam Fever Hospital serving Copenhagen has recently been correlated and studied by Dr J Ipsen He has investigated the diphtheria immunity of the adult population of Copenhagen and has found that persons who had contracted diphtheria more than fifteen years earlier did not possess more antitoxin than those who had never contracted this disease One of the most remarkable findings is the shift of the age incidence of diphtheria in recent years Until 1941 the ratio of child to adult cases of diphtheria was 5 to 1 In 1941 the voluntary vaccination of children in Copenhagen against diphtheria became general, and when the last wave of diphtheria began in 1943 the ratio of child to adult cases was 1 to 1 8 and in 1944 it was 1 to 2 2 In the same year more than 90 per cent of all the children in Copenhagen between the ages of 4 and 15 had been vaccinated This shifting of the age incidence of diphtheria has been accompanied with a greatly increased mortality rate, which in 1943 and 1944 was between 8 and 9 per cent, as compared with 2 to 4 per cent earlier Dr Ipsen suggests that this change must be attributed to the sudden appearance in 1943 of the "gravis type." His investigation of the antitoxin content of the blood in vaccinated persons is all the more valuable because the same technic and the same vaccine are employed everywhere in Denmark The interval between the first and second injections is one month and between the last two injections is one year Dr Ipsen concludes from his investigations that "the Danish vaccine has stood the test of a serious epidemic"

## Marriages

James L. Fender, Bamberg, S C, to Miss Betty Petty of Belleville, Ill, in St Louis, March 23

James K Cunningham, Newark, Ohio, to Miss Ann Loren Wilson at Camp Lejeune, March 30

Reid Hogan Anderson, Pullman, Wash, to Miss Uva Louise Teiser of Henderson N C, April 22

Stanton L. Collins, Fort George Mead, Md., to Miss Anne Keith of Columbia, S C April 7

John C Hanley to Miss Ruth Grey Argersinger, both of Lewistown, Mont., April 27

Gayle G Arnold to Miss Elizabeth Key Boyle, both of Baltimore, Nov 17, 1945

# Correspondence

## THE CASE HISTORIES OF DOCTORS' ILLNESSES

*To the Editor* —I intend to publish in book form a collection of subjective case histories written by physicians, if a sufficient number of suitable contributions can be obtained

The response of patients to disease is essentially second hand knowledge, since it is by necessity based on information provided by patients Since the development of ever wider and more refined methods for the objective evaluation of morbid conditions, the information that only the patient can give has more and more been relegated to the background This tendency is enhanced by the much greater variety of individual symptoms than that of objective signs Apparently uncontrolled variables (namely, the patients' response) are obviously less valuable in diagnosis and prognosis than are objective, recordable and preferably measurable signs and laboratory findings Within limitations this tendency is scientifically sound and fertile. However, it needs to be complemented by a fuller knowledge of patients subjective experience of disease This refers to a much broader field than what is customarily called symptoms Parenthetically it may be noted that the understanding, analysis and treatment of symptoms per se tend to be neglected in modern scientific medicine. Such neglect deprives the physician of most valuable diagnostic hints and the patient of relief that he may justifiedly expect. The physician who has had no intimate subjective experience with disease is apt to underrate greatly the patient's overwhelming interest in symptoms, falsely assuming that the patient always shares with him his dominating interest in diagnosis

The full significance of the argument will be understood only if the term "symptoms" is used to mean the total subjective experience of the patient caused by disease. To the commonly acknowledged symptoms, such as pain, fatigue and nausea must be added such subjective experiences as are related to the mental, emotional, social and economic aspects Any subjective experience proceeds not in a theoretical vacuum of the "normal' or 'average" person but within the canvass of an established personality with all its modalities of intellect, emotions, faith, codes of behavior and social and economic realities The argument may then well be encompassed in two main questions

1 How has my personality (in the fullest sense of the word) *modified* the disease?

2. How has the disease modified my personality?

A fertile approach to this problem is to induce physicians to analyze and describe their own experience with diseases they have or have had The combination of objective medical knowledge with the subjective experience should be particularly fruitful of original contributions in this field While many subjective case histories could be and have been culled from autobiographies and from case reports, the present purpose has been advanced by only a small percentage of them, mainly because most of them were not written with the specific aim in mind.

I contemplate, therefore, publishing a collection of subjective clinical descriptions, written by physicians who have, or have had, certain diseases In such a collection, emphasis should be placed on chronic or recurrent diseases, because they are likely to show, more than acute ones, modifications caused by the patients' individuality and more of such significant marks as disease may leave on the individual in his mental, emotional, physical, social and professional life.

Each contributor should be limited by no other concern than the general aim of the collection It is therefore expected that objective clinical details be limited to that minimum which is germane to the story Full emphasis should be given to subjective symptoms, especially to those that the usual textbooks consider unessential or fail to mention Considerable details are expected in the matter of psychologic attitude to the disease as such, to pain, to the prognosis—right or wrong—to the limitations imposed by the disease or its consequences, to accomplished or attempted readjustments, and to peculiarities of the premorbid personality if it is essential to the total picture.

I am aware of the inherent difficulties and pitfalls In many discussions the main and first objection raised was the impossibility of getting "unbiased accounts" This is simply met by the answer that unbiased accounts are neither expected nor desired, since it is precisely the individual experience that should be told There will presumably be the contributor with exhibitionistic tendency, and the stoic on the other extreme Proper editorial selection, it is hoped, will provide balance and the desired variety

Each contributor will have the choice whether or not he wishes to remain anonymous, and, if anonymity is desired, it will be strictly maintained

Physicians who may be interested in contributing reports of their illnesses are invited to write to

MAX PINNER, M D, Editor,
American Review of Tuberculosis,
463 Vermont Avenue,
Berkeley 7, Calif

## QUININE AS PROVOCATIVE TEST IN MALARIA

*To the Editor* —The remarks by Commander Fred A Butler in the January 5 issue of THE JOURNAL deserve a little additional comment He states that 'the use of quinine as a provocative measure has not to my knowledge, ever been reported before and requires confirmation" My own experience at a Southwest Pacific naval hospital revealed several cases in which the thick blood smear showed malarial parasites for the first time after the administration of 1 Gm of quinine. That this experience was not unique is indicated by the statement on page 90 of Stitt's Diagnosis, Prevention and Treatment of Tropical Diseases (ed 6) 'Provocative measures to produce a relapse with a reinvasion of the blood by malarial parasites are occasionally employed for diagnostic purposes Among these may be mentioned fatigue, refrigeration, exposure to sunlight, administration of small doses of quinine for ten to fourteen days "

BERNARD M JACOBSON M D, Boston

## "PHYSIATRIST" FOR PHYSICIAN SPECIALIZING IN PHYSICAL MEDICINE

*To the Editor* —An editorial comment in THE JOURNAL, May 4, suggests the term "physiatrist" for physicians who specialize in physical medicine. Many lay folk now have difficulty determining the spelling and significance of the words psychiatry, psychiatrist and psychologist. "Physiatrist" will further confuse. Psychiatrists will be answering calls from patients seeking physiatrists Physiatrists will be embarrassed by unwelcome maniacal and paranoid guests "Physiatrician," the second of three terms suggested, is discriminated better That he is a physician rather than a lay healer is denoted by the last syllable of this term.

Please publish my protest to the term "Physiatrist."

RUSSELL G MACROBERT,
Neuropsychiatrist,
Captain, MC (S), USNR.

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Prepayment Medical and Surgical Plans Limitations, Good Faith of Physician Member**—The plaintiff sued King County Medical Service Corporation to recover for the surgical expense of having a "stomach ulcer removed by a physician member of the defendant organization From a judgment in favor of the plaintiff, the defendant appealed to the Supreme Court of Washington

The King County Medical Service Corporation, a charitable organization founded some years ago by a large number of physicians and surgeons in Seattle, Washington, entered into a contract with the Seattle-Tacoma Shipbuilding Corporation plaintiff's employer, to furnish certain surgical and medical services to its employees, among which were the following

Services (a) All surgical services reasonably required for any operation and/or for any accidental bodily injury to the patient for a period not to exceed twenty six (26) weeks.

(b) All medical services reasonably required for the treatment of any disease and/or any sickness and/or any accidental bodily injury to the patient for a period of not to exceed Twenty six (26) weeks

The contract also provided

8 The medical director of the company who is hereinafter referred to as the 'medical director or any physician whom he may designate shall have the exclusive and absolute right to determine whether any patient is entitled to treatment, and if so to what treatment, and any such determination made in good faith shall be deemed and held to be conclusive and binding upon the company the patient his heirs executors administrators and dependents and upon the employer if the employer be interested and upon those offering said services

Terms Limitations and Exclusions The physician shall not be required to treat

3 Any preexisting sickness injury or physical disability whether patent or latent and their complications and sequelae from which the patient may be suffering or which may originate or exist prior to the commencement of his relationship with the company and the medical director or a physician whom he may designate shall in line with the authority conferred upon him in paragraph 8 of the agreement have the exclusive and absolute right to determine the question whether or not any such condition originated or existed prior to the commencement of the relationship between the patient and the company and further, that any such determination made in good faith shall be deemed and held to be conclusive and binding upon the patient his heirs executors administrators and dependents and upon his employer if any there be interested and upon the company and upon the physician

The plaintiff, as an employee of the Seattle-Tacoma Shipbuilding Corporation, became a contributor in 1942 and thus became entitled to the privileges of the contract existing between his employer and the defendant, King County Medical Service Corporation At 11 p m on Aug 23, 1942 the plaintiff became violently ill Dr Hagyard a member of the defendant organization, was called and determined that an operation should be performed at once Plaintiff was rushed to the hospital where Dr Hagyard operated and found a perforation of the bowel, the perforation being right in the center of a hard mass which the doctor discovered to be an ulcer Because the immediate condition of the patient did not permit the removal of the ulcer at that time, Dr Hagyard closed the perforation by covering it with layers of fat so that food and fecal matter would not escape into the abdominal cavity Both before and after the plaintiff had left the hospital he was informed that he still had a "stomach ulcer" The physician did not recommend the surgical removal of this ulcer, however, but suggested that medical treatment be tried first and accordingly prescribed a specific diet for the plaintiff to follow The medical treatment was unsuccessful, however, and in September of 1943 Dr Hagyard performed another operation on the plaintiff and at that time removed a "stomach ulcer" The defendant paid all the expenses of the first operation but refused to pay for the second operation

The question presented was whether the defendant corporation, under its contract, was bound to pay the expenses of the second operation The plaintiff argued that Dr Hagyard and the defendant purposely "attempted to avoid any liability for considerable expense by putting the plaintiff off, week after week, and not performing the operation which was necessary to effect a cure, putting him off until twenty-six weeks had expired" We have made a careful study of the statement of facts, said the Supreme Court, but cannot find any evidence to support the plaintiff's contention At one time during the trial the plaintiff was asked how long it was after the operation before he was ready to have the second operation performed The trial court sustained an objection made by the defendant on the ground that the question could be answered only by medical men We are compelled to hold, the court concluded that there was neither evidence, nor inference from the evidence to substantiate the plaintiff's contention The defendant argued that under its contract it was not compelled to pay for treatment of a disease for a period longer than twenty-six weeks and that the ulcer was a preexisting sickness for the treatment of which it was not liable. This contention, the court said, is founded on provisions of paragraph three of the rider to the contract Neither the jury nor the members of this court are able to determine the proper treatment of the plaintiff's ulcer The doctor attempted for over a year to cure the plaintiff but finally had to perform the operation. We cannot determine in the absence of medical evidence, and there was none, that the operation should have been performed within the period mentioned in the contract We must decide this case in favor of the defendant for the reason that the ulcer from which the plaintiff suffered was a preexisting disease for the treatment of which the defendant was not liable under its contract. Medical testimony showed that many people have ulcers of the stomach and never have any trouble or pain to indicate that they have the condition, which at a later date becomes acute We therefore conclude that there was no evidence which justified the court in submitting the case to the jury but that, on the other hand the evidence showed that the defendant had complied with its agreement contained in the contract Accordingly the judgment in favor of the plaintiff was reversed with instructions to dismiss the action—*Schultz v King County Medical Service Corporation 165 P (2d) 857 (Wash., 1946)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### BOARDS OF MEDICAL EXAMINERS BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL June 1 page 483

### EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY *Oral* New York Oct. 9 14 Sec Dr Paul M. Wood 745 Fifth Ave. New York 22.

AMERICAN BOARD OF DERMATOLOGY & SYPHILOLOGY *Written* Various centers Oct 7 Final date for filing application is Aug 15 *Oral* Cleveland Dec. 5 7 Sec., Dr George M Lewis 66 E. 66th St New York 21

AMERICAN BOARD OF INTERNAL MEDICINE *Written* Oct 21 Final date for filing application is July 1 Asst. Sec., Dr W A. Werrell 1 W Main St. Madison 3 Wis

AMERICAN BOARD OF OPHTHALMOLOGY *Oral All Groups Parts I and II* New York, June 1947 Final date for filing application is Dec 1 Chicago October 1947 Final date for filing application is March 1 Sec. Dr S J Beach, 56 Ivie Rd. Cape Cottage Me.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY *Part II Oral* Chicago January Final date for filing application is Nov 1 Sec Dr Guy A Caldwell 1136 W Sixth St Los Angeles 14

AMERICAN BOARD OF PEDIATRICS *Oral* San Francisco July 1 5 Sec. Dr Lee F Hill 3309 Forest Ave Des Moines, Ia

AMERICAN BOARD OF PSYCHIATRY & NEUROLOGY New York December Final date for filing application is Sept. 30 Sec Dr Walter Freeman 1028 Connecticut Ave. N W Washington D C

AMERICAN BOARD OF RADIOLOGY Chicago Nov 27 to Dec. 1 Final date for filing application is Sept. 1 Sec., Dr B. R. Kirklin Mayo Clinic Rochester Minn

AMERICAN BOARD OF SURGERY *Written Part I* Various centers, October Final date for filing application is July 1 Sec. Dr J S Rodman, 225 S 15th St., Philadelphia 2

AMERICAN BOARD OF UROLOGY *Oral* Chicago, February 1947 Final date for filing application is Nov 15 Sec., Dr Gilbert J Thomas, 1409 Willow St Minneapolis 4

# NATIONAL CONFERENCE ON RURAL HEALTH

## First Annual Meeting, Held in Chicago, March 30, 1946

### Purpose of Conference

DR F S CROCKETT, Chicago The purpose of this conference is to seek improvement in rural medical service Rural medical service is more than having a doctor in the community Good housing, warm clothing, a suitable diet, together with adequate health education are important factors in maintenance of rural health The problem is economic and social as well as professional Given all of these, yet the well trained physician cannot operate in a professional vacuum The good physician never ceases to improve his educational and professional skills He must have available diagnostic resources such as the laboratory, x-ray and an opportunity for consultation with his fellows and with those who have acquired special training, if he is to give the sort of service satisfying to his professional soul Attracting and retaining well equipped doctors, such as returning veterans and recent graduates, to areas some distance from medical centers will be helped by what we doctors and interested farm groups do here and carry back to our home states

The problem cannot be solved on a national level It must be worked out in the community where the need resides Every one in the community must join if any effort is to succeed One of the first things to be done is to find out where medical service is lacking Some states have made surveys of rural and urban medical facilities In some states councils have been created joining all elements within the state in this health effort. Committees of state medical societies should join actively with their comparable farm group committees in identifying themselves with existing state councils or inspiring the creation of such organizations where not now existing Since legislation to create more hospitals and other facilities may be passed by Congress rural areas will benefit. This feature should be of especial interest to us

Sound judgment should direct the location of hospitals and other facilities in relation to population served—distances that the sick can be transported, the physical features of roads and terrain and the professional personnel available for good results

Providing plans for the payment of good medical and hospital care is another part of our problem It is hoped that in all our states the medical profession will sponsor plans to aid those who find it difficult to pay for catastrophic illness In some states such plans already exist but serve principally industrial groups Our state committees should seek to extend these benefits to country people. One of the difficulties will be in application of such plans to farmers of the marginal type unable to pay the usual total premium for medical care and hospitalization insurance Whether the general plan of the Farm Security Administration could be adapted to this segment of our country population where the family pays something which in turn is supplemented by general taxation, remains to be seen I believe it has possibilities as well as difficulties At least it is something for our state committees to consider

It is our duty the duty of those we represent, to exercise the greatest vigilance wherever we believe our common interests are threatened through federal domination There can be too high a price paid for help Medical care of our farm people is a nationwide problem which can best be solved on a state and county basis This is your opportunity to do a constructive job in your own home states

### Address of Welcome

DR OLIN WEST, Chicago I extend to you in behalf of the Committee on Rural Medical Care of the American Medical Association and the American Medical Association and its constituent units a most cordial and sincere welcome. We are delighted to have in this audience representatives of national farm organizations, individual farmers, representatives of state medical societies and some physicians not representing any of those organizations The American Medical Association and its constituent units are sincerely interested in the efforts being made for the solution of the problems involved in the farm care. Some states have already organized committees representing organized agriculture. These problems are not going to be easy of solution Some of the problems involved are factors that are actually involved in biologic law, the very law of nature, and in economic law These laws are well nigh immutable Many of those factors or changes effected in those laws are going to be effected through process of evolution and not through revolutionary procedures

### The Farmers' Medical Care Problem

MR RANSOM E ALDRICH, Jackson, Miss The chief problem of medical care in rural America is cost. It is economic. It is social I live in a county that doesn't have an active practicing physician The nearest physician is 22 miles away The flat charge is a dollar a mile. The low income group in American agriculture simply doesn't get medical service from that kind of charge They go without it I don t know that the doctor can render service any cheaper than that. I know we must work out some type of prepayment plan We must work out a program of health centers, diagnostic clinics, ample service and large hospitals in the areas where they can be supported. Some of our people are too anxious to build hospitals in areas that can't support them Before a hospital is established there must be a survey made and adequate profession for maintenance in that community It would be a tragedy to have ghost hospitals all over America We can provide hospital services and adequate beds, and then I am urging your group to see that rural America has just as good a supply of doctors as any other group in America and that they are just as well trained Frankly, people think you have the standards too high for doctors Your costs are exorbitant. I don't entirely subscribe to that I do say we have a shortage and I think it is up to you and the agriculture group to stimulate interest in producing enough doctors to serve rural America From our committee of the American Farm Bureau Federation I pledge you our support in trying to work out a constructive long range adequate program

#### DISCUSSION

DR L W LARSON, Bismarck N D Rural health has always been a problem. Education of the farmer through the public schools and universities, press and radio and improvements in the means of transportation from the farm to the town and from the town to the city have certainly decreased the seriousness of the problem. However, two phases of the problem remain unsolved, they are (1) availability and (2) cost of rural medical care Availability of rural medical care resolves itself into the problem of either bringing the doctor to the people or making it possible for the people to get to the doctor The fees for the actual services rendered by the rural practitioner are not exorbitant, they are usually much lower than the fees charged for comparable services in urban areas Improvements in transportation, particularly in the development of good highways which are passable throughout the year, will accelerate the growing tendency of rural people to bring the patient to the doctor This will reduce the cost of medical care, it will conserve the time of the physician, who too often spends the majority of his working hours in traveling to and from his patient. The only solution of the problem of cost of rural medical care is to raise the level of the farmer's income or reduce the cost of the physician s services or spread the cost of medical care throughout a prepayment medical insurance plan

### A Public Health Program for Rural Areas

DR. FRED D. MOTT, Washington, D. C.—The disadvantage in rural health is chiefly with respect to those conditions which can be influenced directly by modern health educational and preventive services. Thus the death rates of rural infants, preschool children and youths 15 years of age and over were higher in 1940 than those of residents of large cities. While cities of 100,000 or more had an infant mortality rate of 34.3 in 1942, the rate was 43.3 in rural places and 44.6 in semirural towns. The rural maternity mortality rate in 1941 was almost one third higher than the big city rate. As of 1940 we find that the infectious and more or less preventable diseases take larger rural tolls. If we consider the most rural state and the most urban state in each of the nine census regions we find that, as a group, the most rural states had higher case rates in 1942 for chickenpox, whooping cough, mumps, scarlet fever, diphtheria, septic sore throat, malaria, bacillary dysentery, typhoid and paratyphoid, tularemia and smallpox. Trends show that tuberculosis and syphilis may soon become primarily rural. Despite gratifying progress since passage of the Social Security Act in 1935 there were still 1,242 counties in 1942, 40 per cent of all the counties in the nation, without full time county or district health departments. Excluding the people covered by municipal health agencies in these counties, there still remained 33 million people, one fourth of our national population, lacking the protection of a full time health department. Moreover, this consideration of the counties lacking any official health coverage gives only part of the picture. Few of the rural health departments that we do have are housed, staffed or financed in a manner adequate to do their job.

Competent authorities agree that $2 per capita is required to provide satisfactory public health services. Yet in rural counties the per capita expenditure for public health work is hardly 50 cents annually. Total expenditures by local health agencies in our most rural states in 1942 were at only about half the rate of those in the most urban states. A study of Farm Security borrower families in 1940 showed that only 37 per cent of children up to 8 years of age had been vaccinated against smallpox either at public health clinics or by private practitioners. In contrast, 89 per cent of children in this age group had been vaccinated in twenty eight large cities studied in the National Health Survey. The same story holds true for tuberculosis control, venereal disease control, health education or almost any other accepted function of a local health department.

The American Public Health Association has proposed a sound plan that would group counties with small populations into districts of at least 50,000 people. On this basis the 3,070 counties in the nation could be grouped into fewer than 1,200 districts, a far more sensible organization of public health than today's 18,000 independent, uncoordinated health jurisdictions. If rural communities would put up about one dollar per person per year themselves to match about another dollar coming from outside sources, far more could be done to improve rural health than anything we have accomplished up to this time.

Most states now have permissive legislation regarding the establishment of local health departments. Under these laws a county or a community may appropriate funds for public health. Surely we have reached the stage where we should insist on mandatory state legislation under which appropriate public health units would be established throughout the state and their financial support would be required. We already have laws of this kind governing the establishment of public schools. Similar legislation would be the surest way—and an entirely practical and intelligent way—to make public health services available to every rural citizen within a reasonable period of time.

The major public health problems today are the degenerative diseases of advancing years—the various diseases of the heart, the blood vessels and the kidneys, diabetes, cancer and arthritis.

I want to touch on the fundamental question of rural purchasing power and the medical purchasing power of farm families. In 1941 half of all farm operators had annual net cash incomes of less than $760 per family, including income from all nonagricultural sources. So far as rural medical purchasing power is concerned, as contrasted to general purchasing power, it is revealed most readily in the annual expenditures per person for medical care by median income families. Studies show that in 1941 median income urban families spent $26.76 per person for medical care, while median income farm families spent $14.37 per person, or hardly more than half the urban expenditure.

It is not surprising that there is so close a relationship between purchasing power and the distribution of physicians, dentists and nurses and of general and other types of hospital beds. Modern medical services of high quality cannot be provided without adequate resources in personnel and facilities.

Before we set out to solve the whole problem of payment for medical services on a voluntary basis we must not only face these cold factual income and expenditure figures but we must remind ourselves that fewer than 5 per cent of the whole population now receives general medical services on a prepayment basis. Less than 3 per cent of all farm people are covered even for Blue Cross hospitalization and, taking whole states, the states which are over 70 per cent rural had just 4.2 per cent of their population in Blue Cross plans last July 1 as against 18.7 per cent in the states over 70 per cent urban. We must note too that in voluntary plans offering general medical care—aside from those sponsored by the Department of Agriculture—the greatest urban rural disparity is found with respect to medical care insurance sponsored by medical societies. As of 1945, medical society plans covered 3 per cent of the population of the twenty states that are over 50 per cent urban, but in the twenty eight predominantly rural states they covered only one half of 1 per cent of the population.

Before we look at the voluntary prepayment approach with optimism, we must ask ourselves frankly how many farm families can afford to join comprehensive medical service plans. There is general agreement that a plan offering physicians' and specialist care, hospitalization, dental services and prescribed drugs would cost at least $100 for a family of average size. Studies show that farmers had to have net cash incomes averaging well above $2,000 in 1941 before they made average expenditures of $100 or more for medical care. The fact is that not more than 20 per cent of all farm operators had such incomes in 1941, counting income from all sources. The great majority of farm families throughout the nation simply cannot afford to purchase adequate health protection on a voluntary prepayment basis.

We have a choice to make. Each road we may choose has its toll. One road winds for a time through the field of voluntary health insurance. Although this road is an improvement over the past, its toll is one we should calculate honestly. It has its cost—in almost certain failure to bring anything approaching maximum health opportunity to the majority of our 57 million rural citizens. There is also a hidden cost behind these phrases that we must face. There are people living out over this broad land—people on farms and in villages—people whose babies get sick, whose children break arms and legs, who get every physical and mental disorder known to American medicine. These people want competent physicians nearby, they want a modern hospital within reach, they want certain specialists closer than the metropolis 200 miles away. And they want a simple and sure method of paying their share for the support of these essential resources. I, for one, am unwilling to say to representatives of the farm population that these objectives are utopian. On the contrary, they are realistic, they make sense and they are attainable. But it will take more than the road winding through the tempting pastures of voluntary health insurance to reverse the inexorable trends dictated by economic laws. We may choose this first road—for five years, for eight years or for ten years—but if we do, let us count the cost along with any gain.

There is another road we can choose today, the road charted by President Truman. It is broad and it is direct—the way of compulsory health insurance. In one sweep it cuts through the economic barrier, bridges the uncertainties of individual medical costs and stretches out into the future a solid economic foundation for all the challenging measures we can devise to build good health. This road also has its toll, but of a different sort. If we choose this road, the cost we shall pay will be found largely in the taxing of our minds and our imaginations to build, and build promptly, on the solid and unaccustomed economic base the system will provide.

Think for a moment what it would mean if we had this central core of national health legislation Medical purchasing power would be spread evenly the country over Hospital planning and construction proposals would suddenly have real meaning for rural people, for hospitals could be placed where needed once their maintenance was assured The urban-rural double standard would be wiped out—rural people would be assured the number of hospital beds they need and not just those they can support today Something like ten dollars per person would suddenly become available to pay physicians bills each year—$10,000 for every 1 000 rural people $20 000 for every 2,000 people Think of the opportunities this would create in hundreds of underserved rural counties Picture the flow of veteran physicians and new graduates into rural districts under these changed economic circumstances and with the assurance of hospital or health center facilities

Farm leaders have a responsibility to see that farmers know all the facts when they make their choice They should know all the strong and weak points about voluntary prepayment plans They should know the facts too about the President s program They should know that the day to day administration of the President s program will be local They should know that in this program local people and their doctors will serve as consultants in their localities They should know that—as always—they would choose their own doctors and their hospitals And they should know the cost of either course in terms of money Under the President's proposal for a national health program the farm family would pay from 3 to 4 per cent of net income for personal health services The average percentage of net cash income spent by farm families in 1941—for inadequate services—was actually 8 7 and the percentage spent by low income farmers was higher yet. It seems unlikely that farmers will miss the point or will fail to recognize the clear advantage to farm people and to entire rural states of pooling the resources of the whole nation to tackle this problem

DISCUSSION

DR. VICTOR JOHNSON, Chicago The small enrolment in voluntary plans for hospitalization and medical care cited by Dr Mott is deceptive since the absolute figures do not include the important factor of expansion and growth For example, a few years ago only 700 000 persons were enrolled in hospital prepayment plans In a few years this figure has been multiplied more than twenty times so that today there are twenty million people enrolled in one system alone the Blue Cross, which is the largest of the hospitalization insurance plans Again in the state of Michigan the medical care plan sponsored by the state medical society has grown to nearly a million subscribers or one in five to six of the population in a relatively few years We may look forward to growth of medical care insurance coverage in other states on the basis of the experiments in Michigan, so that in a few years there may be many more people insured for medical care than are now enrolled in the Blue Cross hospitalization plans

To be successful and to meet the needs of the country it is essential that prepayment medical care insurance be expanded greatly and provide a wider coverage. First this must be done for those who can pay their own premiums Such expansion should include the farm as well as the urban population of the country Negotiations are now under way between the California Physicians' Service and the Grange in California for group coverage of farm people Such arrangements should be consummated elsewhere as well so that farmers and city dwellers will enjoy the benefits of medical care insurance Secondly there must be efforts and experiments directed toward the inclusion of some of the indigent and the medically indigent in these programs 'How this can best be done presents a serious problem. Many of the indigent have chronic illnesses, and in many instances the illness may be the cause of the indigence Patients with such chronic illnesses as tuberculosis or mental and emotional derangements are soon likely to find their funds exhausted in the course of the illness Perhaps such groups must continue to be provided medical care as special problems outside the scope of prepayment insurance plans Certainly the inclusion of considerable numbers in these categories is likely to threaten the financial structure of any prepayment medical care plan On the other hand there is probably a large group of indigent or medically indigent people whose inclusion into medical care plans would not disturb the financial soundness of the programs or impose unduly high premiums on every one

Perhaps information concerning the best way to include such groups will be forthcoming from another major experiment in improved medical care being conducted in the state of Michigan under the auspices of the Michigan State Medical Society This experiment deals not with the indigent but with another group for whose medical care the federal government has assumed responsibility This group is that of the veterans with service connected disabilities The Veterans Administration has entered into contracts with Michigan Medical Service to provide care for this group employing the fee schedule of that prepayment insurance plan. The physician collects his fees from Michigan Medical Service which in turn bills the Veterans Administration This plan for veterans is also being organized in other states and may well provide a formula on the basis of experimentation for a considerable increase in the coverage of the lower income groups of this country by prepayment medical care plans

In our efforts to solve the problem of improved medical care it would appear wiser to proceed along these experimental evolutionary lines than to make sweeping revolutionary changes Experiments should be conducted even with compulsory medical care insurance in circumscribed areas or communities One such experiment is already under way in the state of Rhode Island, where compulsory insurance is employed in industry, with contributions by the state, by industry and by the insured employees Much has already been learned from this worth while experiment. After the first year of operation of this plan certain significant conclusions were reached by all participants, including the physicians It was found that red tape was excessive, interfering with the quality of medical care. It was also found that the costs of administration were more than was anticipated Finally it was found that there was need for decentralization of the program. The latter finding was particularly significant in the light of proposals for nationwide compulsory insurance, since Rhode Island is one of our smallest states with a relatively small population of both physicians and patients Such illuminating experiences promise to provide much valuable information for the extension of our experimentation into further methods for improving medical care in this country

Throughout all such efforts it is imperative that we keep ever before us the necessity for maintaining a high quality of medical care It would serve no useful purpose but rather produce much harm if extension of medical care to all geographic areas and to all the citizens of the country was to be accompanied by a deterioration in the high quality of medical care now being provided

### Health Program for Small Communities

MR HOWARD STRONG Washington D C. Rural health service may be broken down into three categories (1) medical service by physicians in private practice, (2) service through hospitals medical centers and clinics and (3) public health service through official agencies

The distribution of service by private physicians varies widely It is generally assumed that the proper ratio is about one physician for each 1,500 people. Cities and metropolitan areas have the largest number of physicians per thousand of population, while the rural areas have the smallest proportion.

The most immediate need is the supply of physicians for rural areas and there the situation at present is not too encouraging Sixty thousand doctors were called to the service. These men are now returning The majority are going back to their old practice But a sampling made by the Procurement and Assignment Service shows that only 23 per cent of this former practice is in towns of less than 5 000 and in the rural areas Between 15 000 and 20 000 of the returning physicians are young men who had established no practice before going into the service, and these men want to go to cities ranging between 25,000 and 250,000 There is a very definite reason for this preference

for the larger city The younger men who have graduated more recently from the medical schools have been trained in the use of all the hospital, technical and clinical facilities of the larger city With the development of diagnostic and clinical technics and equipment, and of increasing specialization practice without adequate clinical and hospital facilities is becoming increasingly difficult and unsatisfactory A physician hesitates to go into smaller towns and rural areas which do not offer these facilities He will go to the larger city where they may be found. This brings us to the possibility of increasing these facilities in the rural areas and here we find some encouragement

The National Commission on Hospital Care inaugurated by the American Hospital Association is making in cooperation with state health departments a study of hospital facilities and needs throughout the nation as a basis for a national hospital program. This is the most complete study that has ever been made and out of it will come, it is hoped, a national program which will have the cooperation of all health and hospital agencies, public and private, and of the medical profession, throughout the United States

A small community or a sparsely settled rural area cannot afford to employ full time health officials and provide adequate service A recent nationwide study of health department facilities indicates present local facilities and needs and proposes the development of a system of health administration under which several rural counties may combine in the employment of a health staff and the maintenance of a central office This proposal contemplates a total of 1,197 health units for the country It would make adequate public health facilities available to every section of the country—cities, towns and rural areas A town of 15 000 or 20,000 with county, multicounty, state and perhaps federal assistance usually can build and support a 15 to 40 bed hospital with necessary medical and nursing care, provision for the practice of internal medicine, obstetrics minor surgery, dentistry and some other specialties and with simple laboratory equipment. Such a small institution can serve a majority of the hospital needs of a small community with its rural area if it has the opportunity to refer complicated cases to the larger hospitals And great promise lies in the recent activity toward the provision of nationwide medical care on a prepayment basis Congressional bills propose a universal tax supported medical service. The American Medical Association proposes a nationwide voluntary prepayment plan based on the action of local medical societies These proposals represent two widely divergent schools of thought, and the proponents of each are vigorous and sometimes acrimonious in their support But all this does not mean that health service is going to be presented on a silver platter to every community and to every rural area. The larger political units, federal and state, are not going to do it all County and town communities must participate with citizen enthusiasm and with tax and voluntary funds And this is where you, representing most of the farmers and rural areas of the country and we representing small as well as big businessmen and their organizations come in You have the responsibility for convincing the rural population that health is a sound dollar investment as well as a human asset. We, for eighteen months, have been seeking to stimulate interest in the smaller communities of the country to provide more adequate health service. The response has been beyond our expectations Smaller communities all over the country are seeking ways and means of providing more adequate health and hospital service. And definite action to this end is increasing We expect to intensify this effort in cooperation with the American Medical Association and to help in bringing to these areas the importance of local action if adequate health provision is to be made.

## Health Education for American Farmers

LELAND B TATE, PH D, Chicago The Farm Foundation which I represent is a private, philanthropic organization whose objective is the stimulation of research and education for the improvement of rural living conditions Our policy is to work with various agencies, organizations and leaders interested in the general welfare of rural people and to stimulate activity where needs are great and progress is slow Hence some of our chief concerns are better medical care and health services for farm folks, and health education of a broad nature which brings (1) knowledge and understanding of what is desirable for maximum health and (2) insight into ways and means of getting and paying for adequate health and medical services

In our rural health work we have stressed particularly ways and means of getting more personnel facilities and services We have used both regional and organizational approaches From a regional point of view we have concentrated our efforts mainly in the Northern Great Plains from Nebraska to North Dakota and in the Southern states from Virginia to Texas Various measuring devices show these as predominantly rural regions in need of many more and more widely distributed doctors dentists, nurses, hospitals and health centers On a somewhat informal basis we have worked with farm organizations, research and extension divisions of agricultural colleges, the National Extension Service, public health people, medical colleges, state and regional health planning committees and various medical health and lay leaders, both private and public.

It seems to us that any one who plans an educational program for American farmers about health services and medical care should know at least five fundamental things (1) the meaning and significance of health and education separately and in combination, (2) the characteristic facts about farm people as a segment of the total population, (3) the forces that prompt farmers to think and act as they do, (4) suitable subject matter content and (5) appropriate appeals and teaching technics

To us health education is considerably more than giving instruction and having people learn about health rules, routines safety sanitation and other traditional topics A comprehensive educational program about health matters might well attempt to (1) create awareness, (2) overcome inertia and indifference, (3) soft-pedal fear complexes, (4) explain the basic factors affecting health in a positive way and in a negative way, (5) describe existing health situations, (6) make known available facilities and services—how obtained when, where, by whom, under what conditions, and (7) clarify alternative ways and means of getting more facilities and services their possibilities and limitations their advantages and disadvantages

An educational program for farmers about health matters should take into consideration the forces that prompt farmers to think and act as they do This covers much of what commonly is called farm psychology It is apparent that many factors influence the prevailing ideas which farmers and others have about health services and medical care. Among these are traditions or handed down beliefs, customs or handed down procedures, attitudes or feeling tones toward certain things and persons, experiences with biologic objects such as growing plants and animals, self employment and what it implies, and economic uncertainties due to the great dependence on weather in farming operations These factors need particular emphasis and consideration in developing plans for educational programs about health matters as far as farm people are concerned. Failure to recognize these factors may jeopardize maximum progress toward desired objectives

The economic factor is a very important one to consider when appealing to farm people. For example, it can be stated positively that sound health means productivity for making money Ill or half sick persons with impaired strength and will power mean costly waste in most rural communities This situation is a barrier to economic efficiency even though no direct payments are made to doctors and hospitals Labor represents more than half of the farmers' cost of production. If this labor is of low quality because of sickness or impaired effectiveness, every day lost is reflected in lower earnings Hence good health becomes a prerequisite for full time employment on efficient farmsteads Emphasis too may well be placed on present high costs for medical and dental services to rural people out of proportion to their paying ability Together these two economic considerations—one direct and the other indirect—make a strong appeal to most persons

## Summary Discussion

MRS CHARLES W SEWELL, Chicago Today, in a realization of the great needs in rural America for more adequate health programs, more doctors, nurses, hospitals, equipment, better roads, economic improvement and more education to meet these problems intelligently, we come as doctors to a clinic. Here

we have counseled together, exchanged opinions regarding new or controversial treatments and now should determine our course and throw the high powered x-ray of knowledge on hidden causes of unsuspected malady

Perhaps the first of these would be the scattered population—the disproportion of organized farm families to those found in unorganized groups The low income of such large numbers of rural population is another tremendous handicap A third is the irregular income, since great numbers of farm people do not have a source of revenue except from the sale of products three or four times in any given year

Farm people are proud and conservative and as far as possible are anxious to pay their own way In twenty-six states, members of our organization who are residents of a territory not too far removed from some of the larger metropolitan centers have been able to work out satisfactory arrangements for hospital insurance and in some instances complete medical care.

The principle of insurance through mutual benefit associations, for hospital and medical care, appears to us to offer a plausible solution As rapidly as possible, workable plans already in existence should be extended until they reach the remotest parts of rural America However, we are not blind to the frailties of humanity, and rural people are not greatly different from those of any other group A program of education for this type of insurance must be carried forward until health and hospital insurance provisions become just as well known and as genuinely accepted as fire, automobile and life insurance.

The American Farm Bureau Federation has favored the objectives of legislation providing that the federal government should reasonably extend its public health program with respect to maternal and child health, rural hospitals, public health services and medical care for those unable to provide such care for themselves Such legislation should safeguard the rights of the states to develop their own programs to meet their own local needs The federal government is not justified in assuming the burden of supporting the health and medical facilities that the states can and should bear, but only to the extent necessary to bring about equalization of health and medical facilities among the several states

The proposals of the Hill-Burton bill, now before Congress, designed to establish commissions to study health needs and to set up hospitals in rural communities, is one of great interest to us It is to be hoped that if such arrangements are completed the utmost care will be taken to place the hospitals in communities of greatest need, and not only the problem of building but that of maintenance and location, receive careful consideration Again it is imperative that there be an adequate number of trained personnel, doctors, nurses, technicians and laboratory assistants

We are disturbed by proposals designed to provide compulsory federal hospital and health insurance Our chief concern is to get more adequate medical care and hospitalization for our farm folk. We are wondering if the personnel set up to administer such a health program would know no more about the subject than those placed in positions of authority in other governmental bureaus dealing with agriculture and who recommended taking the shoes off a horse at night to save critical steel as a war measure." We wonder if it would require as many trips to the county seat to secure stamps for medical care as it has done to get gasoline, tires farm machinery and rubber boots in order to carry on agricultural production We wonder if the stork could delay his visit while the necessary red tape was cut or if we might receive a directive such as the sheep men were presented advising them in the face of shortage of herders for the critical lambing season to 'postpone the lambing until more favorable weather We have repeatedly expressed our opposition to compulsory insurance plan by resolution In answer to the statements that we are not moving rapidly enough with such a program we point to the growth of Blue Cross Like a Chinese scholar who taught the famous Chinese marching song to groups of soldiers ten at a time and then in twenty minutes had an army of ten thousand singing Many hearts with one mind Brace the enemy s gunfire—March On—March On" a song heard round the world, we believe it can be done through voluntary effort on a broad educational program

Our organization is particularly interested in the development of plans that will permit of bringing the cost of medical care more in line with the prices which are obtained by farmers as they exchange their products for the labor and services of health agencies It is one thing to pay $150 for a surgical operation when wheat is $1 per bushel and an entirely different one to pay the same cost with wheat at 50 cents per bushel

The prevailing cost of a bedside call in most rural communities is still based on the practices established during the horse and buggy days, necessitating longer absence from the doctor's other patients or office than is now necessary

DR HARRISON H SHOULDERS, Nashville, Tenn I should like for you to think of medicine as being entirely preventive When a department enforces sanitation measures it's to prevent the transmission of disease There has been entirely too much segmentation of this whole problem of medicine As science has progressed it made apparent the fact that there are preventive measures that require the use of the police powers of the state. There are many other preventive measures which are placed in the hand of the individual physician and individual citizen An individual cannot enforce a quarantine The executive department can A state department can I cannot enforce a sanitary and milk order An executive force can For that reason and for the time for that reason only, public health departments were created And they did a fine job when they confined themselves with these particular powers We are for public health, but the question comes down sometimes to what is meant by it Diseases have disappeared under public leadership, under public health departments and with the prudent use of the powers covered beyond them Today such diseases as diphtheria and smallpox could be prevented by individual effort, I mean by inoculation to a large extent in the hands of individual citizens and individual doctors With that broad, simple division of activity then the question comes up Shall we pursue in this American way of life to use our individual efforts and our individual genius and our individual financial aid? It comes down to the economic situation Lets consider the cost of such things in a rural county These public measures serve their purposes largely when cities realized that they required sewerage, sanitation and similar benefits The farm community is still an individual unit. Any public agency must perform most of the activities on an individual basis In a city it is different. People become congregated and congested Geography and location have a lot to do with the problem. In a county of 30,000 with a birth rate of 25, it costs $15 per child to inoculate against five preventable diseases A suggestion made this morning would require a dollar per head, $60,000 a year, to carry out the public health measure of the country

### Application of Medical Knowledge

HON J PERCY PRIEST, Nashville, Tenn How to make rural life in the United States sufficiently attractive and sufficiently stable to permit the production and utilization of essential farm and related products within a pattern of intelligent conservation of rural resources—both human and natural—is not merely a question for emotional appeal to the humanitarian. It is one of cold, calculating, hard headed economic significance—yes, even political significance.

Every one is agreed that the health record of the United States is—on the whole and relatively speaking—good. There is agreement also however that it is not as good as it should be not as good as it is possible for it to be. Indeed, for certain areas in the country and for certain groups of our people it is agreed that the record itself is definitely not good

One of the issues that is repeatedly before the Congress is whether the benefits of proposed health legislation, whatever it may be, will eventually be realized by the people who need them most It is impossible to conceive of health legislation that would apply with equal benefit to all parts of the country As a result we are faced with the question as to whether we should legislate down to the least advanced areas or up to the most advanced It is my opinion that the only way to progress is through the latter approach It is only in this way that government can meet its responsibility of assuring the whole population, as far as possible, the full benefits of good health care.

Even though science has yet to give us the cure for many maladies, the full application of what is known would do much to prevent or minimize the effects of illness. The real problem, then, is to devise the instruments of organization through which all the benefits of present medical knowledge can be applied to the needs of all the people. Before we can even begin a full attack on that problem we must determine how we can best provide for all the people anything approaching adequate medical care. One vital question must be resolved—this is: How can we pay for adequate medical care for the whole population? The President has suggested that we accomplish this by spreading the cost over the entire nation through expansion of our existing social insurance system. It is my belief that only through application of the insurance principle to the risks of illness can we make possible equal opportunities for health in every part of the country.

Students of medical care seem to be in accord in the opinion that prepayment by groups for medical service is more efficient and hence more satisfactory than postpayment by individuals. Here, again, there appears to be no area of serious disagreement. One finds controversy only on details of how the insurance principle can best be applied. One of the major issues today is whether group prepayment should be on a basis of local control and voluntary participation or on a basis of national control with universal participation.

Health services to a large portion of our rural population are alarmingly deficient. There are far too few physicians and other health personnel, far too few hospitals, public health services and sanitation facilities in rural communities to serve the 57,000,000 people who live in these areas. Since I have proposed remedies to the problems of hospital and mental care, let me take these two fields of need as examples of inequities that exist among rural and urban areas. Adequate numbers of psychiatric personnel and clinical services are exceedingly limited throughout the country. They are nonexistent in rural communities. While the hospital facilities problem is not as acute, the disparity between urban and rural areas in the hospital field is almost as great. Rural areas have about half as many hospital beds as do the metropolitan centers—less than half the number they need to serve their people adequately.

In the field of preventive services these disparities continue. Despite the progress that has been made under the impetus of the Social Security Act, there are still about fourteen hundred counties lacking full time health departments. Practically all of them are rural counties. There are gross deficiencies too in sanitation facilities. The reason is simple. People in rural communities and rural states do not have the purchasing power with which to avail themselves of the facilities and services that are essential to good health care. The year 1943 was unprecedented as a year of farm prosperity, yet the income from farming amounted to only 9 per cent of the national income, while farm people made up about 21 per cent of the population. According to the latest census of agriculture (1940) about two thirds of all farm families had gross incomes of less than $1 000 with one third under $400. States predominantly urban (70 per cent) had an average per capita income of $800, states predominantly rural (70 per cent) of about $300. It is basic to our economy that some solution be found to this grave imbalance, and I applaud the Farm Bureau Federation for its efforts to obtain greater equalization of rural and urban incomes. Until that time has arrived, justice demands that the urban states which are, in a sense, draining off the wealth of their rural neighbors, help to extend into our rural communities those facilities and services which are necessary to good health care.

For the nation to meet its obligations in a field as broad, as complicated and as fundamental as health it is of the greatest importance that the public agencies administering the program be maintained at the highest possible degree of competence.

### Rural Medical Services in Alabama

DR. J. PAUL JONES, Camden, Ala. People in rural areas want all the benefits of first class medical services or science that they have read about; they want more doctors, nurses and all facilities for good medical care. They want an easier and a more economical way of paying these bills, even if it means subsidizing of medical services by state or federal agencies. The day of rugged individualism in rural medicine is passing, the people are demanding better care. In its place is appearing the belief that good medical services can be obtained in areas of low economic income either through taxation or through subsidies. The public is slowly becoming convinced that improved medical care and more hospitals are a public responsibility in the same class as good roads and good schools.

While it is true that improvement in farm income and rural living conditions, including education and sanitation, would of course go a long way toward solving the rural medical services problem, there are certain objectives we could aim at right away. 1. Some way to ease the payment of medical services and hospital expenses, through prepayment insurance for those able to pay, and subsidizing of indigent medical services and hospital expenses by the community or state. 2. Construction of facilities such as hospitals and diagnostic and treatment clinics in those areas where need is found, through grants-in-aid, if necessary. 3. A better cooperation between our medical, dental and nursing schools and this system of hospitals so that doctors, nurses and technicians could be trained to staff these facilities. 4. Broadening of preventive public health services and sanitation programs. This problem of better medical services to all the people of Alabama has been recognized by the Alabama Medical Association for several years. In 1944 a committee was appointed by our president to investigate a method of securing a broader and better type of medical services for our people. At a meeting of the committee a definite program was sponsored.

### Action of State Rural Health Committees

DR. A. S. BUCHANAN, Prescott, Ark. Our program was instigated in 1942 by the county medical society or by the Farm Security Agency and had the cooperation of the county medical society. This little program has succeeded very satisfactorily. We have had no trouble in the organization or in the management as to whether it would suit all communities and neighborhoods in the state. To make it possible there would have to be some changes made to suit each community. I think that would be true in the organization of a national program. It has been satisfactory in that county. There has been one in Texas, one in Mississippi, one in Arkansas and perhaps one in Georgia. I understand that these other counties have been equally satisfactory. There was some question as to whether we would as a county medical society have the management of the program. We were accused of cooperating with those in favor of socialized medicine. I want you to know that is not true. It is a very good program. It takes care of all the people, not only farmers. I think the majority of farm families that really need the assistance of others are on the program.

DR. FRED A. HUMPHREY, Fort Collins, Colo. In Colorado we have attempted to solve the rural problem by prepayment health insurance. This is working under the Colorado Medical Service, Inc., and we are at present trying to scatter that all over the state. The previous speaker mentioned the Farm Security Agency. In western Colorado that was a complete flop. In eastern Colorado it worked fairly well and people got fairly good service. Dr. Mott stated that they were working from the top down. In Colorado we have five counties without medical service. In my opinion that is the place to start, where they do not have good medical service, and work up not down. I belong to a county which is of 35 000 or 37 000 population. We have from thirty to thirty-five doctors. Medical service there is very good. The state and national public health services are doing their best to force us to put in a county health unit. What we would rather do would be to have them go into the counties that do not have medical service and do some good there. It is a mining problem rather than a rural problem in Colorado. We have only about five counties out of some ninety-five that have full health units.

DR. HARLAN A. E. GLISH, Danville, Ill. The Rural Health Committee in Illinois is a new committee. We plan to have one meeting a year in each rural medical society at which meeting representatives of all farm organizations in that county will be invited to discuss their rural medical and hospital problems.

DR E. E SHAW, Indianola, Iowa Many counties in Iowa wish to put across a bond issue and build a hospital Whether they can support it is a question They don't feel that every county should have a hospital Ours is one of the counties that hasn't a hospital We don't need a hospital It is healthy to see the Farm Bureau feel that a hospital should be built only where one is needed We are also devising a medical care plan for farm groups We have organized units for collecting agencies for hospital insurance. Many men are going into it We have the medical service plan just getting started We are already putting out a hospital plan in two rural counties in the state. They want statistics as to costs We are anxious to enlarge medical and surgical plans We shall in the next few years be able to put it in rural areas The Farm Security Agency is very unsatisfactory During the first year it worked fine. Doctors were almost 100 per cent in favor In the second year the agency man came in and changed the thing completely

DR. A R HATCHER, Wellington Kan We have not tried any of the plans discussed here. I'm from Sumner County which has a population of 27,000 We have about twenty two doctors There is a part time county health officer but soon we shall have a full time county health officer taking in a county adjoining us to the west which will make it possible for us to have a full time county health officer, sanitary engineer and nursing staff We have forty-seven counties in Kansas some of which have one doctor, some two, some none There are a great many osteopaths It is the intention of the hospital survey committee, of which I am a member, to give that part of our state the first attention in the way of building small community centers with offices, reception room, laboratory, emergency operating rooms and a few rooms for the doctor who may desire to locate there along with a full time county health officer These other programs that have been discussed I am sure we haven t any particular reason in Kansas for even experimenting with. Even with the shortage of doctors many people have not suffered want of medical care. Roads are available, hospitals there are good and even though you are 50 miles from a hospital you can get there in an hour We're going to give our attention chiefly to the rural districts and get some real doctors, young doctors in health centers and try to apply the Hill-Burton bill, if it passes

DR. CLARK BAILEY, Harlan Ky Two years ago the medical economics committee reported to the House of Delegates that we should have an enabling act that would enable us to take part in a prepayment plan We went before the legislature, and last week the governor signed the bill enabling us to go ahead and set up an organization to have a prepayment plan for the people of Kentucky The medical economics committee asked the legislature for a revolving fund of $75,000 that would put two students through medical school if they will agree to practice in some designated rural community for the next five years after completing the internship That passed but was vetoed by the governor The medical association and the state association made donations to start a fund of that kind to take care of some rural counties that do not have doctors

DR. GUY R. JONES, Lockport, La. We have, as you have throughout the United States, a scarcity of doctors We have tried the Farm Security Agency and found it to be a complete flop Doctors have refused to work under that plan. We shall advocate a prepayment medical and hospital plan. The parish health officers are being urged to support state medicine, but they are working with Louisiana State Medical Society and fighting it. Those gentlemen are not for state medicine. In Louisiana osteopaths and chiropractors are prohibited by law We are well organized and ready to follow any plan advocated by this meeting

DR. H B ZEMMER Lapeer Mich. Whatever has been done in Michigan has been done with the medical society as a whole. We are getting organized and will have some suggestions to make when we get back. Some three hundred farm groups and many grange groups are cooperating with Blue Cross Michigan Medical Service is separate from the Blue Cross and we are proud of its accomplishments It has had its greatest memberships in industrial groups and is now being extended to farm groups We feel that it has done a splendid job in rural groups We are hoping that the Hill-Burton bill will help us solve the problem of hospitals Another thing we have obtained in Michigan is a uniform fee schedule for all government agencies, worked out by the council of the Michigan State Medical Society after much discussion Adoption of this schedule made it possible to cooperate with the Veteran's Administration On this program the service is for service connected disability Before the war there was a preceptorship with the university Juniors and seniors were assigned to doctors throughout the state This was a splendid idea. It gives the student a fine chance to get some bedside manner and gives doctors a chance to come in contact with newer technics I hope it can again be established.

DR B J BRANTON Willmar, Minn Minnesota is a state with two and one-half million people and eighty-four counties About two thirds of the people are in the rural population one third being urban. In the eighty-four counties of the state there are only three, four or five not having hospitals Roads are excellent throughout. The need for the Hill-Burton bill is evident in some places We have in Minnesota the number of hospitals we need at the present. The prepayment medical plan is going to serve a fine purpose. We have worked closely with the Farm Bureau It has been a wonderful and friendly feeling to have people who control the destiny of some 60 000 farm families in the state behind us in our work. We are working with and in conjunction with Blue Cross which now has about six thousand contracts in the state. We have put over a health education program.

DR R. W KENNEDY Marshall Mo We have plans for the extension of prepayment medical care and prepayment hospital care, information on placement of hospitals and enlarging the state university to four years with the final year in Kansas City to provide more doctors We have a plan for extension of public health To promote health among farm folks we have provided a committee in the woman s auxiliary and a speakers' bureau Doctors in this area are called on to make health talks to farm people.

DR E M GANS Harlowton Mont There has been a prepaid medical service established in Montana. There is a low bracket group up to $5 000 a year

MR. M C SMITH, Lincoln Neb We do not have a rural health committee There is a Nebraska Health Planning Committee as part of the extension of the Agricultural School in Nebraska The state medical association has had representation on that committee We are another of those states that have four counties without a physician. The committee has established with the approval of the state medical association a cooperative health plan in Thurston County where there has been no physician This cooperative plan has worked with a varied degree of success The greatest difficulty is to keep a doctor out there. It is very difficult to keep a doctor in sparsely settled areas A doctor wants a better educational opportunity for his children People up there have plenty of money and are willing to spend it to have a doctor in their own community They took an old hotel and built a hospital there. The plan worked except that they can t keep a doctor there. We went through that area with the Farm Security Agency and organized eighteen or twenty plans operating all over the state. As soon as the farmers had raised two or three crops they didn t like the Farm Security Agency Farmers were the ones that wanted to discontinue the plans The farm bureaus, the farmers themselves want to pay their own bills As to the Hill-Burton bill, we do need some hospitals in Nebraska We hope we shall have the opportunity to place some hospitals in Nebraska. Our greatest problem will be where to build hospitals In this state we have a number of towns where they have started local campaigns to build hospitals have raised money and want their own hospital This committee will have the problem of going to the town and say here is the reason why the hospital will not be successful in this territory

DR. DAN MELLEN Rome, N Y Our state is well organized for the prepayment insurance plan. It seems to be successful, and recently a committee made a survey in the rural districts relative to the hospitals, the laboratory equipment and staff

and the number of physicians As far as placing physicians, we have been working in conjunction with the committee on veterans' affairs As we get calls from these areas mostly in the northern part of the state we try with the committee on veterans' affairs to place these men.

DR. W A WRIGHT, Williston, N D We haven't the constructive program that we have had prople tell us about today There is a misconception as to the practice of medicine May I tell you how we think rural medicine should be practiced? It should be clustered around certain metropolitan centers where people go to buy things There is no future in trying to put a doctor in every hamlet, as was felt thirty years ago It is easy for a patient 50 60 or even 100 miles away to get to a doctor with present methods of transportation Perhaps it is a hardship, but I would rather travel 80 miles in North Dakota than 1 in Chicago Doctors should be educated for rural practice. The tendency of the medical schools is to look down on the general practitioner and exalt the specialist. If it was made more honorable, more young men would become general practitioners We need more good general practitioners It takes a large area to support a specialist. If we are going to have good general practitioners we must have more trained in college days to be just that We realize that it is a hardship not to have a doctor in a county But the county is no longer a unit. It is the natural trading center In the next county or over, there may be a good health center I deplore using the county as a unit

DR. CARL S MUNDY, Toledo, Ohio For years we have had a health subcommittee of the planning committee, composed almost entirely of laymen, but the state association has had a representative on that committee since its beginning Through that representative our state association has been in touch with the thinking of the farm groups This committee attempted a year ago to put into effect a prepaid plan on a small scale in one of our counties The plan did not succeed, although it was supported generously by our state association In the last few months we have started our prepaid medical service plan which we call the Ohio Medical Indemnity, Inc. We are just now beginning to sell contracts It is our intention to push the sale of these contracts in rural areas as rapidly as possible. We found the same thing in Ohio—an inertia among farmer groups to prepaid medical service. We are able to sell contracts to only about 30 per cent of their membership We cannot determine the exact reason

MR. KENNETH G MANNING Portland, Ore. We do not have a rural health committee in our state. I have been sent here representing Oregon Physicians' Service, the association approved and sponsored by members of the state society The setup has approximately 50,000 subscribers under the hospitalization plan. In the state of Oregon about 140,000 are covered. As for rural problems in that area, surprisingly I have not heard the name of Dr Shadid in this meeting Dr Shadid comes from Oklahoma He has been in Oregon and has sold one or two areas in the state on the idea of organizing a cooperative health center, hiring doctors and setting up health centers selling prepaid medical and hospital care. He is particularly interested in farm areas In Salem, Oregon, they have adequate staff doctors The Farmers' Union and other farm agencies have caught hold of the thing and are trying to sell membership We don't have a serious problem in Oregon so far as medical service is concerned. We had experience with the Farm Security Agency in Oregon The thing has been quite a flop Doctors refuse to work for a percentage which is substandard.

MR. DICK GRAHAM Oklahoma City Dr Shadid will run his chosen path and get little distance down the run. I have heard reference made to the Hill-Burton bill According to statistics only two states do not have a very liberal surplus in their state treasuries And you call on federal aid to do that which the local community should do There has to be an end to this federal spending I doubt if there is a community anywhere in the United States which cannot finance its own health needs In Oklahoma we started with $100,000, we have already completed our survey, and if the Hill-Burton bill becomes a law on the basis of that division we should get only 175 a year I have talked to many veterans who have never been in private practice. They went out of medical school into internship and then into the army For four or five years they have had the finest medical facilities to work with. They had technicians and nurses Those boys are utterly scared to practice by themselves I would not suggest that the medical associations lower their standards but I do believe that the medical schools should take cognizance of the fact that those students may have to go into areas from an economic standpoint alone and practice without the help of the Hill-Burton bill and the technicians and the nurses and I hope that that day will come.

DR AUGUSTUS KECH, Altoona, Pa We do have our rural problem We're not organized It belongs now in the committee on medical economics The state society in conjunction with the state college of health and voluntary agencies selected three counties to survey The Farm Security Agency has had some problems Several communities have been organized, and we have felt that the physician would not get anything out of that practice We have 236 state aided hospitals Hospitals are covered within 30 miles Good roads exist on which to go to and fro We do not need new hospitals, we do need extension of every hospital in bed capacity Our medical service has had a poor start but now since last year has grown It has doubled the number of members and participating doctors It is going it alone and not with connection with any other agency

DR A. W BROWNING, Elloree, S C We have good roads, schools and easily accessible hospitals Our splendid state board of health is doing good work. Every county has a county officer and nurses We have in our county the tuberculosis examination for schools, x-ray units in the county and x-ray at the tricounty examination We have clinics there every week and in two or three towns every week We have been trying to get a medical college in Charleston for years Last June the legislature passed the bill for one and one-half million dollars for a doctors' hospital and also gave us two and one-half million dollars for a survey of the state and for medical centers if needed I don't know any one in my section who can't get medical care or hospital care when needed We have a publicity man to watch out for our interests and have a permanent committee, one from each district, to watch the political affairs in our state. We have Blue Cross insurance passed by the legislature and are trying to bring it into effect. We need more hospital beds, hospitals and small medical centers We are thinking of subsidizing some students while at South Carolina Medical College at Charleston to serve two years in outlying places, also Negroes as Virginia is doing at the college in Nashville, Tenn We believe in the American Medical Association plan of approved insurance, prepayment hospital and health insurance such as Blue Cross We are having meetings all over the state with speakers discussing the Wagner-Murray-Dingell bill.

DR A P PEEKE, Volga, S D Our problem is the same as in Nebraska and North Dakota. We have about half a million population, 342 doctors, 142 over age 65, and 90 per cent of the medical profession are in small cities of 15,000 or 20,000 The big problem in our state is that we have 60 osteopaths practicing

DR. H H SHOULDERS, Nashville, Tenn. When the dislocations of a war period are still with us, it is no time to do permanent planning The county as a unit is not a basis for location of hospitals and a county society That should be considered on the basis of the logic of the situation rather than on county boundaries The people in rural communities complain that doctors charge on a mileage basis I think that was a good basis for the period when it prevailed. It seems to me that the time factor or some other factor should be used. Our profession within ourselves might present some correction. The general practitioner of medicine deserves a great deal more dignity and attention than he has received from the profession. We must improve the concept of the practitioner, and we have done so in Tennessee by an education program The rural health problem is as different from the city problem as it can be. The farmer's home is a unit with individual water supply, individual all the way through. In Tennessee we would make some studies, and

this helped get the appropriation The doctors were alert doing immunization of all diseases and getting reasonable fees for it By doing that they had to keep a nurse. Doctors discharged nurses because they hadn't enough practice That has influenced the economics of rural practitioners We made some studies of counties with equal population in the same general area Rural counties with an alert profession well trained showed a mortality rate no different from that of a county with an equal population with a full time health unit The solution of the rural health problem resolves itself with getting a qualified doctor into the area If immunization will control a lot of diseases, it becomes individual medicine, both preventive and curative Probably we have sold the idea, and that has been made possible by the fact that we have never drawn any sharp distinction between public health activity and individual health activity If we do that most of our problems will be solved

DR CROCKETT In the state of Indiana the house of delegates has organized a committee which is setting up the machinery whereby men who are first class general practitioners will be so certified by the state society after due examination In that way we hope to do that very thing—give every man in the general practice of medicine an opportunity to stand apart on account of the excellence of his work

DR. B E PICKETT SR, Carrizo Springs, Texas Our executive committee passed a resolution to accept any plan that met with the specifications set up by the American Medical Association Mr Ketchum from Michigan suggested that the medical and surgical plan as offered by the state, paralleling the Blue Cross, be accepted and we commended him This plan is getting under way We have some 15 000 subscribers The Blue Cross is quite active in the state, and there are few communities that are not within 30 miles of a hospital

DR. K. B CASTLETON, Salt Lake City We inaugurated a publicity plan in which we made use of a local newspaper having the largest statewide coverage. Since then we have had articles published dealing with medical problems and case reports In these articles no reference was made to doctors names, hospitals or communities We feel that the articles have done a great deal of good in combating adverse publicity received in the last few years We also use radio for this purpose. We are forming a speakers' bureau to supply speakers for civic groups, women's groups and schools We need more hospitals or more beds We need more hospitals where distances are great and doctors scarce. People in Utah don t want federal money for this they are not interested in the Hill-Burton bill The church offered help for supplying different hospitals needed. Several hospitals were built and are maintained by the Mormon Church This plan is endorsed by the Utah State Medical Society and we hope it will fill our hospital needs without calling on federal funds We have a prepayment plan based on the experience of Michigan and California

MR. JOHN W BROWNLEE, Rutland, Vt We have a governor's advisory health council on which the medical society is represented, dentists, public health public welfare and various other organizations That is a temporary organization and is to develop a program for better health in Vermont. It is the hope of the medical society when that work is completed in the next few months that a permanent health council will be set up to embrace all health agencies and also business and labor We don't have the problems in Vermont that some of you have We are inaugurating a medical care plan

DR H B MULHOLLAND, Charlottesville Va In 1940 it was realized that the rural health situation was bad A committee was formed of members of most of the farm organizations and members of the medical, dental and nursing professions This committee was instrumental in having a legislative advisory committee appointed who reported to the governor and legislature, made recommendations, instituted a survey for needs of health centers and hospitals and appropriated $10 000 for a survey We think it is important to go ahead with that because so many communities now have been stimulated to erect health centers and hospitals that are not warranted We shall have extension of the health departments We also got $600 000 for examination of school children This is an important start for the health of the people living in rural areas We hope to have school children examined four times during their school life We got an enabling act so that the state can lend some of the money it has to invest for construction of health centers and hospitals in areas where they are needed as shown by the survey, the loan to be at a small rate of interest and to be a long term loan The rural health committee is also backing the state health council composed of thirty-five or forty organizations in the state, including all farm organizations in the state The legislature also took our advice to continue the study of health problems and particularly the extension of prepayment insurance plans to the medically indigent We feel that we can solve these problems on a state and county level

MR JAMES P NEAL, Seattle This program in Washington for setting up a prepayment plan was organized in 1917 and has been growing until some twenty-one units have been set up coordinated through the state bureau all under the sponsorship of the Washington Medical Society, covering more than a quarter of a million people In 1944, in order to avoid any insurance laws of the state, the doctors created and chartered the insurance company The insurance covers all the subscribers of the local organization This group has been approached by the executive committee of the state farm bureau for a contract which would cover their farmers Arrangements have been made and contracted now in effect in one area on a trial basis providing hospital and medical care for a man and his family for $7 a month In another area quite a number of families in the farming area have complete medical and hospital care as far as the head of the family is concerned but with just hospital care for members of the family, the rate being $4 55 a month These two plans are paying doctors a reasonable fee schedule. The Farm Security Agency started in our state All moved out with the exception of one county The price for that was $35 a year We are also caring for service men, beginning the first of the month under contract made with the Veterans Administration, serviced and handled through the state association

DR. C N NEUPERT Madison Wis If groups are to meet the suggestions in his program I would propose that there must be some required reading Whatever you think of some of these things if you are planning to go into rural health conferences be ready Know what they are thinking Farm folks are acquainted with what is going on. Wisconsin people in rural areas seem to be doing just as well as in urban areas We have no health centers I have been wondering if that might not be a good development in Wisconsin We have our survey under way We have a statewide medical and hospital care insurance policy in connection with the state insurance companies Another in Milwaukee is going along with Blue Cross They are both developing As far as the Farm Security Agency is concerned it is in two counties and is working all right. In this year of operation we have paid out 100 cents on the dollar Don t overlook health agencies Get close to them.

DR H N SMITH Brookville, Ind We have had a rural medical care committee for three years We tried this farm security program in several counties in Indiana. It didn t work out so well It was tried in the county I am in, but as soon as the people were able to pay for their medical care they dropped it. Doctors didn t like it, and patients didn t seem to care much for it. I know there is to be a prepayment medical plan in the state of Indiana

DR JAMES F DOUGHTY, Tracy Calif We don't have many people worried about rural medical care The indigent are taken care of in county hospitals by a paid staff The non-indigent rural farmer in California is a very progressive person who appears as though he was poor and dies rich and the doctor dies poor There is a California Physicians Service for non-indigent people. It offers service to employed groups and is now offering it to the rural families through the Grange of California We service them and they pay for service plus the cost of administration I am impressed with the need for more country doctors of good qualities Unless doctors are educated for general practice instead of for specialists in the city we shall not have good medical care for rural areas An average well trained general practitioner can well take care of most ills

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

### American Journal of Physiology, Baltimore

**145** 633-736 (March) 1946


Renal Clearance of Pantothenic Acid. L. D. Wright, K. H. Beyer, Helen R. Skeggs, H. F. Russo and Elizabeth A. Patch.—p. 633.
Nature of Volume Effects in Renal Clearances. R. F. Holden, Jr. and H. A. Bulger.—p. 638.
Effect of Protein Deficiency and Cholesterol Feeding on Liver of Dogs. Tsan Wen Li and S. Freeman.—p. 646.
Experimental Lipemia and Hypercholesterolemia by Protein Depletion and by Cholesterol Feeding in Dogs. Tsan Wen Li and S. Freeman.—p. 660.
Importance of Exogenous Fat in Fatty Infiltration of Liver of Dogs. Tsan Wen Li and S. Freeman.—p. 667.
Relative Sensitivity of Mucosal and Peritoneal Surfaces of Guinea Pig Ileum to Histamine, Acetylcholine and Specific Antigens. G. A. Feigen and D. H. Campbell.—p. 676.
Compensatory Growth of Kidney After Unilateral Nephrectomy in Thyroidectomized Rats. I. T. Zeckwer.—p. 681.
Blood Oxygen Saturations and Duration of Consciousness in Anoxia at High Altitudes. C. E. Hoffman, R. T. Clark, Jr. and E. B. Brown, Jr.—p. 685.
Effects of Feeding Thyroid Substance and of Adrenalectomy on Activities of Succinoxidase and Cytochrome Oxidase in Liver Tissue of Rats. S. R. Tipton, Martha Jean Leath, Isabel H. Tipton and W. L. Nixon.—p. 693.
Renal Blood Flow and Renal Clearance During Hemorrhagic Shock. E. E. Selkurt.—p. 699.
Initiation of Sweating in Response to Heat. E. F. Adolph.—p. 710.
Estimation of Cutaneous Blood Flow with Photoelectric Plethysmograph. A. B. Hertzman, W. C. Randall and K. E. Jochim.—p. 716.


### Am. J. Syphilis, Gonorrhea and Ven. Dis., St. Louis

**30** 99-204 (March) 1946


Venereal Disease in Army Air Forces in Continental United States, 1942-1944. R. Dyar and J. R. Scholtz.—p. 99.
Use of Penicillin in Treatment of Syphilis of Central Nervous System: Report of 100 Patients. J. L. Callaway, R. O. Noojin, A. H. Flower, Jr., Beatrice H. Kuhn and Kathleen A. Riley.—p. 110.
Seroresistance (Wassermann Fastness) in Syphilis: Discussion for Patient. J. E. Moore.—p. 125.
*Penicillin Therapy of Early Syphilis in 14,000 Patients: Follow-Up Examination of 792 Patients Six or More Months After Treatment. D. M. Pillsbury.—p. 134.
Blood and Urine Arsenic Levels of Patients with Early Syphilis Under Intensive Arsenotherapy. A. B. Cannon, J. K. Fisher, J. J. Rodriguez, G. F. Beattie and Eugenia H. Maechling.—p. 144.
Venereal Disease Problem in Woman's Federal Reformatory: Study of Women Released Over a Period of One Year. H. I. Blair.—p. 165.
Problem of Reinoculation of Human Beings with Spirocheta Pallida: Review of Literature. H. Beerman.—p. 173.


**Penicillin Therapy in Early Syphilis.**—According to Pillsbury, penicillin was adopted as the drug of choice in the treatment of syphilis by the United States Army in the European Theater of Operations on June 26, 1944. As of June 15, 1945 over 14,000 patients with early or latent syphilis, or with syphilis which had not responded satisfactorily to previous treatment with standard or intensive arsenobismuth therapy, had received treatment with penicillin. It was found that the toxicity of penicillin therapy in early syphilis is negligible. Infectiousness, with rare exceptions, is controlled promptly. The incidence of infectious relapse after penicillin therapy is low. Infectious relapse will usually occur within twenty weeks after treatment. The lesions of relapsing syphilis appear most frequently on the genitalia in male patients. Realization of the full benefits of a single course of penicillin therapy in syphilis is dependent on the promptness with which the diagnosis of syphilis is made after infection. Achievement of seronegativity six months after the initial treatment is significantly lower in seropositive primary and in secondary syphilis than in seronegative primary syphilis. The incidence of asymptomatic neurosyphilis disclosed by spinal fluid examination performed six to eight months after treatment is extremely low, especially as compared with the incidence after standard arsphenamine heavy metal therapy. The promise of penicillin as the best single agent against syphilis is being fulfilled.

### American Review of Tuberculosis, New York

**53** 103-194 (Feb.) 1946


*Chest Photoroentgenography in Army Physical Examinations: Review of 40,283 Chest Photoroentgenograms at Buffalo Recruiting and Induction Station. I. A. Schiller.—p. 103.
Miliary Tuberculosis of Bone Marrow. E. M. Schleicher.—p. 115.
Pyopneumothorax: Treatment of 2 Cases with Penicillin. K. T. Bird, B. P. Bushueff and F. P. Dawson.—p. 122.
Transcutaneous Tuberculin Test (Corper): Its Evaluation as Compared with Mantoux Test. L. W. Holden.—p. 129.
Anatomic Studies on Human Tuberculosis. XXI. The Reinfection Complex: Additional Observations. K. Terplan.—p. 137.
Treatment of Experimental Ocular Tuberculosis with Promin. W. Steenken, Jr., E. Wolinsky and F. H. Heise.—p. 175.


**Chest Photoroentgenography.**—Schiller presents the results of routine chest radiographic examination of 40,283 men with 4 by 5 inch stereoscopic photoroentgenograms at the Buffalo induction station. Eight hundred and fifty-six, or 2.12 per cent, were rejected because of pulmonary disease as revealed in the photoroentgenogram, of which 632 were for tuberculosis and 224 for nontuberculous pulmonary diseases. Approximately 40 per cent of the men rejected were deferred temporarily. Thus of the 632 cases rejected for tuberculosis 258 were temporarily deferred in order to determine the stability of the lesion. The rejection rate for tuberculosis varied considerably, the oldest group showing the highest rate and the youngest group the lowest. The high rate among the older men was the result of a greater prevalence of arrested tuberculosis. Comparison of the rates of rejection obtained at the Buffalo induction station with those observed in the southern New York recruiting district showed essentially the same rejection rate for active tuberculosis in the two localities. The greater prevalence of arrested tuberculosis in the Buffalo region was attributed to the generally older age level of the men examined.

### Annals of Surgery, Philadelphia

**123** 161-320 (Feb.) 1946


Vascular Injuries of Extremities in Battle Casualties. C. A. Rose, O. W. Hess and C. S. Welch.—p. 161.
Penetrating Head Wounds: Experiences from Italian Campaign. R. A. Munslow.—p. 180.
Treatment of Jaw and Face Casualties in British Army. P. Clarkson, T. H. H. Wilson and R. S. Lawrie.—p. 190.
Repair of Soft Tissue War Wounds. B. W. Rawles, Jr.—p. 209.
*Pulmonary Embolism: Statistical Study with Particular Reference to Value of Certain Preventive Measures. C. R. Lam and D. H. Hooker.—p. 221.
*Congenital Cystic Lung: Successful Pneumonectomy in a Three Week Old Baby. R. E. Gross.—p. 229.
Delayed Internal Fixation of Compound Battle Fractures in Mediterranean Theater of Operations: Case Histories with Illustrations, Follow-Up Study in Zone of Interior. O. P. Hampton, Jr.—p. 238.
*Surgical Significance of Accessory Spleen. G. M. Curtis.—p. 276.
Biliary Ascariasis: Report of 19 Cases. S. C. H. Yang and P. J. Laube.—p. 299.
Sympathectomy for Ischemia Following Femoral Artery Ligation. R. R. Crutcher.—p. 304.


**Pulmonary Embolism.**—Lam and Hooker made a study of the fatal and nonfatal embolic complications which occurred in 118,611 operations performed at the Henry Ford Hospital in Detroit in the twenty-one year period between 1924 and 1944. Two hundred and eighty patients had pulmonary emboli, of which 78 were fatal. The diagnosis was established at necropsy in 70 per cent of the fatal cases. Both fatal and nonfatal embolism occurred more frequently in men than in women, the ratio being about 3:2. All embolic episodes occurred most frequently in the fifth decade, while fatal embolism was noted oftenest in the sixties. It was expected that abdominal operations would show the complication frequently and head and neck operations not at all. This proved true. Gastric operations and prostatectomy were the worst offenders. There is no report of a successful Trendelenburg operation in this country. Almost half of the patients in this series died in less than ten minutes, three-fourths died in less than half an hour and only 10 per cent lived more than hour. Theoretically it would be possible to operate on only a fourth of the patients. Since the adoption of anticoagulant therapy and prophylactic femoral vein ligation there has been a very low mortality rate in cases selected for

treatment However, these measures have not prevented a number of sudden and unexpected fatal embolisms Early ambulation offers the most promise as a preventive measure easily applicable to the majority of surgical patients

**Successful Pneumonectomy in a Three Weeks Old Baby for Congenital Cystic Lung**—Gross reports that a 3 weeks old baby with congenital cystic disease of the left lung withstood total pneumonectomy in a satisfactory manner and has had an uncomplicated postoperative course

**Surgical Significance of Accessory Spleen**—Curtis and Moritz present a list of diseases for which 174 consecutive splenectomies and 4 abdominal explorations were done In this series of 178 consecutive patients operated on for various splenic diseases 56, or 31 4 per cent, presented accessory spleens The 50 per cent incidence in the first decade as well as the 39 1 per cent in the second decade is even greater than the increased incidence of accessories ordinarily found in the young with "normal" spleens The decreasing incidence with advancing age is presumed to occur normally by gradual involution and atrophy The onset of a pathologic process in splenic tissue apparently causes the accessory to remain and thus occurs the increased frequency of accessories in those with certain splenic diseases The greatest incidence of accessories was 57 1 per cent in the first decade in congenital hemolytic icterus Save for the third decade, the incidence of accessories in congenital hemolytic icterus is greater than in primary thrombocytopenic purpura The number of accessories per patient varied from one to ten. The presence of splenules throughout the peritoneum appears to be a different clinical entity from true accessory spleens and is now known as splenosis They are to be differentiated because (1) they originate by transplantation of fragments of splenic tissue, usually scattered about the peritoneum by hemorrhage from a ruptured spleen, (2) they usually occur in great numbers, reportedly varying from 42 to 400 and (3) they are diffusely distributed throughout the peritoneum The occurrence of splenosis is closely related to splenectomy To avoid overlooking accessory spleens a routine search is made, after the major spleen has been removed, in the following approximate order (1) hilar region, (2) splenic pedicle, (3) retroperitoneal region surrounding the tail of the pancreas (4) the great omentum and especially along its attachment to the greater curvature, (5) colic ligamentary attachments, (6) mesentery of both large and small intestine and, (7) in the female, the left adnexa The two recurrences thus far observed in this series of 174 consecutive splenectomies are reported in detail, 1 with primary thrombocytopenic purpura and the other a striking case in which recurrence of congenital hemolytic icterus was relieved by removal of two accessory spleens at a second operation Pedunculated accessory spleens may cause acute abdominal symptoms from infarction due to pedicle torsion This is shown in 2 such case reports

## Archives of Internal Medicine, Chicago

**77** 121-236 (Feb) 1946

Streptococcic and Nonstreptococcic Disease of Respiratory Tract Epidemiologic Observations L. A Rantz, Helen H Rantz P J Boisvert and W W Spink—p 121
Progressive Bilateral Bullous Emphysema A. H Price and G Teplick—p 132
*Fulminating Meningococcemia with Vascular Collapse (Waterhouse Friderichsen Syndrome) Report on 4 Adult Patients Who Recovered D O Wright and L. B Reppert—p 143
Atypical Hemolytic Anemia Observations with Particular Reference to Use of Transfusions in Study of Hemolytic Mechanisms L E. Young and J S Lawrence—p 151
Absorption, Distribution and Excretion of Streptomycin. J D Adcock and R A Hettig—p 179

**Recovery in Fulminating Meningococcemia**—Wright and Reppert report 4 nonfatal cases of fulminating meningococcemia with severe vascular collapse which were clinically indistinguishable from cases of the Waterhouse-Friderichsen syndrome. The patients were adults Treatment consisted in administration of sulfadiazine, large amounts of plasma and fluids intravenously to combat the critical vascular collapse and adrenal cortex substance. Deductive evidence suggests that hemorrhagic destruction of the adrenal glands is not the primary cause of death Early clinical diagnosis and prompt institution of therapy without waiting for laboratory aid are imperative

## Archives of Ophthalmology, Chicago

**35** 71-198 (Feb) 1946

Basket Type Implant for Use After Enucleation N L. Cutler—p 71
*Uveal Blastomycosis J V Cassady.—p 84
Acid Burns of Eye J S Friedenwald, W F Hughes Jr and H Herrmann—p 98
Tests for Detection and Analysis of Color Blindness II Comparison of Editions of the Ishihara Test LeGrand H Hardy Gertrude Rand and M Catherine Rittler—p 109
Edema of Cornea Precipitated by Quinacrine (Atabrine) W P Chamberlain Jr and D J Boles—p 120
Return of Vision in Transplanted Adult Salamander Eyes After Seven Days of Refrigeration. L. S Stone—p 135
Ocular Dermatitis from Local Penicillin Report of 2 Cases A Schultz.—p 145
*Congenital Malformations Induced in Rats by Maternal Vitamin A Deficiency I Defects of the Eye J Warkany and Elizabeth Schraffenberger—p 150
Corneal Transplantation and Preliminary Iridectomy C I Thomas—p 170
Contact Eye Cup for Corneal Baths with Solutions of Penicillin G C Struble and J G Bellows—p 173

**Uveal Blastomycosis**—Cassady observed a man aged 64 who was admitted to the hospital with polyarthritis of six months' duration and cutaneous lesions of six weeks' standing There was a generalized papular disease of the skin, with some pustules covered with large scabs The right pupil was sluggish and small The temperature varied from 99 to 100 F almost every afternoon but was normal in the morning Sometime later he complained of severe pain in his right eye The lesions over the trunk were in various stages of evolution, healing with violaceous, atrophic scars Biopsy of the skin revealed numerous giant cells in which double, refractile, yeastlike bodies were seen They were thought to be Blastomyces hominis, typical of blastomycosis of the skin Roentgenograms of the right knee, tibia and fibula and the right side of the skull revealed irregular areas of destruction without reaction of the bone around the lesions The appearance and location of the lesions in the bone, together with the type of lesion in the lungs, favored the diagnosis of blastomycosis The patient had severe photophobia, moderate injection of the ciliary body of the right eye, a total posterior synechia and a small, fixed pupil At 8 o'clock on the free margin of the iris was a yellowish tubercle-like nodule Extending into the angle of the anterior chamber at the limbus was another yellow tubercle-like lesion Paracentesis of the anterior chamber and examination of the aqueous for blastomycetes gave negative results Necropsy revealed blastomycotic iridocyclitis, cataract and secondary glaucoma The anatomic diagnosis was blastomycosis involving the skin, lungs prostate gland, kidneys, bone and eye

**Congenital Defects of Eye and Vitamin A Deficiency**—Warkany and Schraffenberger found that when female rats were raised and bred on a dietary regimen which led to extreme vitamin A deficiency during pregnancy there were congenitally deformed offspring These newborn rats had various defects of the skeleton and of some of the soft tissues Study of histologic sections of the eyes revealed a fibrous retrolenticular membrane in place of the vitreous in every specimen In addition there were frequently colobomas, eversion and abnormal structure of the retina, rudimentary development of the iris and of the ocular chambers, defects of the cornea and of the conjunctival sac and lack of fusion of the lids With the last mentioned defect the abnormal eyes could be recognized by external inspection When the maternal diet was supplemented with vitamin A during pregnancy, the eyes of the young were normal

## Georgia Medical Association Journal, Atlanta

**35** 27-54 (Feb) 1946

Control of Stature J K. Fancher—p 27
Chronic Hyperthyroidism T C Davison—p 34
Pulsating Hematoma J D Martin Jr—p 37
Lichen Planus Treated with Calcium Lactate D B Ware—p 40

**35** 55-102 (March) 1946

Basic Principles in Treatment of Cancer J L. Campbell.—p 55
How Permanent Are Results of Transurethral Prostatic Resection? H P McDonald and A J Filip—p 59
Forty Years of Medicine Science, Art Organization in Georgia. J W Simmons.—p 62

## Journal of Infectious Diseases, Chicago

77 177-254 (Nov.-Dec.) 1945

*Effect of Triethylene Glycol Vapor on Air Borne Beta Hemolytic Streptococci in Hospital Wards III Action of Glycol Vapors at Low Relative Humidities M Hamburger Jr Valerie Hurst O H Robertson and T T Puck—p 177
Studies on Nutrition and Avian Malaria IV Protein Deficiency A O Seeler and W H Ott—p 181
Phase Variation of Andrewes in Coliform Bacterium P R Edwards and Mary G West—p 185
Culturing of Blood Clots for Brucella Organisms D Evelyn West and E K Borman—p 187
Experimental Gonococcal Infection of Rabbit's Eye I Method of Production C P Miller M J Drell Velma Moeller and Marjorie Bohnhoff—p 193
Id II Course of Disease and Its Pathology M J Drell, C P Miller, Marjorie Bohnhoff and Velma Moeller—p 201
Id III Treatment with Prophylactic and Therapeutic Agents C. P Miller Marjorie Bohnhoff and Velma Moeller—p 216
Immunologic Relationships of Plasmodium Gallinaceum and Plasmodium Lophurae W H Taliaferro and Lucy Graves Taliaferro—p 224
*Susceptibility of Vervet Monkeys to Poliomyelitis Virus in Flies Collected at Epidemics J L. Melnick and R Ward—p 249

**Effect of Triethylene Glycol Vapor in Hospital Wards**—Early laboratory studies on the bactericidal action of glycol vapors revealed that maximum efficiency is obtained at relative humidities between 40 and 60 per cent Equally effective killing could be achieved at lower humidities only when higher concentrations of glycol were employed Later, certain observations in hospital wards suggested that an appreciable bactericidal action may be exerted by triethylene or propylene glycols when the relative humidity is as low as 35 or even 25 per cent Hamburger and his associates have found that the bactericidal effect of triethylene glycol vapor on air borne hemolytic streptococci in hospital wards at relative humidities of 18 to 32 per cent is substantial, though the reductions are less than those achieved when the humidity is maintained at 40 to 50 per cent The effect has been noted both on streptococci liberated into the air during bed making and on those present during "quiet periods"

**Susceptibility of Vervet Monkeys to Poliomyelitis Virus in Flies**—Melnick and Ward tested flies trapped in four epidemic areas in 1943 and 1944 for poliomyelitis virus in vervet (Cercopithecus ethiops pygerythrus) monkeys from East Africa Eleven of this species of monkey were used for the tests Experimental poliomyelitis was produced in 2 vervet monkeys inoculated with flies from two of these epidemic areas urban Chicago and rural North Carolina This indicates that another experimental host, at present more available than cynomolgus or Java monkeys, is susceptible to poliomyelitis virus in flies

## Nebraska State Medical Journal, Lincoln

31 81-120 (March) 1946

Benign Gastric Tumors Report of 3 Cases G W Covey and F L. Rogers—p 85
The Deafened School Child in Nebraska E P Fowler Jr—p 91
Bronchogenic Carcinoma of Lung Report of Case J C Eagan—p 94
Response of Physician to Regimentation R W Fouts.—p 99
Nebraska Surgical Plan—Its Accomplishments and Its Aims A J Offerman—p 104

31 121-172 (April) 1946

Mental Public Health—A Blueprint. R H Felix—p 124
Symposium on Penicillin Penicillin in Medicine R. W Bliss—p 129
Use of Penicillin in Urology C A Owens Jr—p 132
Pharmacology and Methods of Administration of Penicillin A C Andersen—p 133
Frontal Lobotomy W A Muehlig—p 137

## New Orleans Medical and Surgical Journal

98 399-442 (March) 1946

Carcinoma of Cervix Attempted Follow Up Study of 500 Cases III Road to Improvement in Results P Graffagnino and Elizabeth M McFetridge—p 399
Rupture of Ileum in Uremia V D Ingianni and Hazel Ann D Ingianni—p 406
Herniation of Temporal Lobe into Cerebellar Fossa D H Echols and J A Rickles—p 408
Osteoid Sarcoma of Breast Case Report J S Couret—p 412
Resuscitation of Asphyxiated Baby Delivered by Cesarean Section J D Russ—p 415
Summarized Review of New Orleans Charity Hospital Surgical Deaths from July 1, 1943 to July 1 1944 F L. Loria—p 417
Present Status of Use of Tetanus Toxoid F G Gruich—p 420

## New York State Journal of Medicine, New York

46 449-560 (March 1) 1946

Studies on Problem of Repeated Miscarriage I Genital Hypoplasia. R Kurzrok—p 493
X Ray and Public Health with Special Reference to Tuberculosis. H R Edwards—p 498
Increased Urinary Frequency in Women Caused by Extrinsic Genitourinary Tract Lesions J A Lazarus—p 501
*Hodgkin's Disease in Children H Charache—p 507
Sclerosing and Surgical Treatment of Varicose Veins. S R Hirschman—p 510
Premedication for Anesthesia J P Curran—p 513
Treatment of Migraine and Related Headaches. M A Goldzieher—p 516
Neostigmine in Disorders of Colon M H Morris and A Robbins.—p 519
Acute Syphilitic Nephrosis Treated with Penicillin D V Holman and I H Makovsky—p 520
Visceral Leishmaniasis. F Kaminsky and G K Wever—p 522
Acute Fulminating Ulcerative Colitis Treatment with Streptomycin B Kirschner—p 525

**Hodgkin's Disease in Children**—Charache reports 11 cases of Hodgkin's disease in white children from 3 to 15 years of age, observed at the Brooklyn Cancer Institute from 1930 to the present Seven of the patients were boys and 4 were girls Three of the patients were one of homologous twins without the other twins being affected The mother of one of the twins died from Hodgkin's disease Of the 11 cases, 8 originated in glands of the neck, of these, 4 originated on the right side of the neck and 2 on the left side, 2 were bilateral In 1 case there was general adenopathy, 1 originated in the left axilla and in 1 there were primary skeletal manifestations Six patients had an enlarged spleen and 4 an enlarged liver on admission Eight had mediastinal involvement There was mild eosinophilia in 4 cases One presented 5 per cent eosinophils One of the cases showed a terminal leukocytosis of 26 000, while 2 cases presented a terminal leukopenia A moderate leukocytosis was present in the rest of the cases Roentgen therapy was administered in all cases This is the treatment of choice, although some localized lesions may lend themselves to complete surgical excision The duration of life since the onset of the disease in 8 cases that could be followed was 19 75 months Hodgkin's disease in children is comparatively rare The only positive diagnosis is based on the microscopic study of an excised lymph node from the cervical or axillary region Inguinal nodes are often associated with infection and do not always give a true picture of Hodgkin's disease. The prognosis of Hodgkin's disease in children is even more grave than in adults

## Northwest Medicine, Seattle

45 145 220 (March) 1946

Diagnosis of Acute Porphyria M H Stiles, G M Pike and E. L. Berne—p 166
*Death and Illness from Use of Carbon Tetrachloride. C M McGill—p 169
Geniculate Syndrome Case Report N K Rickles—p 172
Fractures Treated by Skeletal Traction or Dual Pin Fixation Report of 252 Cases F J Dwyer and D H Murry—p 173
Disability Evaluation of Injured Extremity W C Smith—p 178
The Yakima Prepayment Plan J E Bittner Jr and G W Cornett—p 183

**Death and Illness from Use of Carbon Tetrachloride**—Four men were assigned to clean the glue off a newly laid "masonite' floor covering All soap solutions being unsatisfactory, one of the men suggested use of carbon tetrachloride as a solvent. Two 5 gallon cans of commercial carbon tetrachloride were issued to the workmen, who used it to scrub the floor, working on their hands and knees Rubber gloves were issued to protect their hands The job required the afternoon of one day and the forenoon of the next (a total of eight hours), after which the crew worked that afternoon waxing the same floor The survivors did not believe they spent more than two thirds of the eight hours in actual working, the remainder being spent outside in the fresh air As carbon tetrachloride is about five times as heavy as air, the heaviest concentration was on the floor, where the men were working, and probably exceeded the limit for acute poisoning of 1 000 to 1,500 parts per million of air One patient had only a mild headache, a

second had insufficient exposure to be affected. The third patient developed headache, nausea, vomiting, diarrhea, vertigo and abdominal tenderness. Gastrointestinal disturbances persisted for a week, and anorexia, lassitude and mild headache persisted for another week. This patient lost 25 pounds (11 Kg.). The fourth patient died and the postmortem revealed acute hemorrhagic nephritis, acute toxic myocarditis with failure, bilateral hydrothorax, toxic splenomegaly and fatty degeneration of the liver.

## Ohio State Medical Journal, Columbus

**42** 217-328 (March) 1946

Closure of Debrided War Wounds. G. D. Kirk and M. A. Hershey.—p. 245
*Psoriasis. Therapeutic Review. I. L. Schonberg.—p. 254
Prophylaxis Against Venereal Disease. H. Wain.—p. 256
Meningioma of the Cervical Spinal Dura with Postoperative Uremia and Renal Insufficiency. W. B. Wartman.—p. 259
Diseases of Gallbladder and Common Duct. Diagnosis and Management. R. P. Rizzo.—p. 260

**Therapy of Psoriasis.**—Schonberg observed 207 cases of psoriasis among 7,000 dermatologic cases in a military hospital. In 35 of the patients the psoriasis was of such severity that hospitalization seemed advisable. Two of the patients had psoriasis guttata, whereas all the others had psoriasis vulgaris. The author gained the impression that the various types of parenteral and enteral medication were of no apparent value in this series of cases. Exacerbations were most prevalent where infiltrated patches remained. Dietary measures were of questionable value. Autohemotherapy seemed to benefit only the acute cases of psoriasis guttata. Genital and intertriginous nail and scalp lesions were most resistant to therapy. Nail lesions did not respond to any measures. Although there was some evidence of familial tendency in several of the cases, no definite conclusions could be drawn. The best method of therapy is external. A soap suds soak and keratolytic preparations were employed for the first few days of treatment. This was followed by a 5 per cent crude coal tar ointment in conjunction with ultraviolet as suggested by Goeckerman. Residual lesions were treated with 1 to 3 per cent chrysarobin and ultraviolet. Certain cases of psoriasis will not be influenced by therapy of any kind.

## Puerto Rico J. Pub. Health & Trop. Med., San Juan

**21** 125-226 (Dec.) 1945

Incidence and Distribution of Schistosoma Mansoni and Other Helminths in Puerto Rico. T. H. Weller and G. J. Dammin.—p. 125
Incidence of the Rh Agglutinogen Among Puerto Ricans. M. V. de Torregrosa.—p. 166
Fleas of Puerto Rico. J. Maldonado Capriles.—p. 173
Malaria Control in Dominican Republic. J. D. Caldwell.—p. 193
Ova of Schistosoma Mansoni in Purged and Unpurged Fecal Specimens. F. Hernández Morales and J. Oliver Gonzalez.—p. 209
Poisoning by Oleoresin of Aspidium. Report of Case with Postmortem Findings. F. Hernandez Morales.—p. 213

## Quarterly J. Studies on Alcohol, New Haven, Conn.

**6** 415-594 (March) 1946

Alcohol and Creative Work. Part 1. Painters. Anne Roe.—p. 415
Studies of Compulsive Drinkers. Psychologic Test Results. Florence Halpern.—p. 468
Cultural Differences in Rates of Alcoholism. R. F. Bales.—p. 480
Public Clinic Approach to Certain Aspects of Alcoholism. R. G. McCarthy.—p. 500
Survey of Official Church Statements on Alcoholic Beverages. B. Y. Landis.—p. 515
Classics of Alcohol Literature. The Ocean Cruise of the Viennese. German Poem of the Thirteenth Century. Comments and Prose Translation. E. M. Jellinek.—p. 540

## Rocky Mountain Medical Journal, Denver

**43** 185-272 (March) 1946

A Doctor Looks at the Wagner-Murray-Dingell Bill. L. T. Brown.—p. 204
Sialography. T. E. Beyer.—p. 210
Delayed Suture of Wounds Associated with Fractures. R. C. Rounds.—p. 216
Penicillin Nebulization in Bronchopulmonary Disease. Preliminary Report. A. Hurst.—p. 219

# FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

## British Journal of Radiology, London

**19** 89-132 (March) 1946

Cytologic Analysis of Response of Malignant Tumors to Irradiation as Approach to Biologic Basis for Dosage in Radiotherapy. P. C. Koller and D. W. Smithers.—p. 89
Nonmalignant Conditions of Esophagus. A. S. Johnstone, R. A. K. Harper, J. W. McLaren and Maria E. Grossmann.—p. 101
Bronchopulmonary Dissociation Due to Abnormal Artery Visualized by Bronchography. L. G. Blair, D. M. Pryce and T. H. Sellors.—p. 118
Case of Secondary Amebiasis of Lung. W. Campbell.—p. 120
Bite-Wing X-Rays—Scheme for Mass Dental Radiography. W. Harvey.—p. 124
Familial Brachydactyly with Associated Bilateral Coxitis. J. F. Brailsford.—p. 127

## British Journal of Surgery, Bristol

**33** 201-300 (Jan.) 1946

*Surgery of Thymus Gland. G. Keynes.—p. 201
Constrictive Pericarditis. T. H. Sellors.—p. 215
The Last Hate. Account of Abdominal Injuries of the V 1 and V 2 Phases of War on Britain and of Shelling of Dover. G. Gordon Taylor.—p. 230
German Hospital Center at Abano Terme. I. Mitchell-Heggs and W. J. Walter.—p. 235
Experimental Observations on Use of Absorbable and Nonabsorbable Plastics in Bone Surgery. G. Blaine.—p. 245
Interesting Cervical Tumors. Report of 3 Cases.—p. 250
Penetrating Wounds of Chest. W. F. Nicholson.—p. 257
Survey of Abdominal Wounds in 21 Army Groups (June 1944-May 1945). A. E. Porritt.—p. 267
Spontaneous Gangrene of the Scrotum (Fournier's Gangrene). O. T. Mansfield.—p. 275
Case of Hindquarter Amputation for Chondromyxosarcoma of Right Thigh. I. M. Hill and I. P. Todd.—p. 277
Spontaneous Rupture of Spleen in Sarcoidosis. I. James and A. J. Wilson.—p. 280
The M. E. M. Sphygmoscope in Vascular Injuries. F. B. Malkinson and D. O. Williams.—p. 282
Relative Incidence of Sternomastoid and Ocular Torticollis in Aircrew Recruits. J. Grieve.—p. 285

**Surgery of Thymus.**—Of Keynes's 51 patients subjected to thymectomy, 6 had tumors one of which was infiltrating the pericardium, pleura and lung and was judged to be inoperable. The patient died soon after the operation. The other five tumors were apparently benign, though their thick capsules were densely adherent to the pleura covering them and to the pericardium thereby increasing the difficulty of removal and the risk of the operation. One of the 5 patients with benign tumors died after the operation from pulmonary atelectasis. The other 4 survived the operation but 2 of them after improving greatly for a time had severe relapses of myasthenia and died within three months of respiratory failure. Only 2 of the 6 tumor patients are alive today. 1 two years later is much better than before the operation. The other was operated on only recently. Of the 51 patients operated on 13 are dead and 38 are alive. Of the 13 fatalities only 8 can be called operative deaths. Of the 33 patients available for a postoperative follow-up 9 are well, 11 are greatly improved, 8 are somewhat improved and 5 show no improvement.

## British Medical Journal, London

**1** 305-342 (March 2) 1946

Diagnosis of Amebiasis. W. E. Kershaw.—p. 305
*Acroparesthesia in Lower Limbs. Unexplained Pains in Legs at Night. J. P. Martin.—p. 307
Problems of Diphtheria. J. Grant.—p. 309
Prefrontal Leukotomy in Treatment of Postencephalitic Conduct Disorder. F. T. Thorpe.—p. 312
Penicillin in Gonorrhea. Single Injection Method. A. Allan.—p. 314
*Traveler's Edema. K. Zacopoulos.—p. 322

**Acroparesthesia in Lower Limbs.**—Martin reports several cases of acroparesthesias in the lower limbs in men. The tingling is usually described as being in the muscles and is relieved by muscular activity, but the burning sensation in the feet, if present is superficial and is relieved by putting the foot against something cold. The sensation is the same as that of acroparesthesia in the upper limbs. Not only is the quality of the sensation the same, but both in the upper and in the lower limbs the sensation occurs in sleep, if severe, it awakens the sufferer, and it is relieved by the same means by putting the affected parts out into the cold, holding them up and exercising

them. Furthermore, in many cases physical exercise taken during the day in bringing about this peculiar discomfort at night is similar in the two instances. The association of these paresthesias with exercise and sleep is puzzling. Paresthesias of the leg are frequent features of the early stages of organic nervous diseases due to dietary deficiencies. They occur also in subacute combined degeneration of the spinal cord in polyneuritis and in other organic nervous diseases. Paresthesias are also seen in some cases of vascular occlusion and in "immersion feet" in which there is a combined nervous and vascular effect. However, in 1 of the author's patients even after forty years of paresthesias at night, no signs of organic nervous or vascular disease could be discovered, nor were such signs seen in the other patients. The author has found acetylsalicylic acid most serviceable in relieving these paresthesias.

**Traveler's Edema.**—Zacopoulos directs attention to a form of edema caused by inactivity to which travelers by sea, rail or road are subject. Among 40 Greek officers who, while escaping to Aleppo, Syria, had an uncomfortable, crowded trip lasting four days, there were 8 who developed edema of the ankles. Another group of Greek officers had to stand for the better part of three days during a journey from Smyrna to Aleppo. Extensive edema had appeared in the lower extremities of every member of this group toward the end of the second day of the journey. None of these men had suffered from excessive malnutrition. It was not a cardiac edema because careful examination of the cardiovascular system revealed no abnormality. It was not a renal edema, because none had pyrexia, renal pain, oliguria, edema of the eyelids or any other symptom of nephritis. 'Deck ankles' probably represent the same condition. He prefers the term traveler's edema to either inactivity or orthostatic edema. Traveler's edema is caused purely mechanically in cases in which there is a great diminution or complete absence of muscular movements of the extremities in persons who are sitting or standing for prolonged periods. Treatment is simple. Repeated active or passive movements of the lower extremities must be started immediately. Tepid bathing of the feet is advisable, with simultaneous massage and passive movements of the toes, ankles and calves. An elastic stocking might be tried in those few cases which do not respond promptly to massage and tepid baths. Travelers must be warned against complete inactivity and whenever possible must avoid standing up during long journeys.

## Indian Medical Gazette, Calcutta

**80** 485-540 (Oct.) 1945 Partial Index

Paratyphoid C Fever. S. M. K. Wasti.—p. 485
Intracranial Herniation Syndromes. H. B. Lal.—p. 489
Stools in Clinical Sprue. D. A. K. Black.—p. 492
Position of Vermiform Appendix. M. A. Shah and Mubarika Shah.—p. 494
4 4 Diamidino-Diphenyl Ether in Treatment of Indian Kala Azar. P. C. Sen Gupta.—p. 495
*Protein Hydrolysate in Infective Hepatitis. R. Viswanathan.—p. 498.
Sulfanilyl Benzamide in Treatment of Bacillary Dysentery. Preliminary Note. A. R. Majumder, A. K. Bagchi and B. K. Ghosh.—p. 500
Jaundice in Amebic Liver Abscess. Report of 2 Cases. D. G. Reddy and C. M. Rangam.—p. 501
New Technic in Sternal Puncture. D. G. Reddy and M. Thangavelu.—p. 502
Treatment of Kala Azar with Sodium Antimony Gluconate (Stibatin). Further Observations on Treatment of 32 Cases. K. C. Chakravarty.—p. 507
Deep Reflexes in Neural Leprosy. R. Subramaniam.—p. 511

**Protein Hydrolysate in Infective Hepatitis.**—Viswanathan studied 54 cases for the purpose of assessing the value of protein hydrolysate, 27 were treated with the protein digest, while the remaining formed controls. He concludes that protein hydrolysate has definitely a place in the treatment of infective hepatitis with toxic symptoms. Vomiting disappears and appetite is restored quickly. The liver becomes normal within a shorter period. The degree of jaundice is not appreciably affected in the majority of cases. The sedimentation rate comes down to normal in a shorter time. Better results are obtained in those treated early. He is inclined to believe that if the treatment is instituted in the preicteric or the early icteric stage the results will be more favorable.

## Semaine des Hôpitaux de Paris

**22** 1-46 (Jan. 7) 1946 Partial Index

Paroxysmal Arterial Hypertension Caused by Adrenal Paraganglioma (General Brief Outline). C. Lian, F. Siguier and A. Girauld.—p. 1
Medicosurgical Observation of Paroxysmal Arterial Hypertension Caused by Adrenal Paraganglioma. C. Lian, H. Welti and F. Siguier.—p. 3
Diagnosis of Common Form of Paroxysmal Arterial Hypertension Caused by Adrenal Paraganglioma, Based on Questioning of Patient. C. Lian, F. Siguier and A. Girauld.—p. 7
Paradoxical Collapse of Arterial Tension and Sudden Death in Course of Paroxysmal Arterial Hypertension Associated with Adrenal Paraganglioma. C. Lian, F. Siguier and A. Girauld.—p. 7
*Teleroentgenographic Method for Demonstration of Form and Respective Dimensions of Both Adrenal Capsules. C. Lian, M. Marchal, F. Siguier and A. Girauld.—p. 10
Minor Form of Paroxysmal Arterial Hypertension Caused by Adrenal Hyperactivity in the Absence of Tumor. C. Lian, H. Welti and F. Siguier.—p. 15

**Teleroentgenographic Demonstration of Adrenal Capsules.**—Complete absence of gas in the adrenal area after an enema and after restriction of food and beverages on the eve of the teleroentgenographic examination should first be verified by radioscopy. The patient then is placed in a vertical position with the back against the plate. The x-ray tube must be centered on the eleventh intercostal space so that the normal incident ray is tangent to the superior pole of the adrenals. The teleroentgenogram should be made at a distance of 1.5 meters during expiration, with a radiation of about 80 kilovolts. The time of exposure should be the shortest the apparatus permits. By using this method in 3 cases of adrenal hypertrophy, Lian and his associates succeeded in demonstrating not only the size of both adrenal capsules but also their contours. An irregular hypertrophy is manifested by sharp outlines, while the visible superior pole of the capsule appears circular instead of oval. A regular hypertrophy i. e. a simple hyperplasia, is indicated by smooth outlines, while the superior pole of the capsule shows the roentgenographic oval. Very slight anomalies can be demonstrated by this method where others may fail.

## Schweizerische medizinische Wochenschrift, Basel

**75** 917-940 (Oct. 20) 1945 Partial Index

Clinical Significance and Differentiation and Typification of Bacteria. A. Grumbach.—p. 917
Osteomas and Hyperostoses of Superior Maxilla. E. Luscher.—p. 924
*Tonsillectomy and Tuberculous Lymphomas of Neck. H. Wissler.—p. 927
Cholinesterase of Blood and Arterial Hypertension. Preliminary Note. L. Libbrecht.—p. 929

**Tonsillectomy and Tuberculous Lymphomas of Neck.**—Wissler investigated the course of 63 patients who had had tonsillectomy for tuberculous lymphomas of the neck. Twenty-two later had relapses or exacerbations, 28 remained free from them and in the other 13 the later course could not be learned. The author concludes that removal of tonsils does not prevent the progression of tuberculosis of the cervical lymph nodes. However, in certain cases tonsillectomy may aid in the closure of long standing fistulas.

## Rev. de Medicina e Cirurgia de São Paulo

**5** 173-244 (July-Aug.) 1945 Partial Index

*Penicillin Therapy in Case of Tabes Dorsalis. L. Sales Gomes.—p. 173
Dysontogenetic Tumors of Renal Cortex. R. Escobar Pires.—p. 183
Adrenal Problem in Tropical Pemphigus. J. R. Alves Guimaraes and J. P. B. Vieira.—p. 229

**Penicillin in Tabes Dorsalis.**—Sales Gomes administered penicillin to a man aged 78 with tabes dorsalis of two years' duration. The patient had paralysis of the lower extremities, lightning pains, gastric disturbances and urinary incontinence and was in poor general condition. Tabes had become manifest more than fifty years after the syphilitic infection. Penicillin was injected daily for seven days into the spine. Simultaneously penicillin was administered by intramuscular injection for ten days. The total doses were 297,500 units intrathecally and 812,500 intramuscularly. At the termination of this treatment the patient had a severe gastric crisis, which probably resulted from the intense alkalization with the sodium penicillin and the large quantities of dextrose solution. Several weeks after the penicillin therapy the lightning pains were relieved by about 75 per cent in frequency and intensity, urinary incontinence and gastric disturbances disappeared and the general condition improved greatly. There was a return of some of the reflexes.

# Book Notices

**Diseases of the Nose Throat, and Ear Including Bronchoscopy and Esophagoscopy** Edited by Chevalier Jackson M D Sc D LL D and Chevalier L. Jackson M D M Sc F.A C S Professor of Broncho Esophagology Temple University Philadelphia With the Collaboration of Sixty Four Outstanding Authorities Cloth Price $10 Pp 844 with 934 illustrations Philadelphia & London W B Saunders Company 1945

This new textbook is a welcome addition to a field in which new conceptions of pathogenesis and therapy have been rapidly accumulating as horizons have expanded Since however it is for the most part a compilation of the work of some sixty-four contributors, it is natural that one will note differences in style and emphasis This is apparant as one peruses the text and it detracts considerably from the fluidity and continuity which can come only from the pen of a single author Also one will find that certain topics are overstressed to the disadvantage of others which are not too thoroughly covered However, on the whole one may say that the material is adequately presented Special mention should be made of the chapters covering the otologic and laryngologic subjects, which are given in great detail with clarity and authority Also one will note with pleasure the inclusion of such topics as trauma involving the sinuses and facial structures as well as plastic repair of nasal and aural defects There is much that is new in the book, such as chapters on aviation otology, photography of the air passages therapy and anesthesia. Also the discussions of the various neuralgias and psychosomatic problems affecting patients with laryngologic symptoms are timely additions On the other hand, one cannot help but note the absence of any special treatment of the subject of sinusitis in children and the meager coverage of the subject of tonsillectomy, in which a surgical procedure is described that is not representative of the one more generally practiced, also it is regrettable that the subject of nasal allergy is given so little space. Nevertheless the book is well worth while, since in one volume it is comprehensive enough to serve the needs of the average practitioner A large number of excellent illustrations properly labeled and distributed help materially to illuminate the text.

**Colloid Chemistry Theoretical and Applied** By Selected International Contributors Collected and Edited by Jerome Alexander Volume VI General Principles and Specific Industries Synthetic Polymers and Plastics Cloth Price $20 Pp 1,215 with illustrations New York Reinhold Publishing Corporation 1946

This is the last of a six volume series published over a period covering the past two decades (volume I, 1926) that deal with various phases of colloid chemistry The series covers a diversity of scientific interests represented by the contributions of numerous authorities in the field that have been collected and edited by the author Volume V Theory and Methods, Biology and Medicine, reviewed in THE JOURNAL, June 23, 1945 illustrates the wide range of application that colloid chemistry has engendered

The present volume, as suggested by the title, is divided into two sections part I dealing with general principles and specific industries, and part II, dealing with synthetic polymers and plastics In addition, at the end there are three appendixes, a special table of dimensions and the usual author and subject indexes The two main parts comprise 71 papers—38 in the first, 33 in the second. The appendixes consist of three brief supplements to papers in the main body of the book, two of which supply additional information concerning the commercial production of synthetic rubber and penicillin that was withheld from publication during the war The editor has himself contributed a general article on nuclear fission and atomic energy that appears as the last of the papers in part I and serves admirably to provide timely information on this important topic

The book for the most part contains papers on subjects of primary interest to the chemist and physicist particularly with respect to the application of colloid chemistry to industrial and technologic methods involved in processes or products of manufacture A few of the papers are theoretical, but most of them are of practical interest to persons engaged in scientific methods of production. Of technical interest to those engaged in the medical sciences are the papers in part I on electron microscopy and the skin and its technologic hazards (The previous volume of the series contained in its second part much more information on the applications of colloid chemistry to medicine) The other papers of this section cover a wide variety of subjects from the surfaces and nature of solids, adhesives and drilling fluids to the colloidal activity of greases, metals, soaps and paints

Part II of the book is introduced by another contribution of the editor on the behavior of plastics The other papers of this section (except the last on nuclear fission) are devoted almost entirely to the industrial chemical aspects of celluloses, resins, plastics and other synthetic polymers These should be of special interest to those engaged in the development of new structural materials or methods of improving synthetic materials already in use.

The contributors of the various papers constitute an imposing list of authorities too lengthy to supply in detail Among those represented, in addition to the editor, may be mentioned William D Harkins, Norman D Coggeshall J K Zworykin E A Hauser, Lawrence H Flett Joseph Stanley Alfred E Gutman R W Albright, Hans F Winterkorn, C K Tseng, Frank C Combes, W A Helbig, A E Young, Alan F Randolph and James R Patterson The papers are arranged so that each together with its list of references, forms a chapter of the book The editor has successfully arranged the order of the chapters to attain a high degree of organization of the greatly varied topics presented The editing has also been well done, as evidenced by the comparative freedom from typographic and other sources of error peculiar to a work of this kind.

Viewed as a whole, this book should prove to be a valuable reference to the industrial chemist, chemical and technologic libraries, as well as for those interested in so-called pure science

**Pensée de Pasteur** Par Charles Oulmont Paper Pp 103 Lisbon L'Instituto Pasteur de Lisboa 1945

With sympathy and a delicate touch, the life and mind of Pasteur are sketched from the time when the sensitive boy of 13 divided his interest between his studies and his portraits in pastel of Arbois neighbors through the labors and triumphs of his work on fermentation and infectious diseases the establishment of the germ theory and the development of vaccine therapy labors only partly interrupted by the attack of paralysis which seemed to threaten his career at its height But this is not a recital of dramatic success the author's affectionate admiration is compelled by the character of the man, his loving-kindness his determination his invincible integrity his deeply religious outlook in science and life alike 'My philosophy is all of the heart and not of the mind" The relentless investigator who asked for eloquence in facts and not in words masked the devoted son and the tender father and to the long loved companion sweetheart and wife, he gave his humble and honest pledge— I belong to you and to Science for all my life."

This is a perfect example of G Stanley Hall's higher ideal man', He will merge and perhaps efface himself in his cause or task, although greatest he will be content to be thought least he will be vastly more naive than self conscious and will place the good of others before that of himself

**Rehabilitation at Lake Tomahawk State Camp A History** By Harold Holand Director Research Department Wisconsin Anti Tuberculosis Association Cloth Price $1 Pp 46 with 6 illustrations New York National Tuberculosis Association 1945

This book deals with the Lake Tomahawk State Camp for the rehabilitation of the tuberculous operated by the state of Wisconsin at Tomahawk Lake in the northern forest area of that state The book gives an account of the establishment of the institution and a description of its general character and of its working plans It gives also careful statistical studies of the result of rehabilitation For the most part these results have been favorable, but there has been a certain percentage of reentry into the sanatorium among the patients who have been treated or perhaps one had better say rehabilitated at the Tomahawk Lake Camp This percentage is smaller than the percentage of patients who have been readmitted to sanatoriums without the advantages of such rehabilitation as at Tomahawk Lake. The book contains information of value to those interested in the rehabilitation of the tuberculous especially those who may be planning camps and other rehabilitation projects

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT HOWEVER REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## NEUROVASCULAR SYNDROME OF ARMS DUE TO HYPERABDUCTION

*To the Editor*—A white man aged 33 has had weakness of the hands for sixteen years associated with tingling and numbness on exercise These symptoms are relieved by rest or by allowing the arms to remain pendent for some time Elevation of the arms produces tingling of the hands Examination reveals some reddening of the skin and slight thickening of the hands The lower extremities are not involved at all Complete neurologic examination is negative The patient's mother has been subject to the same disorder for over thirty years Although the more gross neuropathies have been considered such as disseminated sclerosis syringomyelia, cord tumor cervical rib scalenus anticus syndrome and the neuritides corroborative evidence has not been found The symptomatology does not resemble any of the ordinary vascular diseases

Sidney N Mandell M D Union City N J

ANSWER—The syndrome as explained in the query suggests one of the neurovascular syndromes produced by pressure or torsion of the blood vessels and nerves between the posterior surface of the clavicle and the anterior surface of the first rib, and accentuated with hyperabduction of the arms due to torsion and pressure behind the pectoralis minor and underneath the coracoid process The subclavian axillary artery is frequently involved in one or both of these areas as well as the nerves of the brachial plexus

A complete description of this type of syndrome is to be found in the paper by I S Wright (*Am Heart J* **29** 1 [Jan.] 1945) The patients described in that paper developed their syndromes for the most part as a result of sleeping with the arms in the hyperabducted position In 1 instance this progressed to the point of gangrene of the fingers A study of 150 young adults revealed that a pulse of the arm can be obliterated in the position of hyperabduction in approximately 83 per cent of all normal persons, although in some instances this is difficult Some individuals were seen whose radial pulses disappeared when the arms were abducted beyond the 90 degree angle in the median plane

Patients have been seen in whom these syndromes are produced by their occupation These include painters and riveters of the undersurfaces of airplane wings Attention should also be called to the article by M A Falconer and Graham Weddell (*Lancet* **2** 539 [Oct. 30] 1943), which describes a similar syndrome produced by downward and backward pressure of the clavicle against the first rib It was noted in soldiers of the British army who wore heavy packs This syndrome can also be produced by relaxation of the muscles which normally support the clavicle, provided the shapes of the clavicle and the first rib are such that they encourage easy obliteration of the normal space of that area

If the syndrome is produced by hyperabduction, this should be avoided Those who sleep in such a position must be trained to sleep with their arms by their sides Those in whom an occupational factor is important must readjust their employment In other instances it is necessary to use exercises to develop the muscles responsible for holding the clavicle in the proper position Falconer and Weddell described surgery involving the production of a groove by operation on the first rib This will probably not be necessary for many patients A table of differential diagnosis regarding these neurovascular syndromes is included in the paper by Wright.

## DERMATITIS FROM 'SIZES'

*To the Editor*—A man has developed a dermatitis of the face and hands while working at sizing straw hats I believe that the sizing consists of a coal tar nitrocellulose and ethyl butyl Please send me any information pertaining to the cause prevention and treatment of the dermatitis I would appreciate if you could also check on the composition of the sizing

M D New York

ANSWER—Dermatitis from "sizes" may be the result of primary irritation from the solvent contained in the size. Such a dermatitis will result if the hands are frequently soiled with the size, especially in thin, dry skinned persons

The stiffener in the size may be a natural or a synthetic resin Natural resins such as rosin, manila gum and shellac are used Synthetic resins such as ethyl cellulose and nitrocellulose may also be used, as may sodium silicate, or water glass Usually there is some alkali content in the size, especially if a natural resin is used, and there is considerable water in the solvent No formulas for size containing coal tar have been found in the available technical books

Dermatitis of the face from sizing usually occurs because the soiled fingers are applied to the face in scratching and other unconscious movements, very much as is the case with nail lacquer dermatitis.

In order to ascertain which ingredient in the size is the actual cause of the dermatitis, it is suggested that patch tests be performed with each of the ingredients except the solvent. This can be done by ascertaining the ingredients from the manufacturer If the ingredients cannot be ascertained from the manufacturers, some of the size may be applied to a piece of gauze 1 inch square and allowed to dry The gauze can then be applied as a patch test on the patient. This will give information as to whether the solid ingredients or the solvent are the actual cause of the dermatitis Dermatitis from the solid ingredients is on an allergic basis, whereas dermatitis from the solvent is primary irritation

Prevention of dermatitis in the case under question will consist in avoiding soiling the hands with the size either by wearing rubber gloves or by using long handled brushes for applying the size, depending on how the work is performed The patient should be warned to keep soiled hands or even soiled gloves off the face The frequent washing of soiled hands during the day is also a useful preventive measure

Treatment of the condition consists in preventing further contact and applying mild medicaments such as wet dressings of Burow's solution 1 20, if the dermatitis is acute and vesicular, or using mild ointments such as zinc ointment or even a simple emollient cream if the dermatitis is of the chronic dry type.

## SEVERE PRURITUS IN RETURNING VETERANS

*To the Editor*—A number of returning veterans have come under my attention seeking relief from a rather severe urticaria They state that on leaving Europe as far as they knew their condition was normal About seven days after leaving European shores this seven day type of urticaria began to manifest itself There are no skin manifestations except excoriations due to scratching I have been giving the patients intravenous calcium gluconate and vitamin B complex and soothing baths but treatment has not been long enough to expect results Can this condition be a contact dermatitis a food allergy or a neurologic mechanism? What therapy would best facilitate improvement?

Michael G Frich M D Monessen Pa

ANSWER—"Urticaria" without skin manifestations developing after seven days in the crowded troop ships might be merely itching due to the crowded conditions, the stuffy hot air and the lack of bathing facilities Another possible factor might be the diet with irregular feedings and irregular bowel function as well as the general nervous excitement Treatment should be directed toward each of these factors and that means cleanliness, rest, pleasant peaceful surroundings, fresh air and a good general diet

## SEX DIFFERENCES IN STILLBIRTH RATES

*To the Editor*—Is there any truth in the statement that 'some women cannot carry a boy baby until birth'? If there is any truth in this statement what would be the possible reason?

M.D Kansas

ANSWER—There is absolutely no truth in the statement quoted. Perhaps it is based on the fact that whereas the ratio of males to females at birth is 105 to 100, the stillbirth rate is about 130 males to 100 females and the sex ratio for early abortions is about 160 males to 100 females

## ALTITUDE AND HEART DISEASE

*To the Editor*—Regarding the query in The Journal April 6 1946, page 981 on altitude and heart disease I have no quarrel with the answer to the question from an academic standpoint—it was my assignment during the war to be director of the Altitude Training Unit at Yuma Army Air Field and during the war I supervised some 50 000 men at simulated altitudes at several air fields During this time we all observed factors which are not explained by alveolar oxygen tensions—in fact none of the research explanations of the A. A. F satisfactorily explained all the effects of altitude simulation Not all of the unusual effects of decompression were limited to very high altitude simulation I have had experiences with older officers and enlisted men at altitude simulations of 6,000 to 8,000 feet which convinced me that patients such as the one discussed would be benefited by both (1) increasing oxygen tension in the room and increasing atmospheric pressure in the room I am not discussing practicability It would obviously be easier to move to sea level However I am convinced that the patient would receive material and evident clinical comfort from a pressurized room—comfort that a simple increase in oxygen would not give

Robert J McNeil M D, Los Angeles

# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL 131, NO 7 — CHICAGO, ILLINOIS — JUNE 15, 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

## AN OUTBREAK OF POLIOENCEPHALITIS AMONG NAVY CADETS, POSSIBLY FOOD BORNE


LIEUTENANT COLONEL DAVID M GOLDSTEIN
*Medical Corps Army of the United States*
W McD HAMMON M D Dr P H
San Francisco
and
HENRY R VIETS M D
Boston


During the first week of September 1943 at a naval training school situated on the campus of a West Coast civilian educational institution 14 cases of clinical poliomyelitis developed These cases were observed, diagnosed and treated at a nearby army station hospital At the same time 3 other paralytic cases occurred at two navy flight training fields in an adjoining state among graduates who had left the aforementioned training school less than six days before the onset of symptoms Another paralytic patient the girl friend of 1 of the graduate patients, who had attended the school commencement also became ill at the same time as the others It is considered that the source of infection was probably common to all 18 clinically diagnosed cases In addition to this group of recognized cases there were several others hospitalized as suspect cases and discharged when spinal fluid tests were found negative It was later learned that about 100 other cadets were ill with suggestive symptoms during this period They did not report to "sick bay" however, since all suspects were being hospitalized, and these mildly ill students feared that loss of time might compromise their chances of qualification for flight training Among 30 graduates who went to one training field, 6 men in addition to the 2 who were paralyzed were found to have been sick and off duty at least two days in the second week of September with undiagnosed illness which, by reported symptoms, might well have been abortive poliomyelitis None of the men at this field however from groups graduated from other schools, were ill during the same week The investigation at this field was carried out when one of us (W McD H [1]) was asked by the civilian physician caring for the 2 paralytic cases to see them as a consultant No investigation was carried out at the other flying fields to which graduates from the training school had gone One paralytic patient included among the 3 graduate cases was eventually reported from one of these fields During the following several weeks no other cases could be discovered from the school or any of the fields known to be involved Thus there is clinical evidence of an explosive epidemic of poliomyelitis infection among young adults which probably involved over 100 persons All appeared to have a common source of infection and not a single secondary case of even a mild nature was found Epidemiologic evidence is suggestive that some food served in the mess hall at the school, probably milk was the source

One unusual feature of the outbreak was the preponderance of cases with encephalitic manifestations Paralyses were limited almost entirely to muscles supplied by the cranial, cervical and thoracic nerves For this reason and because of the unusual epidemiologic picture, the diagnosis of poliomyelitis was not made immediately Serologic tests done at the George Williams Hooper Foundation of the University of California (Army Consultant's Laboratory) and at the Virus Laboratory of the U S Army Medical School ruled out western equine, St Louis and Russian spring-summer encephalitis The feces of 3 of 4 patients tested by monkey inoculation by Mr Walter N Mack, member of the staff of the former laboratory, yielded strains of poliomyelitis virus

Because of the lack of naval hospital facilities in the immediate area, all patients were hospitalized at the nearby army hospital in charge of one of the authors (D M G) Major Ralph Rosenberg, M C and Capt Anthony Coletti, M C, officers on the medical service, were principal assistants in the work The post surgeon requested consultation from Washington, and one of us (W McD H) as a consultant to the Secretary of War on the Commission for the Investigation of Influenza and other Epidemic Diseases, Committee on Neurotropic Virus Diseases of the Surgeon General's Office, was requested to make an investigation This was begun on Sept 16, 1943 The senior naval medical officer of the school cooperated in a study of the campus and furnished information in regard to the early symptoms of the patients Eventually, because of remaining differences of opinion in regard to diagnosis, at the request of the army consultant, the post surgeon, Col C G Hutter, M C, U S Army (deceased June 26, 1945) invited another of the authors (H R V), chairman of the Diagnosis Committee of the National Foundation for Infantile Paralysis, to see the patients Also on October 9, on the recommendation of the consultants, Dr Frances Baker and Miss


Dr Viets is lecturer on neurology Harvard Medical School
From the George Williams Hooper Foundation University of California (Dr Hammon)
Lieutenant Colonel Goldstein's present address is 657 South St Andrews Place Los Angeles 5 Dr Hammon's Hooper Foundation University of California San Francisco 22 Dr Viets's 20 Gloucester Street Boston 15


This investigation was carried out in collaboration with the Commission on Neurotropic Virus Diseases Board for the Investigation and Control of Influenza and Other Epidemic Disease in the Army Preventive Medicine Division, Office of the Surgeon General U S Army Aided by a grant from the National Foundation for Infantile Paralysis

1 While on a lecture tour for the National Foundation for Infantile Paralysis

Marjorie Wagner of the department of physical therapy of the University of California Hospital, made muscle analyses of all patients

A number of outbreaks of poliomyelitis in which milk was suspected to be the principal agent have been reported in the past In West Kirby, England, in 1914, 4 scattered cases of poliomyelitis were found to have a common source of milk, and Jubb[2] who reported the outbreak, suggested that this was a likely source of infection In Spring Valley N Y, in 1916, 7 cases occurred among the users of unpasteurized milk from a dairy A paralytic case was detected on the farm where the milk was produced and Dingman,[3] who reported the outbreak suggested flies as a means of contaminating the milk Knapp Godfrey and Aycock[4] described another small outbreak in Cortland, N Y The milker, a boy of 16, performed his duties while ill until his hands became paralyzed and he could no longer milk At a reasonable incubation period thereafter cases occurred on the milk route where the mixed raw milk from this farm and others was distributed In Broadstairs England in 1926 Aycock[5] studied a larger outbreak (62 cases) involving principally rural boarding schools Raw milk from one farm was incriminated Here, as in the outbreak we report, no known source of milk contamination was found Since, in the cases in our report, encephalitic symptoms were prominent it is interesting to note that Aycock said about the epidemic in England "It may be stated here that the polioencephalitic type of the disease was much more common in this epidemic than in the experience of the writer in the United States"

## EPIDEMIOLOGY

The school where the outbreak here described occurred was located on a civilian campus A number of barracks had been erected near the school buildings and directly adjacent to the areas where a large number of domestic animals were kept Naval authorities had permitted the school to keep its stock of animals used in long term experiments on breeding There was a dairy herd supplying raw milk to the school mess and in addition there were horses pigs and several thousand chickens The latter were housed within a few hundred feet of the barracks and mess hall These chicken houses and barns were the source of prolific fly breeding Manure had accumulated in very large quantities

All water on the campus was piped from a closed tank which was supplied by a drilled well The water was subjected to regular bacteriologic tests and was always found to be satisfactory It was therefore not chlorinated

Inside flush toilets were used exclusively and these were connected to the sewerage system of the nearby town The disposal plant was located at the opposite side of the town from the school

The naval school had a total population of 730 officers and men These all ate at the same mess operated by civilians About 50 civilians were on the campus during the day They did not eat on the campus with the naval cadets but they drank from the same water supply No recognized cases of poliomyelitis occurred in the civilian group

In the town a few cases of poliomyelitis had been reported during the summer months but the rates were lower than in many other areas in the state. No connection could be traced between any of these cases and the September epidemic at the school No suggestive illness occurred among the food handlers or the milkers prior to the outbreak

Approximately ten days before the onset of poliomyelitis in the school there were 20 cases of illness among the cadets, diagnosed as "epidemic pleurodynia" characterized by fever and chest pain Two of the 20 later developed poliomyelitis No case of "epidemic pleurodynia" could be interpreted as the primary source of the poliomyelitis outbreak

The only common contributing factors in the outbreak appeared to be the residence in the school the use of soft drinks (principally milk shakes) at the school's fountain and the eating of meals at the mess hall Case rates in each of the four classes resident in the school during the month of August were approximately equal A new class arriving Sept 2 1943 was not affected though they were present at the time of onset of the illnesses among the three remaining classes The swimming pool was used almost exclusively by one class and a number of the patients had not used it for over a month Cases were rather evenly distributed among the barracks Several patients had not left the campus at any time during the three weeks preceding the onset of their illness Several others had eaten at different town restaurants or attended movies in town but these exposures were not common to many Studies were therefore centered on the barracks, the food and milk supplies and the mess hall

Flies were found present in great numbers both in and out of the buildings Many were present in the barracks, but the number was excessive in the mess hall and the milk barn In the barrack toilets flies were seen crawling over residual fecal smears in the bowls These toilet rooms all had unscreened ventilation opening outside. One toilet for the female kitchen help in the mess hall was also found to have an open unscreened window to the exterior Each time the toilet room door was opened the flies had ready access to the kitchen

Milk from the milking machines in the barn passed directly through cooling coils into a funnel with a cloth diaphragm On this cloth, at the time of our inspection numerous flies were being rinsed with a stream of milk. Open steam sterilized milk cans into which the milk from the funnel was run contained many living flies and drowned flies were in the condensed steam at the bottom Reports on bacteriologic tests made on this raw milk by the local health department were on March 5 1943, too numerous to count, June 2 3,900 per cubic centimeter July 7, too numerous to count, July 31, 6,700 per cubic centimeter, and September 8, 25,800 per cubic centimeter In the mess hall the milk was poured into a large tank and at meal time was run into pitchers These pitchers were scalded after washing then wiped inside by hand with dish towels Flies crawled about in empty washed pitchers until meal time All patients drank milk regularly with meals They stated that dead flies were regularly found in their glasses and in the pitchers Milk remaining in pitchers after meals was returned to the cans and the tank drained into the cans and the

2. Jubb G A Third Outbreak of Epidemic Poliomyelitis at West Kirby Lancet 1 67 (Jan. 9) 1915

3 Dingman, J C Report of a Possibly Milk Borne Epidemic of Infantile Paralysis New York State J Med. 16 589-590 1916

4 Knapp A. C Godfrey E. S., and Aycock, W L. An Outbreak of Poliomyelitis Apparently Milk Borne J A M A. 87: 635-639 (Aug. 28) 1926

5 Aycock, W L. A Milk Borne Epidemic of Poliomyelitis Am. J Hyg 7 791-803 (Nov) 1927

cans placed in a large refrigerator until the next meal This raw milk was supplemented to some extent by grade A pasteurized milk from a town dairy Milk from the town dairy was served at the soft drink fountain operated for the students on the campus All patients had had milk drinks at the fountain on recent occasions

Of a specimen of 341 flies caught there were 269 Musca domestica 67 Fannia canicularis, 2 Stomoxys calcitrans and 3 Muscina stabulans No virus was isolated from these flies by Rhesus monkey inoculation It was noted that there were numerous chicken mites (Dermanyssus gallinae) in the chicken houses and on Musca domestica from the chicken houses This is of some interest in the light of claims made by Perioni,[6] reviewed recently in THE JOURNAL,[7] that the chicken louse (Dermanyssus avium) is a vector of poliomyelitis We have not had the opportunity of seeing the original reports to verify the name of this parasite but a search through entomologic literature has failed to find any record of such a genus Other large collections of flies[8] have not been tested, since Cynomolgus monkeys are not yet available A few mosquitoes[8] were breeding on the campus, and they were collected in small numbers in the barracks, barns and chicken coops They were identified as Culex pipiens, Culex tarsalis, Culiseta incidens and Anopheles pseudopunctipennis

As a result of an official epidemiologic investigation made by the West Coast Mobile Unit, U S Navy Hospital, San Diego, Calif, in charge of Comdr R W Babione (MC), U S N, beginning September 11, recommendations were made and carried out with respect to sanitary conditions

Since the possibility of milk borne epidemics of poliomyelitis has been suggested by other investigators, and since the present outbreak contained somewhat similar characteristics of rapid onset (within eight days) and milk contaminated with flies as a probable common source of infection, it was highly suggestive that we were dealing with a milk borne epidemic Since flies have been found repeatedly contaminated with poliomyelitis virus[9] this source of contamination seems quite possible The flies had at least occasional access to human fecal material and constantly to that of many domestic animals—the material in which many of them bred Careful inquiry was made regarding outbreaks of gastrointestinal disturbances or other infections frequently occurring from food or milk contaminations without uncovering any

The case of the girl friend of one of the graduates, who had only attended the school commencement, should have furnished the clue to the exact source of the infection It did not do so She was questioned repeatedly and the clinical diagnosis verified Arriving in town with other members of her family on the evening of August 28, she visited the campus on only one occasion and did not go to the mess hall or soft drink fountain but did attend the commencement dance in the evening She and her friend partook repeatedly of the refreshments—cookies and punch consisting of bottled syrups, sugar water and ice cubes, prepared in the mess hall kitchen by civilian mess hall employees The liquid refreshments were carried to the gymnasium in a milk can, said to have been carefully washed and scalded to remove all milk odors The cookies were purchased from a town bakery Several of the cadet patients did not attend the dance or partake of these refreshments then or later The girl stayed in town two days, eating at several different places frequently accompanied by her cadet friend She then returned to school at Berkeley, Calif On Sept 6, 1943 she became ill with poliomyelitis and on the same day her cadet friend became ill at the flying field in Nevada Both developed shoulder girdle paralysis It seems probable that they had a common source of infection and their dates of onset coincided with those of the other cadets Her incubation period would necessarily be six to eight days (probably eight) if infection took place at the dance Yet her only contact with the mess hall was through punch prepared there and brought in a milk can Other cases of poliomyelitis were occurring in San Francisco, Berkeley and other Bay area cities and she had many contacts while traveling, but we hesitate to consider her case coincidental

*Known Dates of Onset of Cadet Cases and One Civilian Who Visited the Cadet School*

| Date | Number of Cases |
|---|---|
| September 1 | 1 |
| September 2 | 2 |
| September 4 | 3 |
| September 5 | 5 |
| September 6 | 5 |
| September 8 | 1 |
| Unknown | 1 |
| Total | 18 |

The dates of onset of the recognized cases among cadets including 2 of the 3 from the flying fields and 1 civilian, are presented in the accompanying table

## CLINICAL OBSERVATIONS

The total number of diagnosed cases in the epidemic, as far as we have been able to determine, was 18 On 2 the notes are too incomplete to be of use for detailed evaluation, although the presence of poliomyelitis in each is unquestioned The remaining 16 patients were fully observed, and their records present some features not commonly associated with the diagnosis of poliomyelitis The first few cases in the outbreak, indeed, were given a provisional diagnosis of encephalitis, a justifiable assumption based on the presence of mental symptoms and with due weight being given to the location of the outbreak in a region where encephalitis is not uncommon Poliomyelitis virus however, was found in the stools of 3 patients, and all except 1 gave negative neutralization tests for the western equine and St Louis types of encephalitis In view of these facts, plus the unmistakable paralysis of the poliomyelitis type that developed in 9 of the cases, there can be no reasonable doubt that the whole group were examples of poliomyelitis in an unusual form, many with cerebral manifestations

*Symptomatology*.—The usual symptoms of infection with a moderate rise in temperature, chills, headache and stiff neck were present in nearly all the cases Headache, in some instances severe was the most common complaint, being recorded in 13 cases Stiff neck

6 Perioni C El origin de la paralisis infantil (enfermedad de Heine-Medin) Semana med 2 1149 (Nov 13) 1941 Nuevos aportes anatomicos y clinicos al origen de la enfermedad de Heine-Medin ibid 1 1321 (June 29) 1944

7 The Relation of Infantile Paralysis to Epizootic Avian Paralysis editorial J A M A 130: 34 (Jan 5) 1946

8 Collection of these and dairy barn inspections were made by Dr W C. Reeves and Mr Pedro Galindo of the Hooper Foundation Neurotropic Virus Unit

9 Paul J R Trask J D Bishop M B Melnick J L and Casey A E The Detection of Poliomyelitis Virus in Flies Science 94 395 396 (Oct. 24) 1941 Sabin A B and Ward Robert Flies as Carriers of Poliomyelitis Virus in Urban Epidemics, ibid. 94 590-591 (Dec 19) 1941

was present in 11 The highest temperature was 104 F, the average being about 101 F The Kernig sign was noted in only 2 patients Vertigo was present in 5 patients Nine patients complained of nausea, 6 of vomiting

Sleeplessness, restlessness and confusion was an early symptom in about one third of the cases Some patients were moderately excited, and tremors were not uncommon The presence of these encephalitis symptoms is shown in the following cases

CASE 1—*History*—E E A, a man aged 20 admitted to the army station hospital Sept. 9, 1943, developed "shooting pains" in his lower back and legs on the evening of September 6 He slept poorly but attended part of his classes on September 7 That night he was restless got up and wandered about partly confused Both legs were unstable

On admission most of the pain had disappeared but he felt generally weak and "light headed" His temperature was 100 F, the pharynx was slightly injected the neck moderately stiff and the Kernig sign positive

*Examination*—In the spinal fluid September 9 there were 130 white blood corpuscles per cubic millimeter with 48 per cent polymorphonuclears Globulin was not increased Sugar was 61 mg per hundred cubic centimeters Chlorides were 700 mg per hundred cubic centimeters The gold curve was 0011000000 In the blood there were 13,400 white blood corpuscles per cubic millimeter, with 63 per cent polymorphonuclears

*Course*—By September 13 the patient was afebrile and by September 18 he was asymptomatic except for slight weakness in his legs On October 5 he showed slight nystagmus, with weakness in the thigh muscles The spinal fluid on October 7 was normal, without cells A muscle examination on October 9 disclosed no paralysis

The blood gave a negative neutralization test September 16 for the St Louis and western equine types of encephalitis

CASE 9—*History*—L. F S a man aged 20, admitted to the army station hospital Sept 9, 1943, developed a mild frontal headache, cough, malaise and sore throat two weeks before entry About September 2 the headache became generalized and severe, he felt feverish and drowsy Vision became blurred and his neck stiff On September 7 he became nervous, was excitable and had an uncontrollable tremor of his hands when holding eating utensils He wandered about, restless and with insomnia Examination showed general weakness, apathy and slight stiff neck.

*Examination*—In the spinal fluid, September 9 there were 32 white blood corpuscles per cubic millimeter, with 44 per cent polymorphonuclears Globulin was not increased Sugar was 56 mg per hundred cubic centimeters Chlorides were 710 mg per cubic centimeter The gold curve was 0011000000

In the blood there were 11,750 white blood corpuscles per cubic millimeter, with 63 per cent polymorphonuclears

*Course*—By September 13 the patient was afebrile and nearly asymptomatic. Some tenderness and weakness developed in the left shoulder on September 21 On October 5 he showed left shoulder weakness, gross tremors of the hands and fibrillation of the tongue. On October 9 the whole left shoulder showed muscle weakness, grade 'fair" It was considered that this might, at least in part, be due to a previous injury, three years before his present illness A second spinal fluid examination was negative, with 3 cells per cubic millimeter

The blood gave a negative neutralization test for St. Louis and western equine encephalitis on September 16 It was found negative again for the western equine virus on September 27 and October 11 in the one laboratory In another laboratory it was reported negative on September 11 and 25 and positive on December 3

Two patients developed nystagmus and 3 had transient diplopia The deep reflexes were exaggerated in 2, along with absent abdominal reflexes Two patients developed bulbar symptoms, with dysphagia and nasal regurgitation Only 1 had retention of urine

Paralysis of various muscle groups was transient in 1 case moderately severe in 8, severe in 1 and not present in 8 others The most extensive involvement was shown in the following case

CASE 2—*History*—B B, a man aged 20 admitted to the army station hospital Sept 3 1943, developed chills and headache on September 1 At sick bay that day, although his headache was severe, his temperature was normal On the day of admission the temperature rose to 102 6 F and his neck became stiff and painful

On admission his neck was rigid and painful, with enlarged posterior cervical lymph nodes, his throat was injected and he showed bilateral, horizontal nystagmus No paralysis was noted, but his back was hypersensitive and the muscles were in spasm

*Examination*—In the spinal fluid September 3, there were 372 white blood corpuscles per cubic millimeter with 63 per cent polymorphonuclears Globulin was increased Sugar was 111 mg per hundred cubic centimeters

In the blood there were 12 500 white blood corpuscles per cubic millimeter

*Course*—A second examination of the spinal fluid, September 4 revealed 90 white blood corpuscles per cubic millimeter with 61 per cent polymorphonuclears On September 4 the patient became incontinent, irrational and unresponsive to stimulus No paralysis was evident, but his temperature rose to 104 F On September 5 the patient developed dysphagia A third examination of the spinal fluid revealed 104 white blood corpuscles per cubic millimeter, with 61 per cent polymorphonuclears On September 6 he remained irrational No paralysis was noted except his dysphagia The abdominal reflexes were absent *He was given sulfadiazine intravenously* Extensive muscle spasm and paralysis developed in a few days which gradually improved on October 9 a muscle examination showed spasm of the cervical muscles the adductors pectorals and external rotators of both shoulders and also both hamstrings There was paralysis of both sternomastoid muscles and slight weakness of the left facial muscles, both shoulder girdles the upper arms, the hip muscles and the upper legs A spinal fluid examination in October was normal, without cells

The paralysis showed a predilection for the muscles supplied by the cranial nerves and the cervical level of the spinal cord Diplopia was present in at least 3 cases, and the facial muscles were involved in 2 the pharyngeal muscles in 2 others and the sternomastoid in 1 Six patients had some paralysis of the shoulders, of whom 4 showed paralysis also of one arm Only 1 patient developed weakness in the legs This was of moderate severity The tendency therefore was for the virus to exert its fullest effect on the motor nerve cells in the pons medulla and cervical spinal cord The following case exemplifies this tendency

CASE 7—*History*—V K., a man aged 23 admitted to the army station hospital Sept. 8, 1943, had an attack of epidemic pleurodynia on August 31 with a temperature of 101 4 F slight headache and pain over his right anterior chest at the lower border of the lung He recovered on the second day On September 4 he again became sick with sudden diplopia and vomiting On September 5 he developed neck rigidity headache and sore throat, with a temperature of 103 F His temperature remained at the same level on September 6 and on September 7 he had dysphagia and a nasal regurgitation of fluids On September 8 the temperature was 99 2 F., his dysphagia more pronounced

On admission he showed both dysphagia and dysarthria, bilateral horizontal nystagmus and an injected pharynx but no other paralysis The optic disks were normal There was no paralysis of the vocal cords

*Examination*—In the spinal fluid, September 8, were 45 white blood corpuscles per cubic millimeter, with 77 per cent polymorphonuclears. Globulin was not increased. Sugar was 66.6 mg. per hundred cubic centimeters. The gold curve was normal.

In the blood September 9 there were 9,700 white blood corpuscles per cubic millimeter, with 64 per cent polymorphonuclears.

*Course*—On September 9 the patient began to take small amounts of fluid by mouth. By September 13 he was afebrile, with mild dysphagia and general weakness but no neck rigidity. Slight weakness of the left shoulder muscles was noted on September 14, this was no longer observed on September 21, the dysphagia persisted. On October 5 slight weakness of the right shoulder was still present. Both facial muscles were affected slightly. There were tremors of the tongue and hands, but no nystagmus. A muscle examination on October 9 demonstrated weakness in the right deltoid, grade "good", deglutition was 'fair.' The right scalenus muscle was graded as fair." A second spinal fluid was negative, with 4 cells per cubic millimeter.

The blood gave a negative neutralization test for St. Louis and western equine types of encephalitis on September 16. A second blood examination on September 27 was also negative for St. Louis encephalitis.

Muscle pain was an infrequent symptom. Six patients complained of back pain, 2 of leg pain. Muscle spasm was observed in 3 and muscle twitchings in 1.

*Spinal Fluid*—In 13 cases examined from one to seven days after the initial symptoms of the disease the cell count on the spinal fluid varied from a low of 30 to a high of 372 white blood corpuscles per cubic millimeter. The average was 111 cells per cubic millimeter. Of the total cells the polymorphonuclears ranged from 18 to 77 per cent, the average being 48 per cent. The sugar and chloride content was within normal limits, with sugar averaging about 60 mg. per hundred cubic centimeters and chlorides 700 mg. per hundred cubic centimeters. One sugar gave a reading of 111 mg. per hundred cubic centimeters. The gold chloride curves showed slight changes in the midzone. The Wassermann reactions were negative. Globulin was reported increased in 3 cases and not increased in 10. Unfortunately, the amount of total protein was not recorded, thus omitting the most valuable test except for the cell count and differential, that can be done on the spinal fluid in cases of poliomyelitis. Sugar, chloride and gold curve determinations in the spinal fluid have long been known to be of minimal value in poliomyelitis, but an increase of white blood corpuscles, as shown in the cases here described, with a total protein of 45 mg. or more per hundred cubic centimeters is not only characteristic but almost essential in making the diagnosis. Rarely are cells absent and in adults, within the first weeks of the disease, the finding of 50 to 100 cells per cubic millimeter is the rule. In only 1 of our cases were cells absent, this patient with a facial paralysis, although included in the series, might be considered as an example of Bell's palsy. His complaints of headache, nausea and tremor, plus the absent abdominal reflexes on examination justifies a presumptive diagnosis of poliomyelitis.

CASE 14—*History*—P. P. K., a man aged 20, admitted to the army station hospital Sept. 9, 1943, had a headache on September 6, followed by nausea. There was no stiff neck or vertigo but some tremor of the tongue and hands.

*Examination*—On admission his physical examination was nomal except for absent abdominal reflexes. In the spinal fluid September 9, there were no cells.

*Course*—Weakness developed on the right side of his face on September 12. By September 18 this weakness had decreased and on October 11 it was minimal. No other muscles were involved. Tremor of the tongue and hands was still present on October 5.

*Blood*—In 13 cases the number of white blood corpuscles was determined one to seven days after the onset of symptoms. In 12 the counts ranged from 9,500 to 13,400 white blood corpuscles per cubic millimeter. Only in 1 case was the count normal. Of the total cells, 54 to 78 per cent were polymorphonuclears. Thus a moderate rise of white blood corpuscles in the early stage of the infection was found, with a slight increase in the percentage of polymorphonuclear cells. These observations were considered as consistent with the diagnosis.

## SUMMARY

1. Epidemiologic and clinical aspects of an explosive outbreak of poliomyelitis at a West Coast naval training school were studied. Eighteen cases were diagnosed and there were possibly at least 100 milder infections, all with onset within an eight day period.

2. Data accumulated during an epidemiologic investigation pointed to food, probably milk contaminated by flies, as the common source of infection. Milk used was mostly raw, frequently had high bacterial counts and regularly contained flies. These had access to human and domestic animal feces.

3. The patients showed, in addition to the usual signs of the disease, a high proportion of cerebral manifestations, such as sleeplessness, confusion, excitability, tremors, cranial nerve palsies, headaches, nausea and vomiting.

4. Poliomyelitis virus was isolated from the feces of 3 of 4 patients tested, and after prolonged clinical studies including systematic muscle grading, in each instance the diagnosis of poliomyelitis was made. Infection with the most likely of the arthropod borne virus infections was ruled out by serum neutralization tests.

5. In one half of the cases paralysis, either moderate or severe, developed. The paralysis was largely confined to the muscles supplied by the cranial and cervical nerves. Only 2 patients developed true bulbar symptoms, and none died.

6. The spinal fluid and blood examinations showed the usual changes associated with poliomyelitis.

---

**The Reward of an Investigator**—The discoverer in science may justifiably entertain the deeply gratifying thought that work well done, observations carefully made and recorded will ultimately combine with other observations, perhaps made long afterward, in forming the body of truth. The conquest of yellow fever, for example, involved the identification of mosquitoes, and that in turn depended on previous descriptions by entomologists who had studied scales and veins on the wings and hairs on the bodies of the insects in order to classify them. Little did they realize how their descriptions would fit into the strategy of abolishing a devastating disease. An investigator may never see the synthesis which brings his work into its relations with the work of others, but from historical evidence he can be assured that such may be the destiny of his observations. If, perchance, the labors in which he engages result in immediately practical consequences beneficial to all mankind, he has the happiness of knowing that there will be a continuing beneficence long after his own labors have ceased. There is great reward in the thought of these "durable results of the perishable years."—Cannon, Walter B. The Way of an Investigator, New York, W. W. Norton & Co., Inc., 1945.

# "MARCH FRACTURE" OF THE FIBULA IN ATHLETES

HARRY R. McPHEE, M.D.
and
C. MONTANYE FRANKLIN, M.D.
Princeton, N. J.

"March foot" or "march fracture" is a term applied to a painful condition of the foot first noted in army men following prolonged marches. It was thought to be caused originally by an inflammation of the tendon sheaths, but since the turn of the century opinion has favored the existence of a fracture. Some reports hold that a fracture visible or invisible by x-rays is present from the start. Others speak of a periostitis first, followed by a fracture line developing later. For the most part this condition has been noted in the second, third

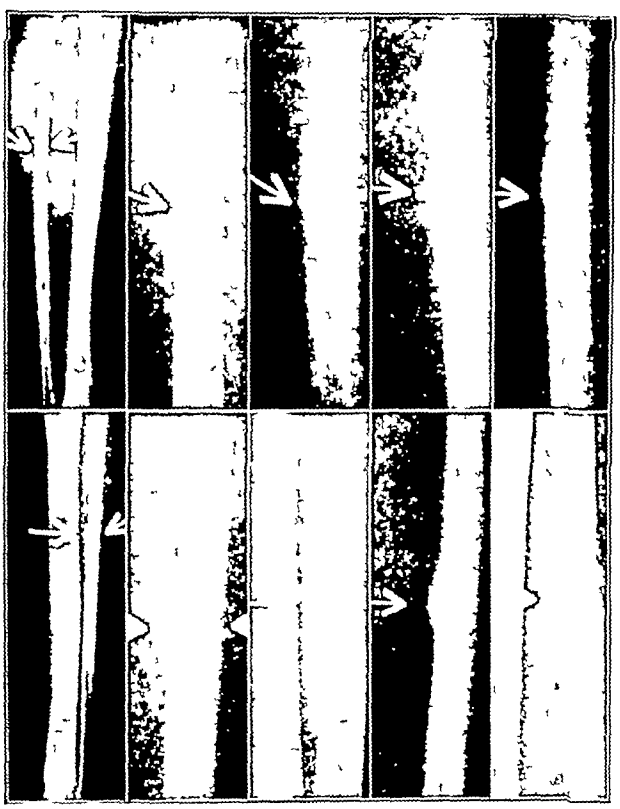


Fig. 1.—Detail views on successive dates (Feb. 17 and March 8, 8 and 27, 1939). Small scale view at left on March 8. Upper, lateral; lower, anteroposterior. Shows stages of march fracture in first runner. Line not definite until March 8. Disability thirteen weeks.

and fourth metatarsal bones, but the more recent literature has been reporting a few cases of a similar condition occurring in other bones, especially the fibula. Our purpose in this paper is to add 6 such cases and 1 of the foot, appearing in athletes at Princeton University.

The University Health Service has maintained medical and surgical supervision over its athletic teams for many years, but it was not until 1939 that this condition came to light, and at first its significance was not fully appreciated. All cases save 1 have developed in runners during the fall and winter seasons. Many more students participate in spring track work, and yet no cases have been seen at that time. The sport during the winter season is carried on in the open air on an especially constructed ten lap board track. The athlete is subject to the variations in weather conditions and temperature common to the area, but he does wear heavier suits for protection. It is interesting to note that the only case to appear in another sport happened at the beginning of the basketball season, the same year the university gymnasium burned. This fire required that the unheated hockey rink be converted into a gymnasium and basketball, which requires much running on boards, started before a heating system was installed. Hence it would appear that running, coolness and boards had something to do with the condition. This cannot be true because the circumstances under which the men have trained and competed in track work have remained essentially unchanged for at least two decades, and it is reasonably certain that cases were not overlooked prior to 1939. Why they appeared then and have continued to appear sporadically since is not known.

The condition was initiated usually by a complaint of stiffness and dull aching in the leg at the beginning of exercise, which subsided after the athlete warmed up. As the process advanced the symptoms became more pronounced, did not disappear during workouts and finally became too painful to permit exercise to be carried on. Most victims could walk with considerable comfort as long as they did not try to run. Early x-rays showed nothing or at most a suggestive haziness of the periosteum. Later definite fuzziness, similar to that seen in periostitis, developed at a point along the bone and more frequently than not was accompanied with a doughy infiltration and swelling in the overlying soft tissues. Two of the cases were seen by orthopedic specialists during this stage and biopsies were requested on the ground that a tumor or tuberculosis was present. A definite fracture line with lateral radiations appeared in about four weeks. The process became sharply defined and subsided to a spindle-shaped swelling along the bone. The completed cycle of disability as far as running was concerned took ten to fourteen weeks, and attempts to modify the course by early immobilization were unsuccessful, as will be evident from the case reports which follow.

About the middle of January 1939 a middle distance runner noticed a dull ache in his left leg as he started to run. The ache would subside as he warmed up and reappear for a short time after practice. He regarded it as a mild "shin-splint"—track vernacular for a strain of the muscles along the anterior margin of the tibia—and, because it did not annoy him when walking, he did nothing about it. Fate took a hand on January 29 and forced him to bed with influenza. There were no local symptoms at the time, but, on the basis of the history, physical therapy was applied during his convalescence. In spite of the ten days of rest and care the ache was more severe and developed into real pain when he resumed running on February 9. Rest and diathermy were instituted for four or five days but to no avail. There had been no history of trauma in any way. An x-ray was taken February 17, one month after the start of symptoms, and revealed a well established localized periostitis at the junction of the upper and middle thirds of the fibula.

Running was forbidden and physical therapy continued. The patient visited an orthopedist of his father's acquaintance about March 7. A tentative diagnosis of bone tumor or tuberculosis of the bone was made. However, a second x-ray March 8 showed an advanced periostitis with a ramifying absorption line clearly visible in the anteroposterior view and less clearly on the semilateral but none the less present. The interim

history disclosed that he had lightly brushed an upholstered movie seat the week before This was considered the cause of the fracture in spite of his protests that the contact had been too light to cause any damage A cast was applied until the clinical picture and x-ray warranted its removal some three weeks later For personal reasons he did not compete in track events that spring but turned in some brilliant performances in the next three years without any difficulty It is interesting to note that he was listed as having a "fracture of the fibula left" as of March 8 and that his period of disability covered thirteen weeks

A second boy came to our attention October 29 of the same year with a painful right foot which had been bothering him for a month during his cross-country running It started with a dull ache while running, which would subside when he was quiet It did not respond to strapping and support or to the trainer's therapy Rather it became more and more painful and when first seen he had localized swelling heat and tenderness over the shaft of the fourth metatarsal bone The x-ray revealed a well established periostitis but no definite fracture line was seen A diagnosis of "march fracture" of the foot was made and a subsequent x-ray taken ten days later showed the absorption line He was put in a cast and on crutches for about three weeks and was finally discharged on January 3, thirteen weeks after the onset of his trouble

The next case appeared in a middle distance runner during the winter track season Early in February 1940 he complained of soreness in his foot Investigation failed to reveal any positive finding He pursued a course of hydrotherapy, but the soreness continued and spread to the leg The early symptoms were those of a dull ache increasing in intensity He consulted an osteopath, who said he had pulled his flexor hallucis longus muscle and gave him some treatments These seemed to help for short periods but did not disperse the trouble Acute pain in the left leg forced him to stop during a race on February 22 Since it was the end of the season he rested in comparative comfort until late March The trouble returned as soon as he tried to run and was now definitely located in his leg He consulted the health service on April 8 A tender area of doughy infiltration 4 to 5 cm in diameter could be palpated on the outer and posterior aspect of the left leg a short distance below the middle of the fibula. An x-ray showed an advanced localized periostitis of the fibula with an absorption line similar in character to cases 1 and 2 in the late stage The use of a cast and subsequent physical therapy brought his disability to an end fourteen weeks after the first symptoms

The similarity between these 3 cases was so striking that they were now considered to be similar entities The trainers were asked to send in any track men who complained of aching in the leg Several were sent but they turned out to have ordinary strains of the anterior extensor muscles along the border of the tibia However, on Oct 28, 1940 a renowned track man was admitted to the university hospital complaining of a dull ache in his right leg which started five days before, during cross-country practice It had been no more than slightly annoying for the first two days, but on the third day he had run a competitive race during which the leg gave him considerable pain At the time of entrance to the hospital, much tenderness was elicited along the lower third of the right fibula, and there was an indurated area 3 to 4 cm in diameter, red and warm, about 2 inches above the ankle joint An x-ray was made on the 28th and again on the 31st from slightly different angles but no bony pathologic change was noted The tenderness, redness and local heat subsided with rest and elevation by November 1 He was discharged, but running was interdicted Heat and rest other than walking to and from classes were instituted He was comfortable and strained at the leash to go back to running He was destined to forego this pleasure over a period of thirteen weeks, for an x-ray on November 13 showed a small patch of periosteal proliferation just above the ankle joint A cast and crutches were applied immediately, but the absorption line appeared on the 29th The cast was worn for about five weeks, during which time the lesion went through its typical stages roentgenographically This period was followed by three weeks of physical therapy and exercise before he could resume his track work without difficulty

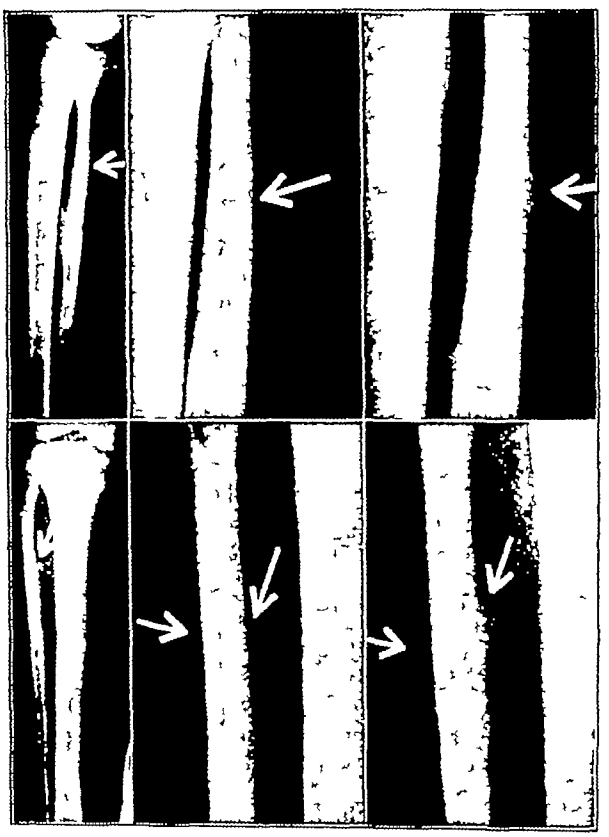


Fig 2—Detail views on March 20 and April 13 1936 Small scale view at left on April 13 Upper lateral lower anteroposterior Shows demonstrable fracture in lacrosse player Complete recovery in three and one half weeks

No further cases were seen until near the end of the winter track season of 1941-1942, when 2 appeared at about the same time Unfortunately their histories were destroyed in a fire, and all attempts to reconstruct them authoritatively have failed One was in the right leg and the other in the left They did parallel the other cases in their mode of onset and clinical course One was treated with cast and crutches and the other patient was let walk There was no appreciable difference in their period of disability, which covered approximately ten to twelve weeks

The first and only case to develop in a sport other than track appeared in basketball during the winter of 1944 The youngster started practice in the unheated gymnasium about November 1 but it was not until the third week in November that he noticed a slight

stiffness in his right leg when he started to play. This stiffness disappeared as he warmed up, but a mild ache remained for fifteen to twenty minutes after practice. Each day he noticed that it became more and more uncomfortable even after he was warmed up, so he reported to the trainer who treated him with moist heat massage and soothing dressings. The condition continued to get worse and finally he could not bear to let his heel go down while running. He was referred to the infirmary on December 15, which was roughly one month after his first symptoms. The right leg presented a localized slightly warm tender swelling 4 to 5 cm. in diameter at the junction of the middle and lower thirds of the fibula. The x-ray showed no more than suggestive signs of a periostitis. Military complications prevented the application of a cast and also interrupted further contact until January 8. The inspection findings then were the same, but the x-ray revealed very definite periostitis, and a cast was applied in spite of his violent protests. He carried the case to an orthopedist, who had operated on his other leg for Osgood-Schlatter's disease. A bone tumor was diagnosed and a biopsy was advised. However all concerned agreed to delay two weeks, during which time a fracture line was promised. It appeared in very typical form in the x-ray taken January 22. The cycle was completed without further incident on February 19 after a period of thirteen weeks.

The outstanding thing about these cases to any one dealing with athletic injuries is the prolonged loss of time. The fibula is not a weight-bearing bone and disability to an athlete resulting from injuries to its shaft rarely exceed six to eight weeks. It was a trifle upsetting therefore to have an orthopedic friend to whom the first 4 cases were demonstrated remark "there is a fracture there in the beginning only you do not see it." That of course was the idea advanced by Stechow[1] in 1897 and supported by Schulte[2] (1897) by Kirchner[3] (1905) and by Krause and Thompson[4] (1944). They pointed out the infallibility of the x-ray. That contention must be admitted but it is certainly reasonable to expect small fractures in similar locations to behave somewhat alike under similar circumstances. Hence it is interesting to make notes on a case occurring in lacrosse.

Lacrosse is an activity which involves considerable running, stopping, fast starting and turns which put heavy strains on the legs. On March 20, 1936 a player was struck on the right leg with a lacrosse stick. He had sharply localized tenderness about 4 inches below the head of the fibula, but no crepitus. He could not bear to run. The x-ray on the same day revealed a fine hairline fracture near the lower end of the upper third of the right fibula and an old ossified hematoma lower down. He was given physical therapy treatments for three days until a duraluminum protective splint could be made which extended from the head of the fibula to the outer malleolus. With this in place to ward off blows, he resumed his work in lacrosse. An extra large callus resulted and, in sharp contrast to case 1, in which the lesion was at approximately the same level, his distress got less and less each day and he had totally recovered in twenty-four days. Other cases of known greenstick and hairline fractures of the fibula from external trauma in athletics could be cited to illustrate the shorter period of disability and the reversal of clinical symptoms and in no instance did such fracture parallel the pattern of the cases under discussion. Hence a feeling persists that some other factor besides simple fracture is involved in these conditions.

1 Stechow: Fussödem und Rontgenstrahlen. Deutsche mil aertzl Ztschr. 26: 465-471, 1897.
2 Schulte: Die sogennante Fussgeschwülste. Arch. f. klin. Chir. 55: 872-892, 1897.
3 Kirchner: Die Aetiologie der indirecten Metatarsalfracturen. Arch. f. klin. Chir. 77: 241-268, 1905.
4 Krause, G. R., and Thompson, J. R., Jr.: March Fracture. Am. J. Roentgenol. 52: 281-290, 1944.

SUMMARY

Six cases of so-called "march fracture" of the fibula and 1 of the foot occurring in athletics were encountered. The existence of a hidden "fracture from the beginning" has been questioned in light of comparison with the clinical picture in cases of known fracture.

## PROSTATIC CANCER TREATED BY ORCHIECTOMY: THE FIVE YEAR RESULTS

CHARLES HUGGINS, M.D.
Chicago

Five years is a customary period to appraise the results of treatments of cancer and this time has elapsed since the introduction of the endocrine therapy of prostatic carcinoma. The antiandrogenic treatment consisting of orchiectomy or the administration of estrogen has proved to have both theoretical and practical significance. There has emerged from this study the fact that cancer of the prostate is usually not autonomous since the neoplasm grows or shrinks when androgens are administered or eliminated. The antiandrogenic measures have a general modality of action and, in a sense, are chemotherapeutic agents although not specific ones, estrogens are the first agents of known chemical constitution (aside from radioactive chemicals) which ameliorate carcinomatosis in man, and they are the only medicines known which, when taken by mouth influence cancer beneficially.[1] The long time practical benefit will be demonstrated in this paper.

### NATURAL COURSE OF PROSTATIC CANCER

Only in the classic study of Bumpus[2] has an extensive series of untreated cases been followed. In 485 patients with no form of treatment the average duration of the disease from the first symptoms to death was about thirty-one months, 4 patients lived more than three years and 2 of them more than ten years. When metastasis had occurred at the time of examination, two thirds of the patients were dead within nine months.

For comparison the results of various nonendocrine therapeutic measures may be cited. Caulk and Boonitt[3] reported that 10 per cent of patients treated with the cautery-punch operation and irradiation were living after five years. Muir[4] found the average duration of life of 18 patients treated with cystostomy and irradiation was three and one-half years. Illyes[5] stated that 5 of 48 patients (10.5 per cent) treated with partial prostatectomy lived five years. Barringer[6] found that 20 of 351 patients (5.7 per cent) were controlled over

From the Department of Surgery, the University of Chicago.
This study was aided by grants from the Committee for Research in Endocrinology, the National Research Council, and from the Albert and Mary Lasker Foundation, Inc., and the Sidney and Frances Brody Foundation and from Mr. Ben May, Mobile, Ala.

1 Dodds, E. C.: Synthetic Estrogens in Cancer. Biochem. J. 39: [illegible] 1945.
2 Bumpus, H. C., Jr.: Carcinoma of the Prostate. Surg. Gynec. & Obst. 43: 150-155 (Aug.) 1926.
3 Caulk, J. R., and Boonitt, S. B.: Carcinoma of the Prostate. Am. J. Cancer 16: 1024-1052 (Sept.) 1932.
4 Muir, E. G.: Carcinoma of the Prostate. Lancet 1: 667-672 (March 31) 1934.
5 Illyés, G.: Erfahrungsergebnisse bei Nieren-, Blasen- und Prostatakrebs. Ztschr. f. urol. Chir. 41: 123-132, 1935.
6 Barringer, B. S.: The Treatment of Prostatic Carcinoma. Surg., Gynec. & Obst. 62: 410-412 (Feb. 15) 1936.

five years after external irradiation and implantation of radium needles Hager and Hoffman [7] noted that 4 of 307 treated patients (1 3 per cent) survived five or more years Thompson [8] reported that 46 of 337 patients (14 1 per cent) subjected to transurethral resection of the prostate survived five years or longer Prince and Vest [9] treated 57 patients in thirteen different ways, and 4 patients (7 per cent) survived five years or more Palomo [10] stated that 5 of 165 patients (3 per cent) lived five or more years

## HISTORICAL

Wugmeister [11] treated men who had prostatic hypertrophy with estrogen on the theory that this disease was due to hypervirilization as a result of a failing of the supply of female sex hormone in the organism Kahle and Maltry [12] similarly treated a series of patients with prostatic hyperplasia and observed a decrease in the size of the gland and of the symptoms in some cases More experience and with refined methods [13] has shown that reduction in size of the prostate does not occur regularly or to a great extent, and the general use of estrogen at the present time is not warranted in prostatic hypertrophy

It was found however in dogs [14] that spontaneous cystic hyperplasia of the prostate underwent prompt and massive involution following orchiectomy or estrogen administration Accordingly a series of patients with far advanced prostatic cancer was treated [15] with these measures and it was discovered that androgens activate the disease while antiandrogenic procedures often induce a remission Estrogen had not previously been used in prostatic cancer Orchiectomy had been extensively practiced in the treatment of noncancerous prostatism but only Young [16] had described its employment in the treatment of prostatic carcinoma. Young's experience was limited to 2 cases and the results were negative

Some months after the demonstration of the influence of androgens on cancer of the prostate, Munger [17] independently reported the beneficial results of irradiation of the prostate and testes in this disease While it is possible to eliminate any tissue (and it is at present feared the universe) by electronic methods it was pointed out that the Leydig cells of the testis were unusually highly resistant to external irradiation in both animals [18] and man [19] and the conclusion was reached that irradiation of the testis is not feasible in the practical endocrine management of prostatic cancer

There have since been numerous publications which in general have confirmed the beneficial results seen in some cases following endocrine treatment Randall [20] has reported the results in 5 patients treated with orchiectomy, 1 of these patients was alive and in good general condition but with evidence of metastasis over six years after testicular excision

TABLE 1—*The Course of Prostatic Cancer in Twenty-One Patients After Orchiectomy*

| Case Name | Age Yrs | Bone Metastasis | Duration of Remission | Length of Life | Comment |
|---|---|---|---|---|---|
| 1 A J | 75 | Yes | 6¼ yrs | Alive | No signs of malignancy 6¼ years after orchiectomy |
| 2 E K | 61 | No | 4¾ yrs | 4¾ yrs | Prostate remained indurated and small died of coronary thrombosis |
| 3 P G | 74 | Yes | 1¼ yrs | 2 yrs | Prostate atrophic while metastases flourished terminally |
| 4 S R | 72 | Yes | None | 5½ mos | Prostate atrophic and metastases flourished terminally |
| 5 G P | 73 | Yes | None | 8 mos | Prostate small but indurated |
| 6 M M | 56 | Yes | 5 mos | 17 mos | Prostate atrophic terminally |
| 7 J M | 75 | No | 2 yrs | 3¾ yrs | Steady progression of primary lesion after 2 years |
| 8 P R | 64 | Yes | 3½ yrs | 6¼ yrs | Spectacular regression of bony lesions followed by recrudescence |
| 9 J D | 65 | Yes | 3½ yrs | 3 yrs 11 mos | Primary became atrophic metastases flourished |
| 10 C R | 74 | Yes | None | 8 days | Died of pneumonia |
| 11 E B | 73 | No | 5½ yrs | Alive | Very slow increase of cancerous extension in seminal vesicle |
| 12 L V | 60 | No | 6 mos | 16 mos | No metastasis extensive progression of primary lesion |
| 13 C B | 61 | Yes | 11 mos | 1 yr 7 mos | Spectacular regression of bony lesions and primary followed by recurrence |
| 14 J R | 80 | Yes | 5¼ yrs | Alive | No signs of malignancy 5½ years after orchiectomy |
| 15 O A | 75 | Yes | 3½ mos | 3½ mos | Died of pneumonia |
| 16 P M | 55 | Yes | 5 mos | 11 mos | Progression of primary lesion and metastasis |
| 17 J C | 71 | Yes | 5 yrs | Alive | No signs of malignancy 5 years after orchiectomy |
| 18 F W | 63 | Yes | 5 yrs | Alive | No signs of malignancy 5 years after orchiectomy |
| 19 F D | 84 | Yes | 9 mos | 14 mos | Complicated with arteriosclerotic heart disease prostate atrophic |
| 20 G B | 74 | No | 13 mos | 16 mos | Prostate small and indurated |
| 21 G R | 61 | No | 12 mos | 16 mos | Associated cancer of rectum prostate became smaller but remained indurated |

## MATERIALS AND METHODS

The first series [21] of patients treated with orchiectomy consisted of 21 consecutive men presenting far advanced prostatic cancer as defined by the presence of demonstrable metastases or local infiltration considerably beyond the prostatic capsule One person (patient 10) died of pneumonia eight days after operation and will not be considered further in this paper, leaving an effective total of 20 patients Fourteen of

7 Hager B H and Hoffman E F Statistical Data on 396 Cases of Carcinoma of the Prostate Observed at the Los Angeles General Hospital from Jan 1 1923 to Jan 1 1936 J Urol **37** 180 185 (Jan ) 1937

8 Thompson G J Transurethral Resection of Malignant Lesions of the Prostate Gland J A M A **120** 1105 1109 (Dec 5) 1942

9 Prince C L and Vest S A. Carcinoma of the Prostate South M J **36**: 680 685 (Oct ) 1943

10 Palomo A Carcinoma of the Prostate Gland J Urol **53**: 166-187 (Jan ) 1945

11 Wugmeister I Le traitement de l hypertrophie de la prostate par doses massives de folliculine Paris med **103** 535 536 (June 12) 1937

12 Kahle P J and Maltry E Treatment of Hyperplasia of the Prostate with Diethylstilbestrol and Diethylstilbestrol Dipropionate New Orleans M & S J **93** 121 131 (Sept ) 1940

13 Pierson E L A Study of the Effect of Stilbestrol Therapy on the Size of the Benignly Hypertrophied Prostate Gland J Urol **55** 73 78 (Jan ) 1946

14 Huggins C and Clark P J Quantitative Studies on Prostatic Secretion II The Effect of Castration and of Estrogen Injections on the Normal and on the Hyperplastic Prostate Gland of Dogs J Exper Med **72** 747 762 (Dec ) 1940

15 Huggins C and Hodges C V Studies on Prostatic Cancer I The Effect of Castration of Estrogen and of Androgen on Serum Phosphatases in Metastatic Carcinoma of the Prostate Cancer Research **1**: 293 297 (April) 1941 Huggins Stevens and Hodges [21]

16 Young H H in Cabot H Modern Urology Philadelphia, Lea & Febiger 1936 vol. 1 p 887

17 Munger A D Experiences in the Treatment of Carcinoma of the Prostate with Irradiation of the Testicles J Urol **46** 1007 1011 (Nov ) 1941

18 Hu C K and Frazier C N Atrophy of Germinal Epithelium of Rabbit s Testis Induced by Roentgen Rays Proc Soc Exper Biol & Med **48** 44-48 (Oct ) 1941

19 Huggins C Effect of Orchiectomy and Irradiation on Cancer of the Prostate Ann Surg **115**: 1192 1200 (June) 1942

20 Randall A Eight Year Results of Castration for Cancer of the Prostate J Urol **48** 706 709 (Dec ) 1942

21 Huggins C Stevens R E Jr and Hodges C V Studies on Prostatic Cancer II The Effects of Castration on Advanced Carcinoma of the Prostate Gland Arch Surg **43** 209 223 (Aug ) 1941

these patients had radiographic evidence of osseous metastasis Therapeutic irradiation was not employed, and estrogen was not administered until it was obvious that the disease was in relapse

The end of a remission was estimated from the beginning of persistent weight loss or the development of severe symptoms the result of carcinomatosis



Fig 1 (case 1) —Appearance of pelvis in October 1939 before orchiectomy showing extensive metastasis in the pelvis with a pathologic fracture of the right pubis

## RESULTS OF TREATMENT

*Early*—In 2 cases (10 per cent) there was no obvious benefit from orchiectomy, while in the remaining 18 cases alleviation of clinical symptoms occurred for a shorter or longer period In this group of 20 senile men (table 1) there were 2 deaths from intercurrent disease, namely from coronary thrombosis (case 2) and pneumonia (case 15), but the series is not corrected for these deaths

Eleven patients (55 per cent) died during the first two years after orchiectomy (table 2) and 4 additional patients between thirty-six and sixty-three months The duration of life among the 15 fatal cases was three and one-half to sixty-three months, and the median survival time was sixteen months The duration of the remission was three and one-half to fifty-seven months, and the median time of improvement was eleven months Among the 15 fatalities the prostate was soft, small and atrophic to clinical examination in 4 cases, while the metastases were flourishing in their growth in bone marrow and lymph gland

TABLE 2—*Survival After Orchiectomy for Prostatic Carcinoma*

| | |
|---|---|
| Less than 1 year | 4 cases |
| 1 to 2 years | 7 cases |
| 3 to 4 years | 2 cases |
| 4 to 5½ years | 2 cases |
| More than 5 years | 5 cases |

*Late*—Five patients have survived more than five years after orchiectomy, 1 man (patient 11) is in good health but has a mass of tumor tissue the size of a hen's egg in the region of the seminal vesicle No sign of disease can be detected in 4 patients (20 per cent) All these patients had widespread metastasis to bone with elevated serum phosphatases at the time of orchiectomy, in each case after five years the enzyme levels are within the normal range and the bones show equivocal or no evidence of metastasis

## REPORT OF CASES WITH SURVIVAL AFTER FIVE YEARS

CASE 1[22]—A J, aged 75, had acute retention of urine in 1939 and a diagnosis of associated hypertrophy and cancer of the prostate was made. His weight was 50 Kg The prostate was greatly enlarged (4+) and soft on the right side, but on the left there was stony induration extending along the left seminal vesicle Roentgenograms showed extensive osteolytic and osteoplastic metastases in the pelvis, with a pathologic fracture of the right pubis (fig 1) On Oct 16, 1939 orchiectomy was done and on Jan 10, 1940 the prostatic adenoma was enucleated

On Jan. 17, 1946 the patient was free from symptoms and weighed 60 Kg The prostate was soft and barely palpable. A roentgenogram of the pelvis showed healing of the fracture, with regression of the metastases, several small areas of rarefaction in the region of the sacroiliac joint were present (fig 2) The level of the phosphatases of the serum were acid 2 units, alkaline 9 units[23]

CASE 11—E B., aged 75, complained of frequency and difficulty in urination for one year preceding his admission to the hospital on Oct. 30, 1940 Pain in the right groin had been present for two months The prostate gland was moderately enlarged (2+) and nodular, and there was extension of the carcinoma along the seminal vesicles, producing massive wooden induration A roentgenogram of the pelvis and the levels of serum phosphatases were normal His weight was 56 Kg Orchiectomy was performed on Nov 2, 1940

On Feb 22, 1946 the patient was asymptomatic and weighed 66 Kg The prostate was small and soft, and there was a hen's egg sized induration in the vesicular region

CASE 14—J R, aged 80, complained of pain in the dorsal and lumbar regions of the back for five months preceding his admission to the hospital on Oct 30, 1940 For two months he had spent most of his time in bed and was unable to walk without pain His weight was 62 Kg On examination it was found that the patient could not change his position from lying to sitting without intense agony The prostate was slightly enlarged (2+) and there was a hard nodule in the apex of the gland about the membranous urethra Roentgenograms showed diffuse osteolytic lesions in the pelvis, there was partial collapse of the bodies of the sixth dorsal and second lumbar vertebrae The levels of serum phosphatase



Fig 2 (case 1) —Appearance of pelvis in October 1945 six years after orchiectomy revealing healing of the fracture and disappearance of evidence of metastasis.

22 Three of these cases have been described in greater detail earlier (Huggins Stevens and Hodges,[21] Huggins C The Treatment of Cancer of the Prostate Canad M A J 50: 301 307 [April] 1944)

23 All units of phosphatase in this paper are those of King and Armstrong per hundred cubic centimeters

were acid 37 units, alkaline 19 units Orchiectomy was performed on Nov 12, 1940 and there was complete relief of pain within five days

On Feb 18, 1946 the patient was free from symptoms and his weight was 76 Kg The prostate gland had atrophied and there was no induration. There was no evidence of metastasis in roentgenograms and the serum phosphatases were acid 2 units, alkaline 9 75 units



Fig 3 (case 17) —Appearance of pelvis in February 1941 showing extensive osteoplastic metastasis.

CASE 17—J C., aged 71, about six months before admission developed pain in the lower part of the abdomen and back so severe that much sedation, including opiates, was given. Three weeks before admission numbness developed over the buttocks and the posterior aspect of the thighs, accompanied with urinary retention, complete fecal incontinence and inability to stand or walk He weighed 46 Kg There was atrophy of all the musculature of the legs, especially the gluteal muscles, the knee and ankle tendon reflexes were absent, there was a saddle area of anesthesia in the skin enervated by the second to the fifth sacral segment inclusive, a decubitus ulcer was present the anal sphincter was relaxed, there was paradoxical incontinence of both urine and feces, and lumbar puncture yielded yellow fluid, with a high protein content, which coagulated on standing The prostate was slightly enlarged (2+), stony hard and nodular, with much induration along the seminal vesicle and the base of the bladder A roentgenogram (fig 3) revealed extensive osteoplastic metastasis in the pelvis, the lumbosacral spine and the upper part of the femurs The phosphatase levels of the serum were acid 22 units alkaline 54 units Orchiectomy was performed on March 5, 1941

On March 6, 1946 the patient had no symptoms and his weight was 71 Kg The prostate was atrophic, flat, soft and without nodularity There is no evidence of neurologic abnormality, the sensory examination, reflexes and the tonus of the anal sphincter are normal A roentgenogram of the pelvis (fig 4) shows complete clearing of the metastatic lesions, although there are two sclerotic areas of bone condensation visible The values of the serum phosphatases were acid 1 5 units, alkaline 9 5 units

CASE 18—F W, aged 61, had acute retention of urine in 1933 which was treated by transurethral resection of the prostate, a diagnosis of adenomatous hyperplasia was made on pathologic examination In 1941 he complained of frequency of urination and of pain in the rectum for six weeks The prostate was moderately enlarged (3+), with stony induration of the right lobe A roentgenogram of the pelvis revealed an osteolytic lesion in the neck of the right femur, the phosphatase activity of the serum was normal Bilateral orchiectomy was performed on March 5, 1941

On March 6, 1946 the patient was asymptomatic and the prostate was soft and atrophic. The lesion in the femur had disappeared in the roentgenograms The levels of the serum phosphatases were acid 3 units, alkaline 7 units

## COMMENT

The early evidence of clinical improvement following orchiectomy includes (among other effects) the relief of pain, improved appetite with gain in weight, decrease of anemia and a decrease of size and sometimes the disappearance of the primary tumor and of the metastases In 1 patient (case 17) there has been relief of paraplegia, similar cases have been described by Nesbit and Cummings [24] and by Clarke and Viets [25]

In the laboratory, improvements of the disease after antiandrogenic therapy may be detected through changes in the acid and alkaline phosphatase activity of serum Kearns [26] has also demonstrated a striking decrease in the sedimentation rate of the blood after estrogen administration

Five patients survive the five year period, one man has a slowly growing tumor, while in four of these cases we have been unable to detect activity of the tumor It is true that an occasional untreated patient with prostatic cancer will live more than five years although in such patients the tumor does not regress but remains in a slowly growing state, an explanation for prolonged survival in some untreated cases must be spontaneous androgenic deficiency through accidental physiologic failure of androgen production

It is still impossible to predict the course of the disease following orchiectomy at this time With respect to the 4 patients surviving five years after orchiectomy and with great involution of the neoplasm, the ages ranged from 63 to 80 years One patient (18)



Fig. 4 (case 17) —Appearance of pelvis in March 1946 five years after orchiectomy, two small areas of osteosclerosis are seen in the right ilium

had only moderately advanced carcinomatosis, while in 2 men (patients 1 and 14) the disease was far advanced and 1 patient (17) was moribund Therefore the extent

24 Nesbit, R M and Cummings R H Prostatic Carcinoma Treated by Orchiectomy J A M A 120: 1109 1111 (Dec. 5) 1942

25 Clarke, B G and Viets H R. Effect of Diethylstilbestrol on Neurologic Symptoms of Carcinoma of Prostate J A M. A. 121: 499-501 (Feb 13) 1943

26 Kearns, W M Treatment of Carcinoma of the Prostate with Estrogens Wisconsin M J 41 575-581 (July) 1942

of the lesion is not of great moment Two factors are apparently of significance in determining the effectiveness of orchiectomy the tumor must be androgen dependent and the testis must contribute functionally significant amounts of the total production of androgen



Fig 5 (Patient JT) —Metastases of prostatic carcinoma in scalp before orchiectomy



Fig 6 (Patient JT) —Resolution of metastases of prostatic carcinoma thirteen months after orchiectomy

It has been established that human prostatic cancer may be or may become independent of androgens This evidence is based on removal of the adrenal glands in men who have had a relapse after an orchiectomy-induced remission, life being supported by adrenal substitutive therapy,[27] here the androgens were apparently abolished as determined by the excretion of 17-ketosteroids and urinary comb growth androgens, yet the cancer followed its unfavorable course It is known that castration does not cause the epithelial cells of the normal prostate to disappear, they merely shrink and remain functionally quiescent

The question of supplemental therapy arises in patients with unfavorable response to orchiectomy It can be easily demonstrated that the addition of estrogen to a small number of patients in relapse will cause improvement, as in the following case

J T, aged 66, had carcinoma of the prostate with associated bright pink papular metastases over the scalp (fig 5), chest, abdomen and back, orchiectomy was performed and a biopsy of one of the nodules over the sternum showed a typical prostatic adenocarcinoma which was rich in acid phosphatase when stained by the method of Gomori.[28] One year after castration many of the nodules had disappeared (fig 6) but other hyperemic papules had developed in the skin over the chest.

Diethylstilbestrol 1 mg daily was administered by mouth Within four days the lesions had become pale and within six weeks the lesions were flat and at this time estrogen was discontinued Six weeks later the lesions had reappeared in their rosy elevated form and they again became flat and pale when estrogen was given

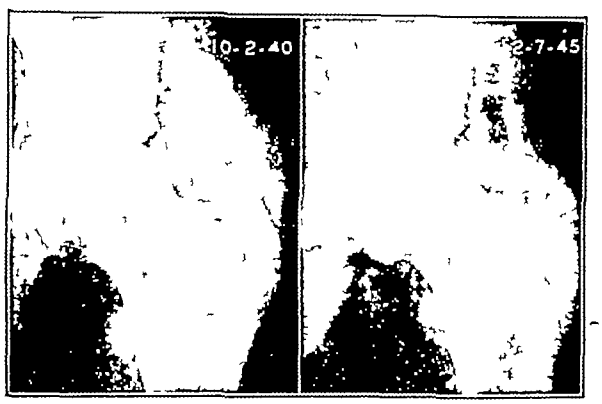



Fig 7 (case 8) —Appearance of left femur before and five and one-third years after orchiectomy Metastasis in the neck of the femur present in 1940 had disappeared and had not recurred in 1945 although new lesions are present lower in the femur

The beneficial effects of estrogen in our experience have not been prolonged nor have we encountered any other agent which would greatly benefit in postorchiectomy failure

An important consideration of the effect of relapse after orchiectomy in disseminated prostatic cancer is the disappearance of certain metastases and reappearance of lesions in other areas This phenomenon occurred twice in the present series It was observed most clearly in cutaneous metastasis and in bone (fig 7) Orchiectomy had apparently injured cancer cells so severely in certain areas that they did not again become active

It has previously been demonstrated [10] that prostatic cancer sometimes grows more rapidly in metastases in bone marrow and lymph glands than in its primary location In the present series in 4 of the 15 fatal cases the primary neoplasm became soft and remained

27 Huggins, C and Scott W W Bilateral Adrenalectomy in Prostatic Cancer Clinical Features and Urinary Excretion of 17 Ketosteroids and Estrogen Ann Surg 122:1031-1041 (Dec) 1945

28 Gomori G Microtechnical Demonstration of Phosphatase in Tissue Sections Proc Soc Exper Biol & Med 42:23-26 (Oct) 1939

clinically atrophic while the disease grew in its metastatic location to cause death

Although the effects of orchiectomy on prostatic cancer are at times very profound and prolonged, it is premature to suggest that any one of these patients has been cured

## CONCLUSION

Remissions of varying length of time occurred in 18 patients among 20 with disseminated prostatic cancer treated with orchiectomy After five years 1 patient is alive with slowly advancing prostatic carcinoma and in 4 patients there is no clinical or laboratory evidence of cancer at the present time

The antiandrogenic therapy of cancer of the prostate demonstrates that a chemical change in the internal environment of the host has brought about a long-continuing regression of a malignant neoplastic process.

950 East Fifty-Ninth Street, Chicago 37

# RUPTURED INTERVERTEBRAL DISK SIMULATING ANGINA PECTORIS

COLONEL ALLEN IZARD JOSEY
and
LIEUTENANT COLONEL FRANCIS MURPHEY
Medical Corps Army of the United States

Among the many conditions with which ruptured intervertebral disks in the cervical region may be confused is coronary artery disease It is our purpose in this paper to review some of our cases of ruptured cervical disks which have caused symptoms similar to those of angina pectoris and coronary thrombosis and to speculate on the cause of the precordial pain It is hardly necessary to emphasize the importance of differentiating between these diseases, not only because of the difference in the treatment and in the prognosis but because many people are made hopeless cardiac cripples by such errors in diagnosis

Intraspinal rupture of one of the lower cervical (fifth, sixth or seventh) disks[1] usually causes pain in the neck with radiation to the shoulder, to the precordium and down the arm, often associated with stiffness of the neck, weakness in the arm and hand and numbness of one or more of the digits The pain is at times acute and severe and aggravated by coughing, sneezing or moving the neck There may or may not be a history of trauma involving the head or neck The recurrent episodes of pain are usually related to physical strain involving the arm and neck but are also related to position of the head and neck and not infrequently occur when the patient is in bed Most often the radiation of pain is from the neck to the shoulder and arm, but in some cases the pain begins in the anterior part of the chest over the heart and may radiate to the shoulder, neck or arm Physical examination usually reveals a stiff neck, reduced reflexes in the affected arm and hypesthesia in one or more digits Occasionally one may find atrophy of the muscles in the upper arm and rarely atrophy of the pectoral muscles[2] The pain may be reproduced by movements of the neck, by pressure over various roots of the brachial plexus at the affected site and by pressure on the head[3] X-rays of the cervical spine show straightening of the spine in the lateral projection or a reversal of the normal lordotic curve, with acute forward angulation at the level of the affected disk in the great majority of cases Narrowing of the intervertebral space may be seen in the lateral views, and in some instances an oblique view will show a reduction in size and alteration in shape of the intervertebral foramen at the affected segment An osteophyte in this intervertebral foramen and other evidences of localized arthritis may be present

Since the term localized arthritis will be used, it is necessary to explain the relation between this condition and ruptured intervertebral disk Keyes and Compere[4] in 1932 pointed out that destruction of, or injury to, the intervertebral disk produces a localized arthritis Oppenheimer,[5] writing on the subject in 1940, was in agreement with this observation Since that time it has been shown[6] that such localized arthritis in the lower cervical and lower lumbar regions is the result of rupture of the intervertebral disk between the involved vertebral bodies and that actually the osteophyte in the intervertebral foramen is merely calcification in the annulus fibrosus (the ruptured portion of the disk) and the posterior longitudinal ligament over a previously herniated nucleus pulposus

In a number of cases of rupture of the lower cervical disks the presenting symptom is pain in the precordial region This pain may be of such severity as to overshadow any other symptom, although there is usually radiation to the shoulder and down the arm Frequently the presence of any pain in the neck or persistent numbness in the fingers is determined only after the patient is closely questioned. The pain in the chest may be related to exertion, and real dyspnea may be present It is in such cases that the diagnosis is not infrequently confused with angina pectoris or coronary occlusion This syndrome of precordial pain simulating coronary artery disease caused by ruptured cervical disk was first described by Semmes and Murphey,[1] who reported 4 such cases in 1943 Precordial pain simulating that of coronary insufficiency caused by arthritis in the lower cervical spine had been previously reported by Nachlas[7] in 1934, Hanflig[8] in 1936 and Reid[9] in 1938 The latter authors reported a total of 7 cases of "pseudo-angina" caused by what they designated as arthritis of the cervical spine It appears to us in the light of present knowledge that some of these cases in all probability represented instances of ruptured cervical intervertebral disks Therefore, since this important syndrome is not generally recognized as the result of a ruptured cervical disk and the common textbooks on heart disease fail to emphasize it in the differential diagnosis of coronary artery disease, and because we believe that it is a relatively common syndrome we are reporting a group of 7 cases selected from a larger group of approximately 30 cases seen by us within the past three years

From the Medical Service and Neurosurgical Service O'Reilly General Hospital Springfield Mo

1 Semmes R E and Murphey F The Syndrome of Unilateral Rupture of the Sixth Cervical Intervertebral Disk with Compression of the Seventh Cervical Nerve Root, J A M A **121**: 1209 (April 10) 1943

2 Elliott F A and Kremer M Brachial Pain from Herniation of Cervical Intervertebral Disks Lancet **1**: 4 1945

3 Spurling R G and Scoville, W B Lateral Rupture of the Cervical Intervertebral Disks Surg Gynec & Obst. **78** 350 1944

4 Keyes D C and Compere E L. Normal and Pathological Physiology of Nucleus Pulposus of Intervertebral Disks Anatomic Clinical and Experimental Study J Bone & Joint Surg **14**: 897 1932

5 Oppenheimer A Discogenic Disease Am J Surg **47** 642 1940

6 Whiteleather J E Semmes R E and Murphey F The Roentgenographic Signs of Herniation of the Cervical Intervertebral Disks to be published Semmes and Murphey[1]

7 Nachlas I W Pseudo-Angina Pectoris Originating in the Cervical Spine J A M A **103**: 323 (Aug 4) 1934

8 Hanflig S S Pain in the Shoulder Girdle Arm and Precordium Due to Cervical Arthritis J A M A. **106**: 523 (Feb 15) 1936

9 Reid W D Pressure on the Brachial Plexus Causing Simulation of Coronary Disease J A M A **110**: 1724 (May 21) 1938

REPORT OF CASES

CASE 1.—A man aged 52 received a torsion type of injury to his head and neck in December 1940 while riding in a half-track. About three months later he developed a pain in the right side of the neck, shoulder and arm which was progressive and was aggravated by exertion related to the right arm and shoulder. During a period of four months prior to May 1943 he had several bouts of sharp pain lasting from three to five minutes localized to the substernal area. Two of the attacks became manifest during a period of anxiety. He noticed that walking 50 yards frequently precipitated similar attacks of pain associated with a feeling of constriction in the substernal region and he became alarmed about his condition thinking that he might have heart trouble.

He was admitted to the Neurosurgical Section of O'Reilly General Hospital May 6, 1943. Examination showed limitation of motion in the neck, exquisite tenderness over the right brachial plexus and hypesthesia over the right ring and little fingers. It was recognized that he had a herniated nucleus pulposus in the lower cervical region on the right. One of us (F. M.) who examined the patient thought that he might also have angina pectoris. However, a careful cardiac survey, *including exercise tolerance and electrocardiographic tracings*, gave normal results. The blood pressure was 110/88. A pantopaque myelogram was done and revealed a defect between the sixth and seventh cervical intervertebral space on the right. A partial laminectomy under local anesthesia was done on June 12, 1943 and a large herniated nucleus pulposus was found between the sixth and seventh cervical vertebrae on the right, compressing the seventh cervical nerve root. This was removed and the pressure on the nerve root was entirely relieved. By July 1, 1943 the patient had become asymptomatic except for some slight residual numbness in the right index finger, and he returned to his usual duties. On Dec. 6 1944 he suffered a mild head and neck injury when he fainted while taking a shower bath. Following this he had some stiffness of his neck for a period of two weeks but was then asymptomatic until Aug. 1, 1945 when he experienced the onset of a constant pain in the left arm radiating downward to the fourth and fifth fingers and also about the left shoulder, with definite radiation of an intermittent nature to the precordial area. He did not have dyspnea or palpitation.

He was again admitted to O'Reilly General Hospital on Aug. 3, 1945 on a litter, with severe pain in the precordial area and left arm. Examination showed limitation of neck motion, tenderness over the left brachial plexus and hypesthesia of the left ring and little fingers. Examination of the heart and lungs was again normal and an electrocardiogram failed to show any abnormalities. He was placed in head traction, with only partial relief of symptoms. A pantopaque myelogram showed a definite defect between the seventh cervical and first thoracic vertebrae on the left.[10] On August 24 a left subtotal laminectomy under local anesthesia was performed on the seventh cervical and first thoracic vertebrae. The eighth cervical nerve root was injected with 1 per cent procaine hydrochloride and retracted upward, exposing a large herniated nucleus pulposus. At this point, pressure on the disk itself caused severe pain similar in all respects to that previously experienced in the left upper chest. Care was taken to differentiate between pain produced by pressure on the disk itself and that which might result from traction on the nerve root. The large mass of herniated nucleus pulposus was then removed. The patient became ambulatory within a period of a few days, and he found that the pain in his left arm was much improved although still present to a slight extent. The pain which he had previously experienced in the precordial region had completely disappeared. At the time of discharge from the hospital on September 22 he was entirely asymptomatic.

While there was no doubt from the clinical findings that this man had a herniated nucleus pulposus, it must be admitted that the first operation was undertaken with some apprehension by the surgeon (F. M.) even though he was well aware that such a lesion could cause pain similar to angina pectoris and that cardiac studies were normal, simply because this was the first patient encountered whose pain was aggravated by walking a definite distance.

CASE 2.—A man aged 37 developed a sharp pain with a burning sensation low in the posterior aspect of the neck while moving a piano on Feb. 23, 1945. This pain continued over a prolonged period and was aggravated by any exertion which produced traction on the left shoulder. Late in March he developed attacks of sharp pain over the precordial area, the left upper chest and suprascapular region. Deep breathing definitely aggravated the pain in the left anterior chest and there was dyspnea on exertion. This pain was also produced by *coughing and sneezing*. He stated that under these conditions he felt as if his heart "was swelled" and that there was associated palpitation. About this time he also developed an almost constant numbness in the index and middle fingers and an intermittent tingling of the fourth and fifth fingers on the left.

He was admitted to O'Reilly General Hospital on July 8. The neck was held rather stiffly and the head was tilted slightly to the left. Rotation of the neck produced pain in the index and middle fingers, and pressure on the left side of the neck at the level of the sixth vertebral body over the brachial plexus caused pain in the left anterior chest. The triceps reflex was reduced and there was hypesthesia of the index and middle fingers. The heart and lungs were normal on physical and x-ray examination. The blood pressure was 120/80 and an electrocardiogram was normal. X-rays of the cervical spine showed a reversal of the normal curve and osteophyte formation along the posterior and superior edge of the body of the seventh cervical vertebra. A pantopaque myelogram of the cervical region on June 22 showed a large defect on the left between the sixth and seventh cervical vertebrae. July 3 the patient was operated on under local anesthesia and after a partial laminectomy a large herniated nucleus was found on the left side between the sixth and seventh cervical vertebrae. Pressure on the nerve root caused pain to radiate to the left arm, forearm and index finger. The nerve root was then injected with 1 per cent procaine and retracted. Pressure was then applied on the protruded disk itself and produced a sharp pain in the precordial region. However, it could not be determined with certainty that traction on the nerve root itself was not the factor that produced the precordial pain. A large mass of herniated nucleus pulposus was then removed. Following operation the patient had complete relief of pain in the precordial area and in the left arm. After a period of observation of approximately six weeks during which time he remained asymptomatic he was discharged from the hospital.

The symptoms and signs in this case were classic and no difficulty was encountered in arriving at the correct diagnosis. The cardiac consultation was obtained only for the sake of completeness.

CASE 3.—A woman aged 40 first developed attacks of sharp pain in the chest at the level of the fifth rib just to the left of the sternum in January 1945. They were not particularly severe and disappeared after a few days so she did not consult a physician. However on July 9 she was awakened by a "stabbing pain in her heart," which quickly changed to become cramping and viselike in character. The pain radiated through the left chest to the region of the scapular and thence to the shoulder and neck, producing a choking sensation, thence into the left side of the face, to the back of the neck, to the occipital region and finally down the medial (ulnar) aspect of the arm. The attacks at first would last from fifteen to thirty minutes and were associated with dyspnea but not with palpitation. The pain was not affected by position but occurred both on exertion and while the patient was in bed. At the end of four days the pain became practically constant and she was admitted to O'Reilly General Hospital on July 11.

On detailed questioning she admitted to some stiffness in the neck and numbness and tingling in the index finger of the

10. This herniated nucleus pulposus was one space lower than the first in spite of the fact that hypesthesia was in the same dermatome, a phenomenon as yet unexplained.

left hand There was no history of trauma to the neck or head On examination it was noted that she held her neck rather stiffly while she walked. The heart and lungs were found to be normal on physical and x-ray examination, and the blood pressure was 106/66 There was hypesthesia to cotton and hypalgesia to pin prick over the precordial area and over the index finger Pressure over the anterolateral aspect of the neck at the level of the sixth cervical body produced sharp pain in the precordial region and down the left arm to the medial side of the hand There was no fever or leukocytosis and the sedimentation rate was normal X-rays of the neck showed a definite reversed curve at the level of the sixth cervical body (fig 1) and a pantopaque myelogram showed a small but definite lateral defect on the left side and a defect in the midline between the sixth and seventh cervical vertebrae (fig 2)

She was placed on bed rest with constant neck traction and obtained some relief from the precordial pain However, because the pain persisted and because it was incapacitating, she was operated on, September 17 Under local anesthesia a subtotal laminectomy of the sixth and seventh cervical laminas was done and the nerve root was retracted Pressure on the seventh cervical nerve root reproduced severe pain in the precordial area and in the left arm When the nerve root was better exposed it was seen to be compressed and flattened by a small hard mass anterior to it. Between the bodies of the sixth and seventh vertebrae a hard protrusion of the disk was found, extending from the midline toward the left, in the center of which was a small soft spike of herniated nucleus pulposus just medial to the intervertebral foramen The nerve was decompressed by removal of the herniated nucleus pulposus and a portion of the hard nodule. Following operation the patient had complete relief from all her pain At discharge, two months later, she still had some soreness at the site of the operative incision but no other symptoms



Fig 1 (case 3) —Lateral view of cervical spine showing segmental reversal of normal curvature at level of sixth and seventh cervical vertebrae

The widespread pain was the conspicuous feature of this case and could have been confusing had not the findings been typical of a herniated sixth cervical nucleus pulposus No definite explanation can be given for the pain in the face any more than one can explain the pain over the heart This is not the only patient with pain in the face who has been observed It was not carried over the sympathetic nerves in a similar case, for a dorsal sympathetic block failed to give relief

CASE 4—An officer aged 36, admitted to O Reilly General Hospital on Feb 11, 1945, while pulling a sled and carrying an 80 pound pack on his back during February 1944 developed an acute severe pain in the left shoulder with radiation down the inner surface of the arm and numbness and tingling of the fourth and fifth fingers of that hand On eliminating excessive exertion he was relieved of this pain but again in July 1944 while under physical stress he experienced a similar pain Because of frequent repetitions of such experiences he was hospitalized in February 1945 Physical examination revealed limitation of motion of the neck, spasm of the left trapezius muscle with elevation of the left shoulder atrophy of the upper arm and reduction of the triceps jerk Pressure over the seventh cervical root reproduced the pain in the arm X-ray of the cervical spine revealed a loss of the normal cervical curve and a narrowing of the intervertebral space between the sixth and seventh cervical vertebrae (fig 3) A pantopaque myelogram revealed a large defect between the sixth and seventh cervical vertebrae on the left (fig 4)



Fig 2 (case 3) —Pantopaque myelogram of cervical region demonstrating a definite midline defect and a slight left lateral defect between the sixth and seventh cervical vertebrae

Cervical traction failed to give relief from pain, so under local anesthesia a partial laminectomy was performed on February 24 on the left side with removal of the protruding portions of the nucleus pulposus between the sixth and seventh cervical vertebrae Following this procedure he obtained considerable but not complete relief from the pain in the left shoulder and arm. About the first of July he developed attacks of pain extending from the left shoulder down over the left chest to the level of the nipple. The attacks were associated with definite dyspnea on attempted deep breathing and would occur both on exertion and while at rest Examination revealed that the abnormalities which were present before operation had recurred. Physical and x-ray examinations of the heart were normal and the blood pressure was 138/86 There was a definite lag of the left upper chest on deep inspiration without any evidence of pulmonary pathologic change. Blood cytologic examination sedimentation rate and an electrocardiogram were normal Pressure over the left anterolateral aspect of the neck at the level of the sixth vertebral body reproduced an attack of pain over the precordial area It was believed that a recurrence of the protruded disk had occurred and the pain was relieved fairly promptly by neck traction Because relief of the original pain was not complete, he was retired from the army Aug 11, 1945

This case is of interest because of the fact that precordial pain had not existed prior to operation Recurrence of the findings which had been present before operation, the ability to reproduce the pain by pressure

over the brachial plexus and a normal cardiac study were conclusive evidence that a recurrent herniation of the nucleus pulposus had occurred or that one of the other lower cervical disks had ruptured, as in case 1

CASE 5.—A regular army officer aged 53 was admitted to O'Reilly General Hospital on March 10, 1944 from an overseas general hospital with a diagnosis of angina pectoris He had

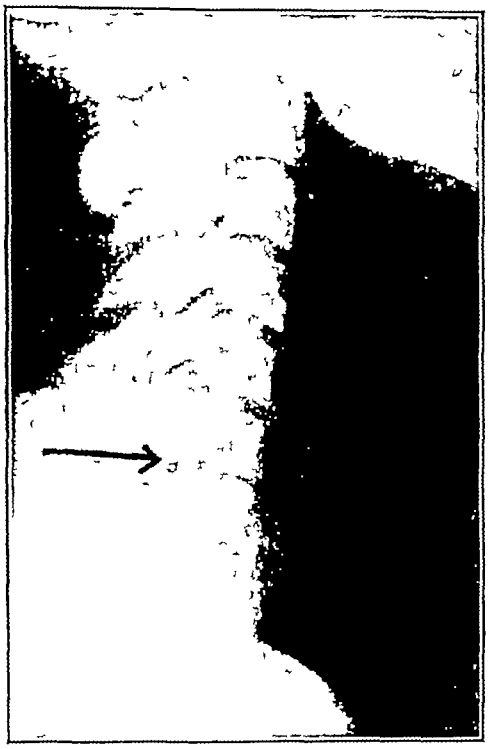


Fig 3 (case 4).—Left lateral view of cervical spine showing loss of normal curvature in lower portion and decrease of the intervertebral space between sixth and seventh cervical vertebrae.

been in an automobile accident on January 3 but did not receive any obvious injuries Following that, however, he noticed mild discomfort in the neck, precordial region and left arm which was of insufficient severity to cause him to consult a physician At about 6 o'clock on the morning of January 9 the patient was awakened from sleep by an agonizing pain in the precordial region which he described as being constricting in nature There was associated radiation of pain, numbness and tingling down the left arm to the fingers The pain persisted for about one and one-half hours before he was admitted to an overseas hospital where he appeared anxious and considered himself to be seriously ill The pain was of such severity so as to require a narcotic for relief

Examination of the heart and lungs at that time was reported as normal, and the blood pressure was 130/70 Urine, blood counts, sedimentation rates, repeated electrocardiograms and x-ray of the chest were found to be within normal limits and there was no evidence of more arteriosclerosis than was consistent with his age. Following the original attack, which lasted several hours, his exercise tolerance was not found to be altered and exercise did not necessarily produce an attack of pain However, he continued to have recurrent attacks of precordial pain which were not relieved by glyceryl trinitrate. Nevertheless, a diagnosis of angina pectoris was made and he was evacuated to the United States

On arrival here he was much better He had found that lying on two pillows so that his neck was flexed relieved the precordial pain completely The attacks of pain were mild and had it not been for his anxiety over his condition they would not have been incapacitating Examination here confirmed that there were no abnormalities in the heart, and repeated electrocardiographic studies were normal Moreover, it was then found that pressure over the brachial plexus on the left at the level of the seventh cervical root produced pain which radiated to the anterior chest and down the left arm There was limitation of motion of the neck, but no motor, sensory or reflex changes were found in the left arm X-rays of the cervical spine demonstrated a narrowing of the joint space between the sixth and seventh cervical vertebrae and an encroachment on the intervertebral foramen on the left side at this level by osteophyte formation A pantopaque myelogram confirmed the diagnosis of a rupture of the sixth cervical disk on the left (fig 5) It was apparent that the patient's complaints were not of sufficient severity to warrant operation, so conservative treatment (neck traction) was begun He was completely reassured regarding the cause of his pain and his anxiety concerning heart disease was relieved As time progressed his precordial pain almost entirely ceased and he was retired from the Army on length of service

Here again the ability to reproduce the precordial pain by pressure over the affected nerve root was the main factor in making the diagnosis, which was confirmed by myelography In addition the pain, when carefully analyzed, was not found to be precipitated by the usual factors which bring on true angina pectoris

CASE 6.—An officer aged 65 was first examined as an outpatient at O'Reilly General Hospital on Dec. 15, 1944 because of repeated attacks of precordial pain which had been previously diagnosed as angina pectoris Approximately ten years prior to this date he had suffered attacks of pain localized to the left shoulder over a period of several months which was diagnosed as bursitis In 1936 he began to have attacks of pain radiating from the left shoulder down the arm to the fingers, and since 1940 he had had an almost constant mild sensation of numbness in the fourth and fifth fingers of the left hand In 1939 the distribution of the attacks of shoulder pain spread to involve the upper precordial area He related the attacks of pain to exertion and thought that he obtained relief on rest. But he had also had similar attacks in bed at night for several years and on at least eight occasions during the year 1944 For a period of approximately two years he had noticed some discomfort and stiffness in the left side of the neck occurring particularly in bed at night. The attacks of precordial pain were not associated with real dyspnea and he had not noticed any palpitation



Fig 4 (case 4).—Pantopaque myelogram of cervical region in anteroposterior view showing a large defect between the sixth and seventh cervical vertebrae on the left.

In January 1944 he consulted a physician because of the attacks of precordial pain and was told that he had angina pectoris Limitation of activity and glyceryl trinitrate were prescribed He found that he did obtain some relief from glyceryl trinitrate but only after a lapse of at least ten minutes and when associated with cessation of activity In addition to the foregoing symptoms he had also suffered repeated attacks of low back pain with radiation down the posterior aspect of the left leg, which were also relieved by rest

On December 2 during the course of an emotional upset he had a severe and incapacitating attack of precordial pain with radiation to the left shoulder and down to the fingers The

pain persisted about three hours, was not relieved by glyceryl trinitrate or rest in bed and was ameliorated only by a hypodermic injection of morphine. The next day he noticed some soreness in the left shoulder and arm but otherwise felt well. He remained in bed for five days and then returned to his duty without further incapacitation. At the time of our interview and examination on December 15 he was apprehensive over his condition and deeply concerned about having severe heart disease. The lungs were clear, the heart was normal by physical and x-ray examination, the pulse rate was 100 and the blood pressure was 132/80. The peripheral and the retinal arteries showed only minor evidence of sclerosis, which was considered to be consistent with his age. Pressure over the neck just lateral to the sixth cervical body produced a sharp pain radiating down the left arm to the 4th and 5th fingers. An electrocardiogram taken on December 16 was normal (fig. 6), as were tracings which had been taken over a period of five days following the acute episode on December 2. The blood cytologic condition and sedimentation rate were normal. X-rays of the cervical spine showed evidence of reduction of the intervertebral space between the fifth and sixth and the sixth and seventh cervical vertebrae with lipping of the edges of the intervertebral bodies (fig. 7) and the presence of osteophytes on the left in the intervertebral foramens at those levels.



Fig. 5 (case 5).—Pantopaque myelogram of cervical region demonstrating large defect on left between sixth and seventh cervical vertebrae.

The patient was put through rather strenuous exercise tolerance tests, including a brisk uphill walk of about ½ mile on a cold day without the production of precordial pain. A Master's[11] two-step test, using 22 step ups, was then done. There was no significant change in pulse rate, blood pressure or electrocardiographic tracings taken immediately after exercise (fig. 8) and at two, four and eight minutes after exercise. Because of the presence of extensive arthritic changes and as the patient had suffered only one severe attack of pain, surgery was not considered advisable and conservative measures were advised. The important consideration was the elimination of the patient's anxiety concerning heart disease and he went away remarkably relieved.

It must be admitted that the evidence in favor of a diagnosis of a herniated nucleus pulposus is not entirely complete in that there were no reflex or sensory changes in the arm and in that a myelogram was not done. On the other hand, the evidence against angina pectoris is quite strong—namely the fact that the pain was not produced consistently by a given amount of exertion and that the heart was normal on physical and electrocardiographic examination.

CASE 7.—An officer aged 58 was at work at his desk on July 4, 1945 when he experienced sharp pain in the left shoulder which shortly also involved the right shoulder region. The pain rapidly became quite severe and was associated with dyspnea, sweating and an "ashen" color. He was observed by a physician who was working in the next office. The attack lasted approximately twenty minutes, and except for a short period of weakness following the attack he then remained asymptomatic. Because a coronary occlusion was suspected, he was further examined in detail on July 10. On that date the heart rate and rhythm were normal, the blood pressure was 120/84 and a sedimentation rate was normal. However, the electrocardiogram showed some abnormality and a diagnosis of coronary occlusion was made.

The patient was admitted to O'Reilly General Hospital on July 13 as a litter patient. At the time of our examination he was asymptomatic and quite comfortable. On detailed questioning he admitted to having had intermittent minor attacks of stiffness of the neck over a period of several months. Physical and x-ray examinations of the heart and lungs were normal. Pressure over the anterolateral border of the fifth cervical vertebral body reproduced pain identical with that which he had experienced in both shoulders. X-rays of the cervical spine showed a narrowing of the space between the fourth and fifth cervical vertebrae and an encroachment on the foramen on the left side in that area. Electrocardiographic tracings taken on July 10, 13, 17 and 25 and on August 1 showed a normal pattern except for a prolonged QRS time of 0.10 second. This prolongation of the QRS time was entirely dependent on a prolonged and slurred S wave. Fortunately the patient had previously had an electrocardiographic tracing on April 21, 1943 during a period of hospitalization for an attack of acute tonsilitis. This was obtained and was found to show exactly the same pattern as the tracings taken in July 1945. This abnormality has been shown by Willius, Dry and Reeser[12] to be of no clinical significance if it can be shown to be of more than a year's duration. Certainly in this case it could not be considered of any clinical significance. The patient remained asymptomatic and after a period of observation with normal activity he was completely reassured as to his cardiac condition and discharged from the hospital on August 1.

### COMMENT

From our experience we think that in all patients suspected of having either angina pectoris or coronary occlusion in whom the symptoms, physical signs and laboratory examinations are not conclusive the presence of a rupture of one of the lower cervical disks with herniation of the nucleus pulposus should be suspected. The historical points of interest in such cases are persistent or repeated attacks of discomfort

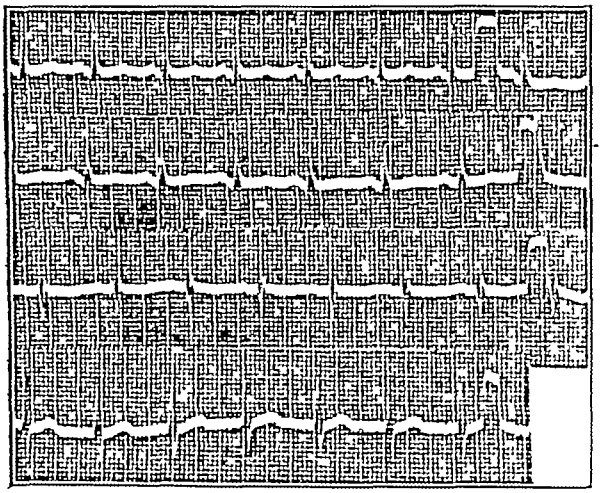


Fig. 6 (case 6).—Normal tracing at rest.

11 Masters, A. M., Freedman, R., and Dack, S.: The Electrocardiogram After Standard Exercise as a Functional Test of the Heart, Am. Heart J. 24:777, 1942.

12 Willius, F. A., Dry, T. J., and Reeser, R., Jr.: Life Expectancy in Conductive Disturbances Affecting the Ventricular Complex of the Electrocardiogram, Arch. Int. Med. 67:1008 (May) 1941.

in the neck, shoulders, precordium and arm, persistent or repeated attacks of numbness in the fingers, the relationship of the pain to exertion which causes a strain on the neck or shoulder region, and the occurrence of attacks of pain while the patient is in bed The history of trauma to the neck when present may

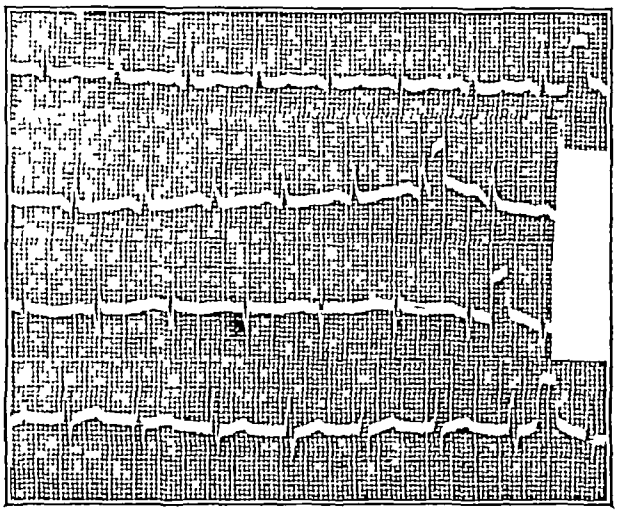


Fig 7 (case 6) —Tracing immediately after exercise (Master's two-step test) the same as before exercise

be quite helpful, but it is often absent The absence of physical and laboratory signs of coronary disease, a normal exercise tolerance and lack of relief by glyceryl trinitrate should then make the physician highly suspicious of the possibility of a ruptured cervical disk If the patient is seen during an attack, dyspnea and diminished respiratory excursion in the upper thorax may be observed Atrophy of the pectorals, biceps, triceps or intrinsic muscles of the hand may be noted when the disease has been present over a long period The pain can frequently be reproduced by pressure on the affected nerve root in the brachial plexus and by pressure on the head X-ray studies of the neck are in most instances confirmatory of the diagnosis of a ruptured cervical disk when such a lesion is present.

The question of why certain patients with ruptured cervical disks have precordial pain as the presenting symptom or, in fact, why they have any precordial pain cannot be fully answered, and the route of the nervous pathways conducting the pain is not known Selective pressure on a certain portion of one of the lower nerve cervical roots has been thought to be the cause. Nachlas,[7] in reporting on pseudoangina resulting from arthritis in the cervical spine, presented some interesting points The medial anterior thoracic nerve, originating in the eighth cervical and first thoracic nerve roots, and the lateral anterior thoracic nerve, originating in the sixth and seventh cervical roots, innervate the pectoralis major and minor muscles These nerves of course are primarily motor in function and supposedly do not cary sensory fibers but can possess protopathic sensibility He suggested that constriction of such a nerve will produce a definite pain, diffuse in character but referable to the terminal portion of the nerve This, however, does not completely explain the sensations of tightness and the constricting type of pain of which these patients so frequently complain and which at times they refer to the heart itself It would explain the limitation of motion of the upper chest and pain on deep inspiration Our observation in 1 case (case 1) at operation that pressure on the annulus fibrosus reproduced the precordial pain is of course only 1 isolated instance of such a phenomenon, but it was quite striking and definite. However, the exact pathway of conduction of precordial pain in the syndrome of ruptured cervical disks must remain as yet in the field of conjecture, much as does the pathway of the pain of coronary occlusion itself with its various areas of distribution from precordium to shoulder, upper extremities, neck and abdomen

Three of the patients (5, 6 and 7) had been previously diagnosed as definitely having coronary heart disease prior to coming under our observation One patient (patient 1) was suspected of having angina pectoris at the time of his original examination in this hospital, even though the examiner recognized the possibility that the pain could be produced by a lesion of a cervical disk The other 3 patients (2, 3 and 4), while not seriously considered as having coronary artery disease, had a type of pain which at times was quite suggestive of such a disorder Three of these patients (1, 2 and 3) who were operated on and the nerve root decompressed by removal of a herniated nucleus pulposus had complete relief of pain following surgery Patient 4, who suffered with pain in the left arm without precordial discomfort, was relieved by operation for a period and developed precordial pain only after he developed a recurrence of the herniated nucleus pulposus but was relieved by neck traction The three patients (5, 6 and 7) who did not undergo surgery were given reassurance in regard to their cardiac status and obtained relief of anxiety concerning their supposed heart disease.

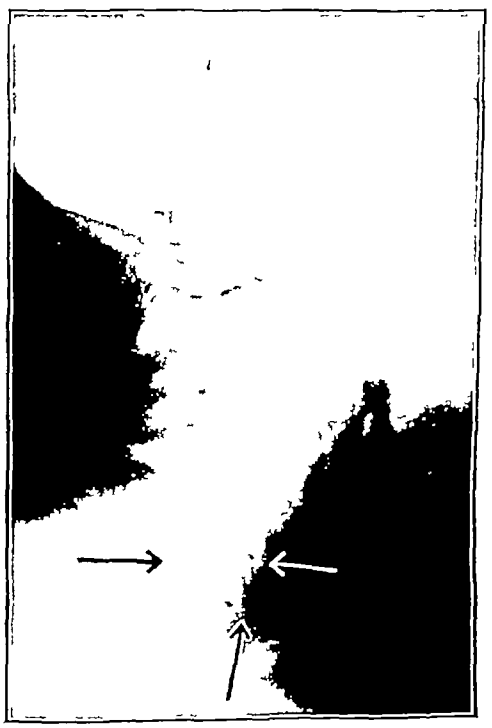


Fig 8 (case 6) —Lateral view of cervical spine showing a loss of normal curvature in lower portion a reduction of the intervertebral spaces between the fifth and sixth and the sixth and seventh cervical vertebrae and evidence of localized arthritis in those areas.

A detailed discussion of when to operate on patients with ruptured cervical disks producing precordial pain is not within the scope of this paper, but the indications for surgery are the same as those of any ruptured cervical disk which produces arm and neck pain and resolves itself into the question of how severe and how

frequent are the attacks of pain, the amount of relief obtained by conservative measures and how much relief can be expected from surgery We do feel that the results of surgery, when extensive arthritic changes can be shown by x-ray and when hard calcified nodules are present, will not be as satisfactory as in the cases in which a soft mass of herniated nucleus pulposus is present The important point, however, is the differential diagnosis between symptoms of precordial pain occurring as a result of a ruptured cervical disk and those which result from coronary artery disease Needless to say, the difference in the prognosis should be clearly explained to the patient, for it is just as important to relieve one's anxiety as it is to relieve one's pain

### SUMMARY AND CONCLUSIONS

1 Precordial pain simulating that of coronary artery disease is frequently produced by a ruptured intervertebral disk in the lower cervical region

2 The differential diagnosis of these two conditions is of grave importance to the patient and can be made on the basis of history, physical findings, electrocardiographic studies and x-ray studies of the cervical spine

3 Seven patients with ruptured cervical disks with precordial pain as their presenting symptom were studied in detail Three were operated on with relief of precordial pain and the other 4 were reassured with regard to their cardiac status and prognosis as to life expectancy

4 The nerve pathway for the production of precordial pain by rupture of a lower cervical disk is not definitely known This particular pain can be reproduced at operation and has been reproduced in 1 instance by pressure on the intervertebral disk itself

---

## FACTS AND FALLACIES IN THE INTEGRATION OF NATIONAL VOLUNTARY HEALTH AGENCIES

D B ARMSTRONG M D Sc.D
New York

*In the end they will lay their freedom at our feet and say to us 'Make us your slaves but feed us*

*—Dostoyevsky*

For at least forty years questions have been asked as to the proper status of national voluntary health agencies Should they continue to be essentially independent organizations? Should their present loose federation be strengthened? Should they be merged? What degree of integration for expert staffing, for economy, for efficiency, for public relations, for education and especially for fund raising would be most advantageous on all levels, national, state and local?

Inevitably two opposing conclusions have been reached regarding merger, because the arguments for and against merger are based on two conflicting philosophies The general public, unaware of the deep roots of this conflict, may well be confused by the brightly colored foliage displayed for hoped-for acceptance. The full flower from one of these roots has recently bloomed in the form of a volume entitled "Voluntary Health Agencies—An Interpretative Study," generally known as the Gunn-Platt Report This study was made technically under the auspices of the National Health Council[1] but was actually financed by the Rockefeller Foundation, of which Mr Selskar Gunn, one of the authors, was a vice president until his untimely death The study was completed by his assistant Philip S Platt, Ph D The authors and not the council (or the members of their "advisory committee," of which I was one) assume responsibility for the recommendations which conclude the report and which are based on inquiries by two skilled laymen under the direction of a committee also under lay leadership

Some of the recommendations and data featured in the report have resulted in hostile criticism of certain national voluntary health agencies, especially as to their programs and expenditures and their methods of fund raising Although the Gunn-Platt Report says that the public could and should give more, not less, than it now gives to private agency health work and admits that decreasing mortality and morbidity rates are substantially due to the work of the national voluntary health agencies, interpreters of the report have implied that the funds contributed by the public to certain major agencies have been at least in part used unwisely More centralization and eventual merger are advocated as the answer to these alleged adverse conditions The report itself concludes by recommending "the pooling of the present separate, competitive and confusing appeals into a uniform nationwide campaign
effective on the local, state and national levels"

The Gunn-Platt Report, however, is only an episode, constructive and useful in some respects, contradictory and redundant in others, in the long history of the voluntary health movement My intention in this paper is to discuss not the Gunn-Platt Report particularly but the truly basic principles involved in the controversy on which this report has for the moment focused both lay and professional attention

### FREEDOM OR MERGER

Cooperation is fundamental to optimum success in any effort Improvement in the health of the individual is the proper goal of every nurse, every physician, every hospital, every private and official health agency But obviously, specialization is both wise and necessary In a coordinated medical and surgical clinic service the patient benefits from division of function Similarly in the National Health Council its member agencies function through analogous specialization Yet the council makes it possible for its members to do many things jointly which they could do less well or not at all alone Many useful joint activities were initiated in its early years, in part abandoned for lack of funds Many untouched fields for joint action could and should be developed The council has been aware of the value of expansion and further coordination from the beginning

It was timely to have now a restatement of program and an increase in resources This seemed hardly to require the costly and intricate study undertaken by the self-created committee of the council or five years

Dr Armstrong was formerly president and first executive officer of the National Health Council.

1 The National Health Council maintains headquarters at 1790 Broadway New York where are housed a number of its member agencies and where numerous common services are maintained The agencies composing the council are as follows Active members American Epilepsy League American Eugenics Society American Heart Association American Public Health Association American Red Cross American Social Hygiene Association American Cancer Society, American Society for the Hard of Hearing Conference of State and Provincial Health Authorities of North America Maternity Center Association National Committee of Health Council Executives, National Committee for Mental Hygiene National Organization for Public Health Nursing National Safety Council National Society for the Prevention of Blindness National Tuberculosis Association Associate Members American Nurses' Association, American Association of Medical Social Workers American Diabetes Association, Planned Parenthood Federation of America Advisory members U S Children's Bureau U S Public Health Service

of scurrying around the country with an expenditure of upward of $100,000 However, the useful though obvious suggestions in the report, which could surely have been outlined in a few hours by any one familiar with the field, should be acted on promptly

At no time in the history of the council has there been any conflict as to the desirability and value of such joint activities But from the very start of the council there was conflict about the desirability of merger of the voluntary agencies Several reports based on earlier surveys had merger as their aim, the current one being only the latest attempt

The argument of this paper is that the wish for merger is based on erroneous concepts and that merger is potentially destructive of all volunteer agencies To create a unit in which the voluntary health agencies were anonymous parts would be a catastrophic sacrifice of one of our traditions which must be maintained if our country is to continue dedicated to freedom In our framework merger is impossible and if it were possible it would be the wrong thing, both practically and theoretically, to do, as it would surely sever the roots now deep in the soil of popular interest and support

### THE RECURRENT DREAM

Yet there are attractive arguments for merger There are pointed, neat, specious arguments against independence About forty years ago, conspicuous leaders in the public health field began expressing the opinion that there were too many organizations in the area of voluntary effort They said duplication was wasteful and uneconomical and that competing for funds was not the best way to tap the full resources of the private contributor They advocated merger into one organization as soon as possible on a national, state and local basis This was to match a similar integration of official agencies looking forward to the merger of the United States Public Health Service and the Children's Bureau, for instance, and the broad expansion of the programs of state and local health departments

At that time there were developed, among other plans beautiful colored charts pseudosimple and pseudological convincing pyramids of unification I myself enjoyed working on such charts and making guesses about quick-working, magic formulas for merger I made the study, under the direction of Vincent, Farrand, Frankel Snow and others that resulted in the establishment of the National Health Council in 1921 and was its first executive officer and later vice president and president of the council I am, or have been, a member of numerous committees and boards of its member agencies and know intimately the history of the attempts at consolidation and their failure It is presumably because of this long and varied contact with this field that I have been repeatedly urged by friends and associates to record my views on the problem, and hence this article

Indeed, the primary objective of the council in the early 1920's was merger While many other things attempted succeeded, merging failed completely In the mid 1930's another major effort at amalgamation into one agency was made and again failed Both these attempts were direct and honest approaches and convinced some participants and observers, at least, of the futility and lack of wisdom of the effort Now, through the Gunn-Platt study and report, a third indirect and more devious approach is being made, this time working from the periphery inward It is our opinion that this too is doomed to failure and that the idea is now "going down for the third time" The next time it is fished out of the roiled waters it should, it is to be hoped, be recognized as "a dead cat"

The value of and necessity for separate and independent national voluntary health organizations have been clearly demonstrated by the history of the National Health Council These agencies are indeed a natural manifestation of the American ideology of free enterprise No amount of venturing with foundation resources by crusading angel laymen into the fields of medicine and preventive medicine will alter this background Typical American initiative in the public health field is not apt to be diverted by the creation of a "top-flight," conspicuous, camouflaging superstructure, well intentioned but misled into believing that the voluntary health executives are simply "entrenched racketeers raising money to pay their own salaries" It is not likely that the American public will be seriously fooled by graphic, undermining attacks on existing successful independent voluntary health agencies or by an organized ballyhoo led by "public relations experts" Certainly, if such a social change should result from this combination of effort, it would mean that here, as in other nations, the egoistic, table pounding commissars will have paved the way for the Dictator

To many familiar with the past history of the National Health Council it was perfectly clear that this third attempt since 1920 at amalgamation of voluntary health work was not only "barking up the wrong tree" but baying at a dead tree, with little anticipation of finding 'possums in its leafless branches

Let us consider some facts and fallacies about volunteer agencies and see why they lead us to the conclusion that merger is both improbable and wholly unwise

### FACTS

1 It is a fact that the national voluntary health agencies can do and are doing advantageously certain things in common These include not only common mechanical services such as rentals, accounting, supplies, telephone service, shipping and library for which the council has operated over many years a substantial budget amounting annually to nearly three hundred thousand dollars They also include many other mutual interests which can, to a degree at least be best served in common, such as certain phases of research, the development of health educational activities, personnel recruiting and management, statistical services, certain phases of state and local field organization and control, and increased cooperation with nonmember organizations Projects in all these fields have been initiated from time to time and carried forward with some degree of satisfaction and accomplishment Of course not all have persisted, mainly for lack of staff and funds

Much more can be done in these directions on a basis of voluntary cooperation through the National Health Council on the part of the independent agencies It is fortunate that, following the recent survey, there now appears to be more foundation money available for these purposes, and it certainly is to be hoped that adequate staff can be secured for the expansion of this type of program

2 It is a fact that resources for the several important voluntary health movements are uneven This is of course inevitable It is easier to raise money for infantile paralysis, for instance, than it is for venereal disease control The public doesn't like to hear any more than it has to about the latter, and it is difficult to dramatize

It is probable that there are important causes such as venereal disease control that will always need special help and that cannot raise funds as adequately by popular appeal as do the infantile paralysis, tuberculosis, cancer and other movements Venereal disease efforts may have to find their chief support from large givers, or arrangements might be made whereby they could share in the more generously financed movements, especially those with unusually successful money-raising devices, such as those used by the National Foundation for Infantile Paralysis or such as the seal sale so effectively utilized by the National Tuberculosis Association

Of course it should be realized that criticism of the well-to-do agencies because of their success in fund raising, and an effort to encourage or force them to carry their impoverished colleagues might readily, if pressed too far, induce an element of public deception and might also actually signify an extension into this field of the prevalent "soak the rich" philosophy

3 It is a fact that previous efforts at voluntary health consolidation failed, and for inherent, basic reasons The executives and boards of some of the agencies have in the past professed to believe in the consolidation idea, and certain of them still do They say that "the time is not ripe" or "we must move slowly" Many of them don't face the facts In reality such a unification on the national level would be contrary to the American tradition and possible only in a regimented society Hitler or Stalin could force it and no doubt would It is however decidedly American to promote and finance separate agencies to which the people can give in a way that reflects their special interests If this expensive but vital privilege is withdrawn, they will probably show their resentment by nonparticipation Separate health movements are a part of the American competitive, free enterprise, democratic system, involving unfortunate but inevitable duplicatory costs that are characteristic of democracy in all its manifestations State and local governments are costly too, but complete federal control would cost us our freedom

4 It is a fact that there are in our country two kinds of people who want the consolidation of voluntary health agencies and who are willing to sacrifice freedom to regimentation with the object of economy, efficiency and more complete control The first group is composed of that portion of the social workers, statisticians and community organizers who are communistically inclined This same group naturally favors other efforts at socialization and the current trends in government and out of it The other group is made up of business executives who favor a unification of appeals, who like the local community chest idea because it means fewer requests for appropriations and because it means that actually in most instances they and their businesses will have to give less in total than they would if faced with a number of separate demands Actually these two groups have the same collectivistic ideology and the same desire for organized monopoly However, the leading executive or political leader who wants private enterprise in business but who is willing to tolerate the regimentation of medicine, of public health and of voluntary social effort is toying with the camel whose nose is already in the tent

## FALLACIES

On the other side, it is clear that in our current thinking about national health federation there are a number of fallacies prevalent, some of them featured in and highly publicized by the Gunn-Platt Report They are not new fallacies They were evident also in earlier National Health Council history We should have learned to recognize them long ago Among them are

1 It is a fallacy to assume that the public is averse to multiple agencies The facts of course speak for themselves The individual citizen generously supports the agency or agencies in which he is especially interested, often because of some personal or family experience During the last few years, when the public was supposed to be consciously overburdened and annoyed, agencies have developed more rapidly in number and volume than in any equal prior period Never were so many new programs launched Never have separate movements met with such generous financial support from the public The tuberculosis seal sale reached an all time high in 1945 The infantile paralysis control movement has grown by leaps and bounds Two separate national cancer drives within the last two years have raised approximately $8,000,000, and another one is now being terminated for an even larger amount Public interest and sympathy increase rather than shrink

2 It is a fallacy to claim that the trend is all toward consolidation Unification is falsely said to be "in the cards" This false assumption is based partly on the experience of the National War Fund, which was a successful war phenomenon—a collectivistic device necessarily borrowed from our enemies in order to fight them on their own grounds, and not the only one so borrowed This fund met with partial failure as soon as peace was certain If Americanism is still strong it will drop that and other wartime bits of collectivism and statism

There are many evidences of similar trends away from consolidation in recent experience Tuberculosis societies have here and there been forced to try merging their local fund-raising programs with community chests and have later had to withdraw and return to an independent basis in order to acquire adequate resources and regain popular interest and support The movement toward unification was furthered (in the early 1930's) by a rather widespread admiration in this country for European collective and socialization procedures In New York City, for instance, under the leadership of a subsequent great New Dealer Harry Hopkins, the New York Tuberculosis and Health Association was able to bring into its group, in addition to its tuberculosis program, the work of those concerned with heart disease, social hygiene, industrial hygiene, dental hygiene and diabetes Most of us thought it was a good idea at the time and worked with Hopkins for it Subsequent history, however, raises skepticism as to the wisdom of the attempt First the diabetes group withdrew and established the New York Diabetes Association, with more adequate funds than it could realize in the merger Then the heart group left the association and started out on its own, with a program that promises to raise a great deal more money than was ever made available for it as a part of the association Dental interests are now threatening to withdraw and might be very wise to do so, so far as their fund-raising activities are concerned

In reality, the trend on both the national and the local level is definitely away from consolidation, though probably ten years from now some new Messiah with a Jehovah complex will again drag out the leaky unifi-

cation bagpipe, to play again the "consolidation blues," perhaps with a foundation again paying the piper

3 It is a peculiarly silly fallacy that the amount of funds that the public will make available for voluntary health effort can be increased by burying the special appeals in an anonymous approach This hardly seems to call for argument, though this assumption is often made or implied It seems quite certain, as mentioned earlier, that one sure way to destroy the voluntary health movement and its public support is to attempt such unanimity through consolidation on a national level The only people who would be pleased would be those who view all private social effort as a racket (though they generally are for private effort in all other channels) or those who would like to see the voluntary movement destroyed in order that the whole health program might be taken over by the state, and particularly by the expanding federal authorities As a matter of fact such motivation, conscious or unconscious, may well be a factor in this third attempt at consolidation It would be fatal for the voluntary health agencies to give up their independent, free access to public support It is ridiculous to assume that they would get more rather than less by a united appeal Those who advocate this should reread Dostoyevsky's chapter on "The Grand Inquisitor" in The Brothers Karamazov, where the people cried to the great leader, in effect, "We lay our freedom at your feet give us bread," hoping and expecting to get more bread that way, but realizing later, as presented more fully by Dostoyevsky in The Possessed, that in giving up their freedom they had also sacrificed their bread Of course this same formula has more recently been demonstrated by the Fascists in Italy, the Nazis in Germany, and the Communists in Russia Those who adopt this formula certainly lose their freedom, but the bread is yet to materialize, at least in comparison with the loaf that free enterprise produces in America

4 It is also a fallacious assumption that the communization of effort and resources in our country is inevitable or that seemingly worldwide trends toward socialization must be followed here Must free enterprise be killed off in social effort? Is free enterprise doomed in business? If so, then only one end is possible—an end clearly exemplified in Europe at the terminus of a road down which other nations, including the British, now seem determined to travel This route was perhaps most compactly described by Hayek when he said that the road to communistic hell is paved with well intentioned socialistic or collectivistic experimentation

It is said, we believe fallaciously, that socialization in medicine and public health is inevitably coming on a national scale as regards official activities, and that a parallel development is therefore essential in the voluntary field This is a two-barreled fallacy, and the triggers are pulled by the same individuals The same small group of persons are pushing the socialization idea through both official and voluntary channels They work behind the scenes for the destruction of American institutions of freedom It is important that their aims and activities should be understood by us all

For instance, on the national level and on the official side there are in the legislative Senatorial hotbed a variety of "plants" that might be labeled "German born," "Russia bitten," "American gullible"—all fit subjects for Thurber's series of sketches of modern Flora in the *New Yorker* These Senatorial "plants" are probably "forced" growths rather than vigorous natural fermenters of statism on the medical level They are root fed and fertilized by horticultural experts working behind the scenes in the country's social security hothouse

In the private agency field a clever, "leftish" lay leadership in the American Public Health Association, for instance, has unfortunately succeeded in putting this association on record as supporting the national socialization of medical care, even though most of its members are naturally individualistic medical men Many of these physicians, however, are health officers exposed to the ever growing influence of a centralized governmental subsidizing regime "He who pays the piper calls the tune"

It is well to be aware of these influences It would be a little ridiculous for us to have spent billions of dollars and hundreds of thousands of lives to defeat totalitarian statism in Europe and Asia and then let the collectivists in our midst conquer us with their program here at home

### HOW GREAT IS THE DANGER?

Practically, the danger of our surrendering our freedom in the health field is not very great The National Health Council has a great deal to its credit Its important services persist and flourish, although they were largely ignored in the Gunn-Platt Report, perhaps as a method of magnifying the alleged current "crisis" Certainly, the usefulness of the council can be greatly increased with the additional funds that are a sequela of the Gunn-Platt study, perhaps a justification of the study itself

There is reassuring healthy resistance to the less fortunate recommendations and interpretations of this report There is a substantial revolt in the tuberculosis field against unwarranted criticism leveled at this movement The Red Cross is said to have threatened to withdraw from the council membership if certain of the Gunn-Platt recommendations regarding local consolidation of fund raising are pressed The National Organization for Public Health Nursing has gone on record as recommending "that visiting nurse associations as well as hospitals and clinics be excluded from the proposed unification of all voluntary agencies into one organization" The National Foundation for Infantile Paralysis, smarting under unjust attacks, has apparently, and it is hoped only temporarily, laid aside plans to join the National Health Council and has for the time being joined the National Social Welfare Assembly, a similar and more comprehensive federation

The Gunn-Platt Report represents an expensive detour It has made useful comments and stirred up a great deal of suspicion and antipathy Efforts are now being made to "pull some of the chestnuts out of the fire" and some progress should be the net result, though not commensurate with the cost and the ballyhoo

### A NEW START?

Of course if the socializers and regimenters succeed in capturing the National Health Council, consideration should perhaps be given to a fresh start in voluntary health organization—a start that would be firmly based

on American enterprise and freedom, with cooperation between independent groups It might conceivably be appropriate to initiate an American health league, which could of course cooperate with the National Health Council as well as other health agencies and which would not in any way undermine the established and advantageous activities of the council Such a league might recognize from the start certain deficiencies in the makeup of the National Health Council While the council includes a number of important agencies raising large amounts of money for health, such as the American Red Cross, the National Tuberculosis Association and the American Cancer Society, it does not include other very important agencies with a vital stake in the health interests of the country, such as the National Foundation for Infantile Paralysis, the American Medical Association, the American Hospital Association, the American Dental Association and the Association of Voluntary Prepayment Plans for Hospital and Medical Care These professional groups should have had a part in the council from the beginning and should have a part now in the council or in any similar organization

Certainly such an organization should be free to oppose or discount the myth or mirage of merged fund-raising appeals on a national level, and probably under most circumstances on a local level It should also at least indirectly oppose other attempts in parallel fields to promote the socialization of medicine and the governmental domination of medical care facilities It should oppose attempts to tie up intimately medical services and therapeutic activities with public health administration, as recently endorsed by the American Public Health Association

On the more important positive side, any soundly American organization will want to maintain the independence nationally of the major voluntary movements but will at the same time wish to encourage a cooperative federation or conference procedure encompassing all the important national health and medical agencies It will want to develop on a state and local basis the proper machinery for the integration of effort, whether this is a council, a federation or an actual consolidation of agencies It will wish to promote full cooperation with official agencies and the further development of adequate public health service, including sanitation, preventive medicine, maternal and child health, nutrition, and diagnostic centers in hospitals, admitting that many such services, while supplied by local agencies, may need federal aid It will want to promote voluntary, nonprofit prepayment plans for hospitalization and medical care, in fact, it would endorse probably all the ten items in the national health program of the American Medical Association, as adopted by the Association's Board in February 1946

### THE BEST FORMULA?

To return finally to the question of fund raising, it is likely that the best formula needs to be somewhat flexible, though it must be firmly anchored to strong principles It should recognize separate and independent agencies, particularly on the national level, with independent and direct appeals to the public for funds, utilizing such appeals as fully as possible also for educational purposes It may be that certain of the agencies with weaker approaches to the public, such as the venereal disease program mentioned earlier, will need to have, more actively than in the past, mutual assistance from some of its partners, perhaps notably the tuberculosis movement with its seal sale It is conceivable that certain of the smaller agencies, working in more restricted and specialized fields, with less need for large resources, may wish to put their appeals in the hands of local community chests That of course has been tried in the past, not always with success Perhaps the experience could be improved on, though one may legitimately be somewhat skeptical about this phase of the formula even for these smaller agencies

The national agencies should use some of their funds to aid their council group in developing to the full the mechanical services that can without question be operated in common They should also, as stressed earlier, go further in experimentation with certain outgoing services such as health education by radio and films, and research

On the state and local level when it comes to fund raising, a separate approach to the public and a distinctive emphasis for different causes should be maintained Money raised as a result of separate national, state or local appeals for tuberculosis, infantile paralysis, cancer, venereal disease and other programs might be more effectively utilized in many communities if the interested, independent agencies had the advantage of a council or clearing house, or other cooperative conference machinery Such an integration the National Health Council field service might appropriately foster Any other possible experimental formulas for raising and spending funds on any level including state and local, that tend toward or represent a single unit of operation should be approached or carried forward with a great degree of caution and skepticism

It is to be hoped that within some such framework the National Health Council with its fine, if limited, record of twenty-five years, augmented perhaps by agencies not now participating, guided by the principles of freedom and democracy, may go forward toward greater accomplishments May it be aided by the obvious manifestations of wisdom and not permanently impeded by the equally manifest evidences of bad judgment on the part of those who have recently proffered their guidance to this organization and its constituent agencies

---

**Fibroblast and Acute Inflammatory Reactions**—Of all the cell types present in the loose connective tissues of the body, no cell has been quite as obstinate as the fibroblast in refusing to display clearly its potentialities under different physiological conditions Today there is little agreement concerning the role of the fibroblasts in the inflammatory reaction Moreover, the fibroblast has exhibited a particular elusiveness in displaying its relation to other cells of its kind There is little agreement as to whether there is cytoplasmic continuity from one fibroblast to another (syncytial arrangement) or whether each fibroblast is a distinct cellular entity capable of independent expression The solution of these problems would not only further clarify the abilities of the fibroblasts as a cell type but also lead to a more complete understanding of the cellular sequence involved in the inflammatory process—Pliske, Edward C The Role of the Fibroblast in Acute Inflammatory Reactions with Reference to Phagocytic Exudate Cells, in Studies in Science, edited by W C. Coker, Chapel Hill, University of North Carolina Press, 1946

cation bagpipe, to play again the "consolidation blues," perhaps with a foundation again paying the piper

3 It is a peculiarly silly fallacy that the amount of funds that the public will make available for voluntary health effort can be increased by burying the special appeals in an anonymous approach This hardly seems to call for argument, though this assumption is often made or implied It seems quite certain, as mentioned earlier, that one sure way to destroy the voluntary health movement and its public support is to attempt such unanimity through consolidation on a national level The only people who would be pleased would be those who view all private social effort as a racket (though they generally are for private effort in all other channels) or those who would like to see the voluntary movement destroyed in order that the whole health program might be taken over by the state, and particularly by the expanding federal authorities As a matter of fact such motivation, conscious or unconscious, may well be a factor in this third attempt at consolidation It would be fatal for the voluntary health agencies to give up their independent, free access to public support It is ridiculous to assume that they would get more rather than less by a united appeal Those who advocate this should reread Dostoyevsky's chapter on "The Grand Inquisitor" in The Brothers Karamazov, where the people cried to the great leader, in effect, "We lay our freedom at your feet give us bread," hoping and expecting to get more bread that way, but realizing later, as presented more fully by Dostoyevsky in The Possessed, that in giving up their freedom they had also sacrificed their bread Of course this same formula has more recently been demonstrated by the Fascists in Italy, the Nazis in Germany, and the Communists in Russia Those who adopt this formula certainly lose their freedom, but the bread is yet to materialize, at least in comparison with the loaf that free enterprise produces in America

4 It is also a fallacious assumption that the communization of effort and resources in our country is inevitable or that seemingly worldwide trends toward socialization must be followed here Must free enterprise be killed off in social effort? Is free enterprise doomed in business? If so, then only one end is possible—an end clearly exemplified in Europe at the terminus of a road down which other nations, including the British, now seem determined to travel This route was perhaps most compactly described by Hayek when he said that the road to communistic hell is paved with well intentioned socialistic or collectivistic experimentation

It is said, we believe fallaciously, that socialization in medicine and public health is inevitably coming on a national scale as regards official activities, and that a parallel development is therefore essential in the voluntary field This is a two-barreled fallacy, and the triggers are pulled by the same individuals The same small group of persons are pushing the socialization idea through both official and voluntary channels They work behind the scenes for the destruction of American institutions of freedom It is important that their aims and activities should be understood by us all

For instance, on the national level and on the official side there are in the legislative Senatorial hotbed a variety of "plants" that might be labeled "German born," "Russia bitten," "American gullible"—all fit subjects for Thurber's series of sketches of modern Flora in the *New Yorker* These Senatorial "plants" are probably "forced" growths rather than vigorous natural fermenters of statism on the medical level They are root fed and fertilized by horticultural experts working behind the scenes in the country's social security hothouse

In the private agency field a clever, "leftish" lay leadership in the American Public Health Association, for instance, has unfortunately succeeded in putting this association on record as supporting the national socialization of medical care, even though most of its members are naturally individualistic medical men Many of these physicians, however, are health officers exposed to the ever growing influence of a centralized governmental subsidizing regime "He who pays the piper calls the tune"

It is well to be aware of these influences It would be a little ridiculous for us to have spent billions of dollars and hundreds of thousands of lives to defeat totalitarian statism in Europe and Asia and then let the collectivists in our midst conquer us with their program here at home

### HOW GREAT IS THE DANGER?

Practically, the danger of our surrendering our freedom in the health field is not very great The National Health Council has a great deal to its credit Its important services persist and flourish, although they were largely ignored in the Gunn-Platt Report, perhaps as a method of magnifying the alleged current "crisis" Certainly, the usefulness of the council can be greatly increased with the additional funds that are a sequela of the Gunn-Platt study, perhaps a justification of the study itself

There is reassuring healthy resistance to the less fortunate recommendations and interpretations of this report There is a substantial revolt in the tuberculosis field against unwarranted criticism leveled at this movement The Red Cross is said to have threatened to withdraw from the council membership if certain of the Gunn-Platt recommendations regarding local consolidation of fund raising are pressed The National Organization for Public Health Nursing has gone on record as recommending "that visiting nurse associations as well as hospitals and clinics be excluded from the proposed unification of all voluntary agencies into one organization" The National Foundation for Infantile Paralysis, smarting under unjust attacks, has apparently, and it is hoped only temporarily, laid aside plans to join the National Health Council and has for the time being joined the National Social Welfare Assembly, a similar and more comprehensive federation

The Gunn-Platt Report represents an expensive detour It has made useful comments and stirred up a great deal of suspicion and antipathy Efforts are now being made to "pull some of the chestnuts out of the fire" and some progress should be the net result, though not commensurate with the cost and the ballyhoo

### A NEW START?

Of course if the socializers and regimenters succeed in capturing the National Health Council, consideration should perhaps be given to a fresh start in voluntary health organization—a start that would be firmly based

on American enterprise and freedom, with cooperation between independent groups It might conceivably be appropriate to initiate an American health league, which could of course cooperate with the National Health Council as well as other health agencies and which would not in any way undermine the established and advantageous activities of the council Such a league might recognize from the start certain deficiencies in the makeup of the National Health Council While the council includes a number of important agencies raising large amounts of money for health, such as the American Red Cross, the National Tuberculosis Association and the American Cancer Society, it does not include other very important agencies with a vital stake in the health interests of the country, such as the National Foundation for Infantile Paralysis, the American Medical Association, the American Hospital Association, the American Dental Association and the Association of Voluntary Prepayment Plans for Hospital and Medical Care These professional groups should have had a part in the council from the beginning and should have a part now in the council or in any similar organization

Certainly such an organization should be free to oppose or discount the myth or mirage of merged fund-raising appeals on a national level, and probably under most circumstances on a local level It should also at least indirectly oppose other attempts in parallel fields to promote the socialization of medicine and the governmental domination of medical care facilities It should oppose attempts to tie up intimately medical services and therapeutic activities with public health administration, as recently endorsed by the American Public Health Association

On the more important positive side, any soundly American organization will want to maintain the independence nationally of the major voluntary movements but will at the same time wish to encourage a cooperative federation or conference procedure encompassing all the important national health and medical agencies It will want to develop on a state and local basis the proper machinery for the integration of effort, whether this is a council, a federation or an actual consolidation of agencies It will wish to promote full cooperation with official agencies and the further development of adequate public health service, including sanitation, preventive medicine, maternal and child health, nutrition, and diagnostic centers in hospitals, admitting that many such services, while supplied by local agencies, may need federal aid It will want to promote voluntary, nonprofit prepayment plans for hospitalization and medical care, in fact, it would endorse probably all the ten items in the national health program of the American Medical Association, as adopted by the Association's Board in February 1946

### THE BEST FORMULA?

To return finally to the question of fund raising, it is likely that the best formula needs to be somewhat flexible, though it must be firmly anchored to strong principles It should recognize separate and independent agencies, particularly on the national level, with independent and direct appeals to the public for funds, utilizing such appeals as fully as possible also for educational purposes It may be that certain of the agencies with weaker approaches to the public, such as the venereal disease program mentioned earlier, will need to have, more actively than in the past, mutual assistance from some of its partners, perhaps notably the tuberculosis movement with its seal sale It is conceivable that certain of the smaller agencies, working in more restricted and specialized fields, with less need for large resources, may wish to put their appeals in the hands of local community chests That of course has been tried in the past, not always with success Perhaps the experience could be improved on, though one may legitimately be somewhat skeptical about this phase of the formula even for these smaller agencies

The national agencies should use some of their funds to aid their council group in developing to the full the mechanical services that can without question be operated in common They should also, as stressed earlier, go further in experimentation with certain outgoing services such as health education by radio and films and research

On the state and local level, when it comes to fund raising, a separate approach to the public and a distinctive emphasis for different causes should be maintained Money raised as a result of separate national, state or local appeals for tuberculosis, infantile paralysis, cancer, venereal disease and other programs might be more effectively utilized in many communities if the interested, independent agencies had the advantage of a council or clearing house, or other cooperative conference machinery Such an integration the National Health Council field service might appropriately foster Any other possible experimental formulas for raising and spending funds on any level, including state and local, that tend toward or represent a single unit of operation should be approached or carried forward with a great degree of caution and skepticism

It is to be hoped that within some such framework the National Health Council with its fine, if limited, record of twenty-five years, augmented perhaps by agencies not now participating, guided by the principles of freedom and democracy, may go forward toward greater accomplishments May it be aided by the obvious manifestations of wisdom and not permanently impeded by the equally manifest evidences of bad judgment on the part of those who have recently proffered their guidance to this organization and its constituent agencies

---

**Fibroblast and Acute Inflammatory Reactions**—Of all the cell types present in the loose connective tissues of the body, no cell has been quite as obstinate as the fibroblast in refusing to display clearly its potentialities under different physiological conditions Today there is little agreement concerning the role of the fibroblasts in the inflammatory reaction Moreover, the fibroblast has exhibited a particular elusiveness in displaying its relation to other cells of its kind There is little agreement as to whether there is cytoplasmic continuity from one fibroblast to another (syncytial arrangement) or whether each fibroblast is a distinct cellular entity capable of independent expression The solution of these problems would not only further clarify the abilities of the fibroblasts as a cell type but also lead to a more complete understanding of the cellular sequence involved in the inflammatory process—Pliske, Edward C. The Role of the Fibroblast in Acute Inflammatory Reactions with Reference to Phagocytic Exudate Cells, in Studies in Science, edited by W C. Coker, Chapel Hill, University of North Carolina Press, 1946

# Clinical Notes, Suggestions and New Instruments

## THIOGLYCOLIC ACID POISONING IN CONNECTION WITH THE "COLD WAVE" PROCESS

LAWRENCE H. COTTER, M.D.
New York

For some time thioglycolic acid has been used in industry as an iron indicator with no reported ill effects on the handlers. A few years ago a process of hair curling was put on the market known as the "Cold Wave," in which this chemical is employed. There are variations in the basic solutions as put out by different manufacturers but thioglycolic acid in dilutions up to 5 per cent is a constituent of all those investigated.

By the technic employed the horny sheath of the hair fiber is softened while it is rolled round a spindle, following which it hardens into a permanent spiral. The sulfur and amino-carboxyl compounds in the keratin scales are disrupted by the thioglycolic acid, $HSCH_2COOH$, which is applied with an excess of ammonia. After varying periods the acid is washed off with water or hydrogen peroxide.

The cases in which a toxic reaction has been observed appear to be on the increase. The process is more widely advertised, and cheaper with the result that less skilled operators now employ it. Its former high price confined its use to a small clientele in the better class establishments. At the present time an outfit for home use has been out on the market, and it should be recognized as a danger in unskilled hands, and even in skilled hands to a certain proportion of the beauty seekers. Persons suffering from allergies and anemias are the most likely victims, but the acid has an established affinity for the protein molecule and liver damage to some extent may be anticipated from prolonged exposure in any individual.

The following cases were selected from a large group because it had been possible to demonstrate their lesions in the laboratory.

### REPORT OF CASES

CASE 1.—J. R., a woman aged 30, American, a hairdresser, had been employed as a demonstrator of a cold wave process. She gave a history of swelling of the face and the appearance of a diffuse rash after using the acid solution while she had an open wound on one hand. This was relieved by applications of hydrogen peroxide but became gradually worse, so that she lost weight and sleep from the constant itching. She was treated in a hospital by injections of calcium gluconate and by x-rays. When seen she had a diffuse erythema, with some edema of the eyelids and the extremities. Her skin was covered with scratch marks, and there were several necrotic areas from x-ray burns. She appeared emaciated, depressed and tremulous.

TABLE 1.—*Chemical Values in Case 1*

| | |
|---|---|
| Kline | negative |
| Blood sugar | 107 mg. per 100 cc. |
| Serum cholesterol | 243 mg. per 100 cc. |
| Serum phosphorus | 4.9 mg. per 100 cc. |
| Serum nonprotein nitrogen | 35 mg. per 100 cc. |
| Serum uric acid | 4.4 mg. per 100 cc. |
| Serum calcium | 10.4 mg. per 100 cc. |
| Serum bilirubin | 0.1 mg. per 100 cc. |
| Serum chlorides | 590 mg. per 100 cc. |
| Serum alkaline phosphatase | 2.5 Bodansky units per 100 cc. |
| Serum total proteins | 7.4 per cent |
| Serum sodium | 143 milliequivalents per liter |
| Carbon dioxide content | 56.7 volumes per cent |
| Cephalin flocculation | positive |

Laboratory investigation showed the urine amber, cloudy and acid with a specific gravity of 1.021, albumin a faint trace, sugar negative. Microscopic examination revealed scattered red and white cells.

Blood count revealed hemoglobin 13 Gm., red blood cells 3,600,000, white blood cells 9,900, neutrophils 50 per cent, lymphocytes 39 per cent, mononuclears 7 per cent, eosinophils 3 per cent and basophils 1 per cent.

The chemical values are given in table 1.

After six months the patient was still very uncomfortable and nervous, but the elevation of her phosphorus had disappeared and the cephalin flocculation was negative. Her hemoglobin had gone up to 15 Gm., but the low total granulocyte count persisted. She reported that she had gone back to her former place of employment but that entering the atmosphere where the thioglycolic acid fumes were present, without any actual contact with the solutions, had brought on a severe attack of rash and swelling. A patch test showed that she was still acutely sensitive. A test fluid was prepared by neutralizing a 5 per cent solution of chemically pure thioglycolic acid with ammonium hydroxide and diluting with distilled water to a proportion of one drop of the acid solution to 100 cc. of water. One drop was allowed to dry on the skin and remain six hours. At the end of that time there was a wheal 3 cm. in length and 2 cm. in diameter which persisted two days and left a permanently pigmented area. In addition, the patient had a running nose, swollen eyes and diffuse itching. She still suffers from extreme nervousness and complains of feeling cold. Her skin has a mottled appearance, and the areas where she had loss of skin from x-ray burns frequently break down and form running sores. She has now developed albuminuria.

TABLE 2.—*Chemical Values in Case 4*

| | |
|---|---|
| Serum bilirubin | 102 mg. per 100 cc. |
| Serum alkaline phosphatase | 6.1 Bodansky units per 100 cc. |
| Serum cholesterol | 132 mg. per 100 cc. |

TABLE 3.—*Comparative Results in Case 5*

| | | |
|---|---|---|
| In January 1946 | Serum total cholesterol | 250 mg. per 100 cc. |
| | Serum free | 73 mg. per 100 cc. |
| | Serum esters | 177 |
| | Cephalin flocculation | negative |
| In April 1946 | Serum cholesterol | 225 mg. per 100 cc. |
| | Serum free | 75 mg. per 100 cc. |
| | Serum esters | 150 |
| | Cephalin flocculation | positive |

CASE 2.—G. T., a woman aged 49, American, hairdresser, had used preparations containing thioglycolic acid in the course of her work. About a year ago she noticed swelling of her extremities and began to suffer from dizziness and severe occipital headache. These symptoms increased, with the addition of nocturia, gastrointestinal pain and a diffuse itching rash. She spent some time in a local hospital, where she was told that she had anemia. Her gastrointestinal series was negative. When seen, she had not been in contact with the acid for some months. Her headaches had improved and her skin was clear except for a pustular eruption of the scalp. The urine was normal. Her blood count was normal except for a slight leukopenia and granulopenia. Her chemical values were normal except for a strongly positive cephalin flocculation test. She was much overweight. When seen three months later she had lost 60 pounds (27 Kg.) on a diet and the dizziness and nocturia had disappeared. Her blood count was normal, and her cephalin flocculation test was positive.

CASE 3.—J. Y. R., a woman aged 52, American, a hairdresser, had not handled any thioglycolic acid preparation but had a "cold wave" of her own hair. As soon as the acid solution was applied she felt an intolerable burning sensation which persisted for three days in spite of all attempts to wash off the acid. She also had severe cramps and itching all over the body. As soon as the acute condition had subsided she was given a patch test by her doctor, with an immediate exacerbation of all her symptoms. When she again appeared normal she was given a second patch test. This time the reaction was delayed a week but was much more severe when it occurred. She had swelling of the hands and feet and enlargement of the lymph nodes of both axillas as well as the itching and burning, and her hair came out in large patches.

From the Department of Medicine, College of Physicians and Surgeons, Columbia University, and the Presbyterian Hospital, New York, New York.

When seen, she had dark patches on her skin and denuded areas of her scalp There was an anesthesia over the distribution of the seventh nerve on the right side She appeared emaciated and nervous Laboratory investigation showed a normal urine The blood count revealed a low hemoglobin and a granulopenia Her chemical values were normal except for an elevated serum cholesterol and a positive cephalin flocculation test The latter was found to be negative after three months and her symptoms had cleared up except for an intermittent burning sensation of the scalp

CASE 4—C B, a housewife, had a "cold wave" of her own hair As soon as the thioglycolic acid solution was applied she became dyspneic and noticed a diffuse itching rash with swelling of the mucous membranes She had a patch test a week later, described by her own doctor as 'positive in high dilutions' after which she suffered from nausea and vomiting and noticed a slight icteric tint of her skin Chemical investigation at that time showed the chemical values given in table 2

Blood count revealed hemoglobin 10 Gm red blood cells 3,200 000 white blood cells 3 000 There was a low granulocyte count, with some anisocytosis and some nucleated forms She made a complete recovery

CASE 5—C L M an American housewife had been under treatment for anemia for two years Her chemical values in 1944 were normal, and her physical examination was negative She complained of extreme lassitude and depression A college graduate in luxurious circumstances she resented a previously made diagnosis of 'neurasthenia Blood count revealed hemoglobin 13 Gm red blood cells 3 800 000 white blood cells 4,600 neutrophils 58 per cent lymphocytes 33 per cent, mononuclears 6 per cent, eosinophils 1 per cent basophils 2 per cent Anisocytosis and poikilocytosis were present and accentuated The platelets were scanty The patient was given systematic liver and nicotinic acid therapy and in April 1945 the blood count revealed hemoglobin 14 5 Gm red blood cells 4,500 000 white blood cells 5 700 Platelets were abundant The differential count was normal She was able to lead an active life and felt perfectly well In June 1945 she had one of a series of cold waves' and noticed a pustular eruption around the roots of the hair, which disappeared after a few weeks, and which she did not connect with the hair treatment at the time. In January 1946 she began to go downhill for no apparent cause Her irritability and weakness returned Blood count revealed hemoglobin 10 6 Gm red blood cells 3 600 000 white blood cells 4 400 Platelets were scanty and the differential count showed low granulocytes and anisocytosis The condition did not respond to liver therapy as it had on previous occasions The laboratory investigations were repeated with the comparative results given in table 3

The ratio of esters to free cholesterol and the positive cephalin flocculation test suggested a chemical poison, and the patient was closely questioned as to possible causes It transpired that she had had a 'cold wave which she thought was her fifth, just before her relapse She has never had any allergic skin manifestations with the possible exception of the slight rash but her physical symptoms recurred and her blood picture was seriously affected with no improvement up to the present time

As has been shown thioglycolic acid can cause severe allergic reactions in sensitive persons Like other allergens its main impact is on the skin and mucous membranes The effect is cumulative, and sufferers have remissions after contact with the acid has been removed. The process has been applied to many thousands without ill effects but it seems probable that repeated exposures may eventually prove disastrous to those who have been immune up to the present time It is not possible to determine in advance without a patch test, which individuals will suffer toxic reactions In general those with anemias and allergic disturbances were the most vulnerable There is some evidence of group sensitivity having been developed in persons who had a violent response to the first application of thioglycolic acid by previous use of certain depilatories containing an HS radical

In the majority of cases recovery occurs without permanent damage to the liver when the exposure is promptly terminated. In those in which the acid acts as a systemic poison as well as an allergen the first signs of trouble are to be found in the blood count the elevation of the alkaline phosphatase the change in the ratio of free to esterified cholesterol and the appearance of a positive cephalin flocculation test.

Now that this product is being sold in the chain stores, its indiscriminate use will result in an increased incidence of poisonings, many of which are already finding their way to the courts Adequate labeling and understanding of the dangers involved are imperative

620 West 168th Street New York 32

## GAMMA GLOBULIN NOT EFFECTIVE IN PROPHYLAXIS OF EPIDEMIC RESPIRATORY INFECTIONS

HERMAN YANNET M D and JOYCE V DEUTSCH M D
Southbury Conn

During the course of an experiment on the prophylactic value of gamma globulin against infectious hepatitis, an unexpected opportunity occurred to test its value in an outbreak of an influenza-like respiratory infection The explosive nature of the outbreak and the uniformity of clinical and laboratory findings suggested a single etiologic factor presumably a virus, since extensive search for a bacterial agent was unsuccessful Eight samples of serum taken from as many patients about two to three weeks after the acute illness were sent to Dr Charles A Janeway who consented to have them analyzed for influenza A and B antibodies No significant titer of antibodies was found The etiologic factor, unfortunately, is therefore not known

Between Dec 16 and Dec 20, 1945 approximately one third of the inmates (aged 5 to 66 years) of each of twenty-five cottages were injected with gamma globulin The dose varied from approximately 4 cc to 10 cc depending on the body weight There were no significant reactions in the 400 patients injected

Between December 27 when the first case was noted and Jan 10 1946, when the last case occurred a total of 87 cases of an influenza like respiratory infection were seen The illness was characterized by relatively sudden onset of fever (100 to 104 F) mild sore throat, headache malaise vomiting nonproductive cough and signs of mild rhinopharyngitis X-rays of the chest in the more severe cases were indeterminate The white blood cells were either normal or reduced in number ranging from 4 000 to 9 000 the disease when present being primarily in the polymorphonuclear cells Not infrequently large mononuclear cells indistinguishable from those seen frequently in infectious mononucleosis and infectious hepatitis, were encountered The course of the disease was benign with normal temperature by the second or third day and disappearance of signs and symptoms at this time Complete recovery took place in every case without any complications Neither sulfadiazine nor penicillin was used the treatment being symptomatic Of the 87 cases 25 (29 per cent) occurred in the group injected with the gamma globulin Since the injected group represented approximately 33 per cent of the entire population there was no evidence of any protective action of the gamma globulin in this outbreak

During this period there were no cases of infectious hepatitis recorded.

### COMMENT

While the prophylactic use of gamma globulin for influenza like infections has not been reported as far as we are aware its use for other virus infections, such as measles and infectious hepatitis is well recognized That there proved to be no evidence of prophylactic value of gamma globulin for this type of respiratory infection is not surprising It is probable that only for those diseases which confer a permanent immunity will there exist the likelihood of finding protective antibodies in a reasonable concentration in randomly drawn plasma samples Presumably for most of the group of respiratory diseases of unknown viral etiology permanent immunity does not ensue

From the Department of Pediatrics Yale University Medical School New Haven Conn and the Southbury Training School Southbury Conn Major P Havens and Dr D M Horstmann were in charge of the Infectious Hepatitis Study at the Training School.

## SKIN BLISTERS CAUSED BY VESICANT BEETLES

MAJOR WILLIAM B SWARTS
Medical Corps Army of the United States
and
LIEUTENANT JOHN F WANAMAKER
Sanitary Corps Army of the United States

At the beginning of a dermatologic army service in Arkansas, one of us saw soldiers with huge bullae, usually on the legs and neck, which healed with mild antiseptics in about ten days These patients had been involved in activities which took place in fields and woods Previous experience in dermatologic practice in the northeastern part of the United States was of no help in diagnosis

After talking with natives and local physicians while he was stationed in Arkansas, the senior author learned the fact that the skin injuries produced by contact with "blister bugs" was common lay knowledge. The insects were even recognized by many of the outside workers

Chalmers and King [1] described an "epidemic" of blisters caused by vesicant beetles in Khartoum, Egyptian Sudan. Mainly members of the local English colony were affected, who were accustomed to eat in their gardens The authors observed that as long as the insect merely walks over the skin and is not irritated, it does no harm If, however, it crawls down the neck, arms and legs the beetle is annoyed by clothes and exudes a fluid from any part of its body It is their belief that this is a protective mechanism The scattered distribution of the blisters produced is explained by the movements of the insects

The apparent immunity of the Egyptians and natives of Sudan is explained because of their lack of clothes Roberts and Tonking [2] made similar observations on East African natives

Chalmers and King [1] observed that there were no symptoms for twelve to twenty-four hours and as a rule the patient does not remember the insect crawling on him and may be entirely at a loss to account for the blisters. The physician is handicapped in not thinking about this possibility Only 1 of our 3 patients remembered an insect being in contact with his skin.

Comstock [3] describes blister beetles, family Meloidae (Cantharidae) (order Coleoptera) as "of medium or large size. The

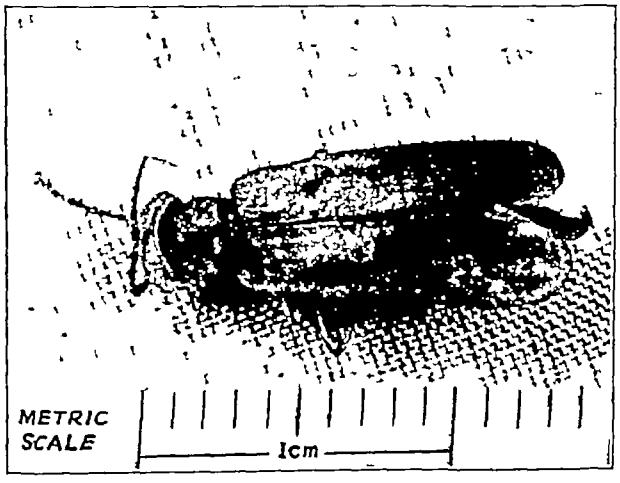



Fig 1—Blister beetle (Epicauta cinerea)

body is comparatively soft the head is broad vertical and sharply narrowed into a neck, the prothorax is narrower than the wing covers, which are soft and flexible, the legs are long and slender, the hind tarsi are four-jointed, and the fore and middle tarsi are five-jointed." Herms [4] further states that they are so named because of their vesicating properties i e., the application of the pulverized bodies or even the simple contact of many species produces a blistering of the skin.

Blister beetles deposit their eggs on the ground. The larvae are active and feed, it is said, in some species, on the eggs



Fig 2 (case 1)—Bullous lesion on nape of neck twenty four hours after contact with blister beetle

of locusts and solitary bees, others are predaceous. They undergo a series of changes not usual to insects, their development being termed hypermetamorphosis, i e, several types of larvae develop before reaching the adult stage. The adults feed on vegetation

More than two hundred species of blister beetles have been found in the United States, the greatest number being confined to the western half of the country One of the common species in the East, the genus Epicauta, colored a glossy deep purple, feeds principally on potato leaves and goldenrod pollen, while the larvae are believed to be parasitic on the eggs of locusts Another common species is of the genus Macrabasis. This beetle measures from 8 to 15 mm. in length, it is black but rather densely clothed with grayish hairs, which give an ashen hue to the upper surface. The Pennsylvania blister beetle, Epicauta pennsylvanica, also is a common species in the East

The Spanish fly, Lytta vesicatorea, is a southern European species of beetle found abundantly, particularly in Spain, during the early summer The collection and preparation of the beetles for medical purposes provide an occupation for many persons for a brief period Collecting and preparing these insects to produce cantharidin requires precautions because of their vesicating properties

It is planned to conduct experiments using both the blister beetle and patch tests with contents of the blister beetle bulla in an endeavor to reproduce the characteristic lesions Unfortunately, neither insects nor patients are available after the onset of cooler weather It will be necessary to postpone these experiments until summer

From the Dermatology Section Medical Service Regional Hospital Camp Joseph T Robinson, Arkansas

1 Chalmers, A. J and King H H Blister Beetles as a Public Nuisance New Orleans M & S J 70 445 (Nov) 1917

2 Roberts J I and Tonking H D Notes on an East African Vesicant Beetle Paedrurus Crebripunctatus Epp., Ann. Trop Med. Parasit. 29 415 (Dec) 1935

3 Comstock J H. An Introduction to Entomology ed 9 Ithaca N Y Comstock Publishing Company 1940 pp 495-498

4 Herms W B Medical Entomology ed 3 New York Macmillan Company 1938 pp. 510-511.

Differential diagnosis includes the skin eruptions ordinarily characterized by bullae, i e pemphigus, dermatitis herpetiformis, erythema multiforme bullosum, dermatitis venenata and bullae produced by thermal and chemical agents

Pemphigus, dermatitis herpetiformis and erythema multiforme bullosum are readily differentiated since the bullae produced by contact with blister beetles usually are healed in approximately ten days while the three bullous diseases mentioned usually have recurrent crops of lesions in various stages of development. The bullae produced by vesicant beetles tend to be at the same stage of development about a day after contact with the insect Another characteristic of these bullae differentiating them from bullous erythema multiforme, is the lack of erythema around the fully developed bullous lesion.

These blister bug bullae can be distinguished from bullous lesions caused by vesicant agents by lack of history of exposure and also by the reaction time of mustard gas and lewisite being respectively two to eight hours and fifteen to thirty minutes Also the configuration of the blister bug bulla is distinctive, being almost perfectly round and symmetrically dome shaped except when lesions coalesce

A bulla indistinguishable from that of the beetle bulla can be produced by the application of a round piece of solid carbon dioxide with sufficient time and pressure to give the desired reaction The configuration of the blister, clear straw-colored blister fluid and lack of an erythematous halo are exactly imitated

REPORT OF CASES

CASE 1.—A man aged 21, seen in the dermatologic clinic May 31, 1945 felt an insect crawling on the nape of his neck while in the fields on the previous day Physical examination revealed a dumbbell shaped bullous lesion as in figure 2 The lesion was filled with clear, straw colored fluid and lacked erythema Complete healing took place in ten days.

CASE 2.—A man aged 35, admitted to the dermatologic ward Aug 3, 1945 complained of large blisters on the lower aspect of the legs, which appeared two days after his organization had camped in a field. He noticed red areas on the lower part of his legs which became large blisters in a few hours Physical examination revealed numerous scattered dome shaped nonerythematous bullae, containing clear, straw colored fluid and

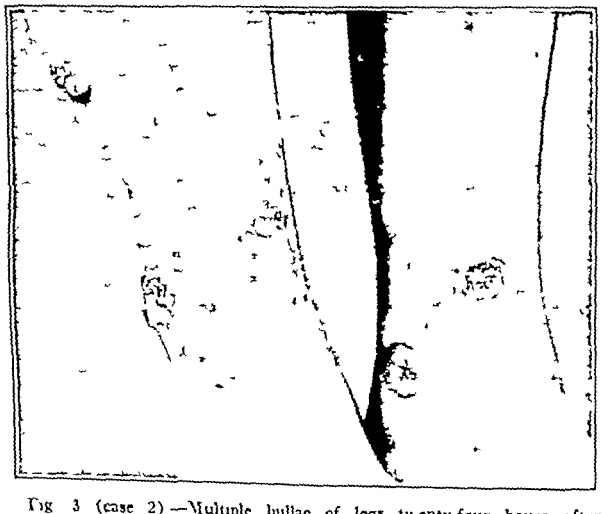


Fig 3 (case 2).—Multiple bullae of legs twenty four hours after exposure to vesicant beetles

varying in size from 1.5 to 5 cm Treatment consisted in removing the roofs of the bullae and applying antiseptics to the raw base Normal epithelium covered the areas in twenty days, and there was no scarring

CASE 3.—A man aged 28 came to the hospital Aug 11, 1945 complaining of blisters on his legs and ankles which had been present for five days One day before the appearance of these blisters he had been inspecting some field military installations Physical examination gave essentially the same results as cited in the 2 previous cases Trimming away the roof of the bullae and applying mild antiseptics to raw areas resulted in completed healing with no scarring in ten days.

The past history revealed that in the previous summer a similar attack was experienced while in the field A diagnosis of 'poison ivy" was made at that time



Fig 4 (case 3).—Blister beetle bullae, duration five days.

COMMENT

Characteristic bullae are produced by contact with blister beetles The possibility of this form of eruption should be kept in mind when one is confronted with a case presenting large bullae usually of the neck or the lower part of the legs and ankles, and occasionally on other exposed areas Characteristically these bullae lack any erythema and are at the same stage of development The cases are more numerous in the southwestern area of the United States and when warm weather prevails The history of exposure to the vesicant beetle is rarely obtained

---

**Everard Home and the Destruction of the John Hunter Manuscripts.**—The name of Sir Everard Home has passed down through the pages of medical history as a byword for apostasy for ingratitude for infidelity to himself, to his family and to science. Virtually every historian or biographer who mentions John Hunter takes pains to emphasize the undeniable fact that the greater part of Hunter's written contributions have been lost to posterity through the folly of his brother-in-law Sir Everard Home, who as his acting executor came into possession of Hunter's manuscripts at his death and who burned them thirty years later Almost without exception, historians have repeated the accusation of William Clift, Hunter's amanuensis, that Home had plagiarized the materials he held in trust and destroyed the papers to cover his own defection, and the basic assumption is commonly accepted that Home's action was deliberate malfeasance.—Oppenheimer Jane M New Aspects of John and William Hunter New York, Henry Schuman 1946

# Council on Industrial Health

## INDUSTRIAL HEALTH CONGRESS

The seventh Annual Congress on Industrial Health will be held in Boston at the Copley-Plaza Hotel September 30 through October 3 under the sponsorship of the Council on Industrial Health of the American Medical Association

The program as in the past will include speakers of national note and is expected to attract hundreds of medical men, nurses, hygienists and in addition legislators industrialists and others interested in the field of health in industry

At a later date further announcements relative to the exact program will be made in THE JOURNAL Because of the importance of the meeting those expecting to attend are urged to make their hotel and transportation plans as early as possible

# Council on Pharmacy and Chemistry

## REPORT OF THE COUNCIL

*The following statement concerning the establishment of the Therapeutic Trials Committee a standing committee of the Council has been adopted by the Council for publication Reprints of this statement which includes forms for submission of proposals for investigation and proposed standard form contract, are available* AUSTIN F SMITH M D Secretary

## THE THERAPEUTIC TRIALS COMMITTEE

Early in 1944 Dr J F Moore proposed to the Division of Medical Sciences of the National Research Council that there be established under its auspices a committee to sponsor and coordinate clinical research on new therapeutic agents He suggested that this committee receive funds from pharmaceutical houses having products deemed worthy of clinical investigation and disburse these funds under contract to competent investigators for the purpose of securing in the shortest time adequate and critical investigation of the therapeutic properties and safety of the new agent After consideration the National Research Council expressed the opinion that the formation and sponsorship of such a committee were not within the scope of its organization, and the proposal of Dr Moore was referred by Dr Lewis H Weed chairman of the Division of Medical Sciences to the American Medical Association for further consideration.

After thorough discussion by the Council on Pharmacy and Chemistry and by the Board of Trustees of the American Medical Association, a committee was appointed to draft a detailed proposal for the establishment of a Therapeutic Trials Committee With the termination of the war it has been possible to proceed with this plan and there follows a statement of the purpose organization and procedure of the Committee

*Purpose*—The Committee has been formed to encourage and aid sound research on medicinal agents and to promote therapeutics through an adequate understanding of the usefulness and limitations of drug products In particular the Committee (on its own decision) will organize impartial clinical trials of biologic and pharmaceutic agents which offer promise in the prevention treatment or diagnosis of disease

The fundamental objective of the Committee is to stimulate progress in the control and treatment of disease through facilitating investigations to establish the usefulness and limitations of diagnostic preventive and therapeutic agents The critical clinical appraisal of such agents and the dissemination of information about them will be accomplished by the voluntary cooperative effort of pharmaceutical manufacturers laboratory investigators clinical investigators and the medical profession

*Organization*—The Therapeutic Trials Committee is a standing committee of the Council on Pharmacy and Chemistry of the American Medical Association The chairman and members are appointed by the Council but they are not necessarily limited to members of the Council

There has been appointed a full time secretary of the Committee under the direction of the Secretary of the Council. Other assistants and special consultants will be appointed as needed The members of the Committee are as follows Members of the Council on Pharmacy and Chemistry are designated by an asterisk

David P Barr M D LL D (1947) New York professor of medicine Cornell University Medical College
Windsor C. Cutting M D (1947) San Francisco professor of therapeutics Stanford University School of Medicine
*E. M K Geiling Ph D M D (1949) Chicago professor of pharmacology University of Chicago
Keith S Grimson M D (1948) Durham N C assistant professor of surgery Duke University School of Medicine
*Robert P Herwick Ph.D M D (1948) Washington D C medical director Food and Drug Administration Federal Security Administration
*Chester Scott Keefer M D (1948) Boston Wade professor of medicine Boston University School of Medicine
*Perrin H Long M D (1947) Baltimore professor of preventive medicine Johns Hopkins University School of Medicine
Joseph Earle Moore M D (1949) Baltimore associate professor of medicine Johns Hopkins University School of Medicine adjunct professor of public health administration Johns Hopkins School of Hygiene and Public Health
*Stuart Mudd M D (1949) Philadelphia chairman of the Committee professor of bacteriology University of Pennsylvania School of Medicine
*W W Palmer M D (1947) New York Bard professor of medicine Columbia University College of Physicians and Surgeons
Ralph M Waters M D (1949) Madison Wis professor of anesthesiology University of Wisconsin Medical School
*W Barry Wood Jr M D (1948) St Louis professor of medicine Washington University School of Medicine

and ex officio

*Morris Fishbein M D Chicago Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
*Austin Smith M D Chicago Secretary of the Council on Pharmacy and Chemistry
*Torald Sollmann M D D Sc Cleveland Chairman of the Council on Pharmacy and Chemistry
Walton Van Winkle Jr M D Chicago Secretary of the Committee

*Procedure*—1 The Committee will initiate or receive from outside sources suggestions regarding problems which offer promise of better means for preventing or curing disease or regarding particular products which are offered for the diagnosis prevention or treatment of disease

Requests for the investigation of theories methods and means for controlling disease may be addressed to the Committee Forms for the purpose of submitting requests to the Committee for clinical trials may be obtained from the Secretary If the Committee deems a project desirable and feasible steps will be taken to interest sponsors and investigators in conducting a cooperative project under Committee sponsorship

2 The Committee will seek and receive and analyze information and suggestions with reference to university departments hospitals research institutes and other suitable agencies for conducting clinical trials with special reference to their fields of particular interest and competence The Committee will welcome information concerning available investigators

3 The Committee will provide a medium whereby investigators interested in particular therapeutic problems may coordinate their efforts and seek advice from others working in the same field

On its own initiative or at the request of one or more investigators the Committee may arrange at a suitable time and place a conference on a therapeutic problem of interest The purpose of conferences will be to provide a mechanism for the prompt exchange of information on problems in which investigation is proceeding rapidly and simultaneously in a number of different centers By such conferences, investigators may compare ideas and coordinate their efforts, thus preventing waste of time and duplication of effort In addition the Committee may arrange for a rapid interchange of information on therapeutic investigations through a central clearing house. It will assist clinical investigators in securing competent advice on the conduct of their investigations

4 When the Committee is convinced that a product or problem merits investigation and knows of a competent

agency potentially interested in the investigation, steps shall be taken toward bringing the two together

If more than one sponsor may be interested in a product, efforts will be made to secure their cooperation by inviting them to participate in the project

5 Before a product shall be subjected to clinical trial, information must be available as to its nature, standardization, pharmacologic actions and toxic effects

Items on which information should be furnished to the Committee are the following

(*a*) Full data concerning the composition of the agent
(*b*) Physical and chemical properties including methods of assay, particularly those applicable to in vivo studies
(*c*) Pharmacology (actions toxicity and fate)
(*d*) Results of any preliminary clinical studies
(*e*) Conditions for which the drug is believed to be of value
(*f*) Proposed dosage and method of administration
(*g*) Any other relevant information

6 The Committee shall be under no obligation to initiate or participate in any investigation unless the Committee deems such investigation promising and feasible

7 The Therapeutic Trials Committee may serve as an agency whereby the sponsors of a problem or product are brought in contact with suitable hospitals or testing agencies so that an independent contract may be concluded in each instance between the sponsors and the agencies conducting the clinical trials The Committee will subscribe to such contracts provided it is satisfied that the plan of investigation, financial arrangements, means of reporting and other factors are such as will insure an adequate and unbiased clinical trial On request suggestions regarding the technic of the proposed trial will be offered.

Prospective investigators will be requested to submit to the Committee as part of a proposed contract, their general views on the following

(*a*) A proposed plan of investigation
(*b*) An estimate of the cost of the investigation
(*c*) An estimate of the time required to complete the investigation
(*d*) An estimate of supplies or special equipment which they would wish to be supplied by the applicant
(*e*) A statement of the direct contacts they wish to have with the sponsor
(*f*) A statement as to the frequency with which they wish to make progress reports to the Committee.

It is understood that these statements are only tentative.

The Committee will not undertake to direct the method by which an investigator shall pursue a problem If a proposed plan of investigation appears unsatisfactory to the Committee, the investigator will be given the opportunity to modify his plan If he does not care to do so the problem may be offered to other investigators The Committee will if requested by the investigator offer advice regarding the proposed plan of investigation but it desires to assure at all times the freedom of the investigator

8 If the contract so provides the investigator may avail himself of the cooperation of the sponsors in supplying technical information related to the investigation

9 Reports shall not be offered for publication until reviewed by the Committee Investigators are free to publish their results in any manner they see fit However no mention of the Therapeutic Trials Committee may be made in any publication unless the report has been specifically authorized by the Committee

If after consultation between the Committee and the investigator publication appears desirable the investigator will be authorized to publish the results under his own name in a suitable professional periodical as a report to the Council on Pharmacy and Chemistry Before the report is published, the sponsor will be informed confidentially, of the results

10 The mutual obligations shall be considered as completed with the termination of the individual contract and further investigation with the cooperation of the Committee must be subject to further contracts

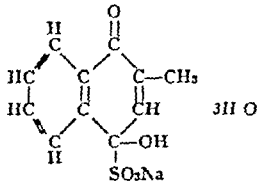
## NEW AND NONOFFICIAL REMEDIES

*The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies A copy of the rules on which the Council bases its action will be sent on application*

AUSTIN SMITH, M D, *Secretary*

---

**MENADIONE SODIUM BISULFITE** — Menadione Bisulfite.— Contains not less than 49 per cent of menadione ($C_{11}H_8O_2$)"—U S P—M W 330.29 Menadione Sodium Bisulfite has the following structural formula




It may be prepared by the interaction of menadione and sodium bisulfite to form the addition product

For description and standards see the U S Pharmacopeia XII, First Bound Supplement, under Menadione Sodium Bisulfite and Menadione Sodium Bisulfite Injection

*Actions and Uses*—Menadione Bisulfite is used for essentially the same conditions as is menadione, which possesses the physiologic properties of vitamin K. *Unlike menadione* it is soluble in water, and stable aqueous solutions may be prepared

*Dosage*—It may be administered subcutaneously, intramuscularly or intravenously, the average daily dose being 0.5 to 2 mg During administration of the drug the prothrombin level of the blood should be followed especially when there appears to be need of an additional dose during a twenty-four hour period.

THE WM S MERRELL CO, CINCINNATI

**Tablets Menadione Bisulfite** 3 84 mg

**Solution Menadione Bisulfite** 3 84 mg **per cc.** 1 cc. ampuls Each cubic centimeter contains the equivalent of 2 mg of menadione, stabilized with 0 05 per cent sodium bisulfite.

U S Patent number 2 331 808

**CITRATED NORMAL HUMAN PLASMA** (See New and Nonofficial Remedies 1945 p 535)

The following additional dosage form has been accepted

SAMUEL DEUTSCH SERUM CENTER, MICHAEL REESE HOSPITAL, CHICAGO

**Normal Human Plasma (Citrated)** 60 cc. bottles Phenyl mercuric borate 1 15,000 is used as a preservative contains dextrose in final concentration of 5 per cent.

**PROCAINE HYDROCHLORIDE** (See New and Nonofficial Remedies 1945 p 97)

The following dosage form has been accepted

BARRY BIOLOGICAL LABORATORY, DIVISION OF BARRY ALLERGY LABORATORIES, INC, DETROIT

**Solution Procaine Hydrochloride 2%** 30 cc. bottles Each cubic centimeter contains procaine hydrochloride 20 mg, sodium chloride 4 4 mg sodium bisulfite 1 0 mg and 0 5 per cent chlorobutanol

**ESTROGENIC SUBSTANCES** (See New and Nonofficial Remedies 1945 p 440)

The following additional dosage form has been accepted

AYERST MCKENNA & HARRISON, NEW YORK

**Premarin *(Liquid)*** 120 cc. bottles Each 4 cc. contains 0 625 mg of estrogenic substances (water soluble) and 12 5 per cent alcohol

**PENICILLIN** (See New and Nonofficial Remedies 1945, p 214)

The following additional dosage forms have been accepted

THE WM S MERRELL CO, CINCINNATI

**Penicillin Sodium** 200 000 units

E R SQUIBB & SONS, NEW YORK

**Penicillin Sodium** 200 000 and 500,000 Oxford unit vials

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - - Chicago 10, Ill.

Cable Address - - - Medic, Chicago

Subscription price - - Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY JUNE 15 1946

## THE POOLING OF HEALTH AGENCIES

Late in 1945 a report was issued by the National Health Council recommending complete reorganization of the nation s 20 000 voluntary health agencies under a 'strong central agency' and the pooling of their fund raising appeals. The report, commonly called the Gunn-Platt report, was prepared by Selskar M. Gunn, C P H and Philip S Platt Ph.D under a grant from the Rockefeller Foundation. Apparently $100 000 was spent on this study which required three years The conclusions urged among other things the establishment of an effective health council in every community representing a voluntary affiliation of all local health organizations The report deplored the lack of central direction and planning and duplication of effort, it urged that present separate money-raising appeals be coordinated into a nation-wide campaign and asked that the two agencies with the most effective money-raising devices—the tuberculosis and infantile paralysis groups —broaden their fields of interest and service. The statement was acclaimed by many of the smaller philanthropic organizations and received the encomiums of many full time public health officials welfare workers and representatives of socialistically minded organizations These alinements in behalf of the objectives of the Gunn-Platt report might well have indicated to the medical profession the position that it should take with regard to the major recommendations of this document

In this issue of The Journal Dr Donald B Armstrong, using as a text the quotation from Dostoyevsky *'In the end they will lay their freedom at our feet and say to us 'Make us your slaves but feed us,"* calls attention to some of the dangers inherent in the Gunn-Platt proposals Dr Armstrong is convinced that the wish for a merger of philanthropic agencies such as is proposed, is based on erroneous concepts and is potentially destructive of all volunteer health agencies Unfortunately the American love for system efficiency, mass action and bigness has misled many persons who studied the Gunn-Platt report too casually into the belief that a superorganization of voluntary health agencies with a single national collection and a board for allocating the distribution of funds would result in improved effectiveness and extraordinary economy Dr Armstrong calls attention to the assumption in the report that communization of efforts and resources in our country is inevitable and that seemingly the world wide trends toward socialization must be followed here The report argues fallaciously that socialization in medicine and public health is inevitably coming on a national scale as regards official activities and that therefore parallel development is essential in the voluntary field Moreover Dr Armstrong indicates that 'a clever radical lay leadership in the American Public Health Association, for instance has unfortunately succeeded in putting this association on record as supporting the national socialization of medical care even though most of its members are naturally individualistic medical men"

Particularly important are the constructive suggestions made by Dr Armstrong for the maintenance of voluntary effort and private initiative in the field of voluntary health agencies 'Any soundly American organization, he says, "will want to maintain the independence nationally of the major voluntary movements but will at the same time wish to encourage a cooperative federation or conference procedure encompassing all the important national health and medical agencies" Certainly cooperation without destruction of individuality is the American way

## EFFECTS OF ATOMIC BOMB EXPLOSIONS AT HIROSHIMA AND NAGASAKI

A distinctive feature of the atomic bomb according to Captain Shields Warren and his co-workers,[1] is the large amount of radiant energy that it produces The chief biologic effects include the results of heat, producing thermal injuries of the flash-burn type, and results of exposure to x-rays This radiant energy was produced in an instant Combined with and modifying and obscuring the thermal and radiation injuries are the more usual effects of the conventional types of bombs Air-blast injury was usually of the secondary type due to flying debris or impact against fixed structures producing fractures and ruptures of viscera. The thermal effects were striking in their intensity considering the brevity of the period during which they occurred Clothes, wisps of hair and even an arm gave protection to the part of the body it shadowed The intensity of the heat and the instantaneous character of the flash are well brought out by photographs which show the profile of blades of grass in relief against the burned background of a board bunker The instantaneous and intense radiant heat burned the wood before the grass had time to wither or wave

1 Warren Shields and others Notes on Observations and Studies Made on the Effects of Atomic Bomb Explosions at Hiroshima and Nagasaki Bumed News Letter 7 No 9 April 26 1946.

The characteristic clinical course manifested by persons who suffered from radiation injury as a result of the atomic bomb explosions included weakness, anorexia, fever and often death and appeared usually within forty-eight hours These effects would parallel experimentally induced changes in animals and represent the syndrome of radiation sickness carried to an extreme degree The delayed effects represented injury of the irradiation sickness type These patients presented, in addition to weakness, anorexia and weight loss, and diarrhea

Warren's group studied 800 cases hospitalized and about 13,000 made available for casualty survey In the cities and villages around Nagasaki and Hiroshima the victims of radiant energy were easily apparent by the characteristic flash-burns and by the frequent occurrence of epilation There were three chief groups of symptom complexes resulting from damage to hemopoietic tissue The first was the leukopenic group in which infection, particularly a Ludwig's type of angina, was the chief characteristic The great bulk of leukopenic deaths occurred during the first three weeks after the bombing The leukocytes in the circulating blood were destroyed at the same time at which the hemopoietic tissue was damaged so that white blood cell counts as low as 200 per cubic millimeter were found in the first few days The second was the thrombocytopenic group From three to five weeks after the bombing a considerable number of hemorrhagic deaths occurred as a result of the thrombocytopenia caused by radiation damage to the megakaryocytes of the bone marrow Some persons had massive hemorrhages from various body orifices At necropsy hemorrhages filling the pelvis of the kidney, multiple mucosal hemorrhages of the stomach and multiple diffuse hemorrhages in the meninges or even in cerebral substance were frequently seen The third was the anemic group Those with serious damage to the bone marrow who weathered the first few weeks showed later manifestations of anemia with red blood cell counts in some instances dropping to a million or below Some bone marrows, as shown by sternal biopsy, were extremely hyperplastic, while others were aplastic The gonadal effect was much more prominent in the testis than in the ovary Spermatogenesis was suppressed, and frequently the tubules were represented only by Sertoli cells and thickened membranes The interstitial cells appeared to be undamaged The question of injury from residual radioactivity was of major importance Persons who had entered the bombed area soon after the explosion and had remained there were without deleterious effects

The treatment given by the Japanese was inadequate, as were their hospital facilities Blood transfusions were not used Little more than supportive treatment was given Repeated blood transfusions and penicillin to control infection during the leukopenic period should have materially reduced the number of deaths

## CERTIFICATION OF SPECIALISTS IN ALLERGY

Announcement was recently made by the American College of Allergists that a division called "The American Society of Certified Allergists" had established an "American Board for the Certification of Allergists" This "board" announces certain requirements which must be fulfilled for certification in this field including provisions for a "founders group" to be admitted without examination Provision is made also for the admission of others in exceptional instances to certification without examination

The American College of Allergists which is sponsoring this new movement, should not be confused with the American Academy of Allergy, the two groups are quite unrelated The new proposal for certification is entirely independent of the well established procedures for certification by the recognized American boards in the various specialties The recognized boards are sponsored by the national societies in each specialty and the corresponding section of the American Medical Association They were organized after careful review of the advisability and need for the establishment of the boards They have been recognized and approved by the Council on Medical Education and Hospitals of the American Medical Association and also by the Advisory Board for Medical Specialties Certification by a regular board is indicated in the directory of the American Medical Association by an appropriate symbol Since this new proposal for certification in allergy has not been considered by the Council on Medical Education and Hospitals of the American Medical Association or the Advisory Board for Medical Specialties, recognition of its certification will not appear in the Directory of the American Medical Association or in the Advisory Board's Directory of Medical Specialists Neither has any provision been made for recognition of the new board in any of the official publications dealing with certification of specialists There is now in operation an adequate mechanism for the regular certification in allergy as a sub-specialty of the American Board of Internal Medicine as well as the American Board of Pediatrics

Any new group of specialists seeking recognition as a regular board should proceed through these accepted channels

1 The proposal should be presented to the Advisory Board for Medical Specialties and to the Council on Medical Education and Hospitals of the American Medical Association

2 Jointly these two bodies consider the proposal, including the need for a new board and the adequacy of the educational program and facilities for the proposed certification

3 Official approval of the new board by the American Medical Association follows on approval by the Council on Medical Education and Hospitals on recommendation of the Advisory Board for Medical Specialties

4 Official recognition of the board is indicated by listing the specialty in the "Essentials for Approved Examining Boards in Specialties," indicating certified specialists with an appropriate symbol in the Directory of the American Medical Association and in the Advisory Board's Directory of Medical Specialists,

and admission of the board to membership in the Advisory Board for Medical Specialties

5 *Institutions* seeking residency approval in the new field make application to the Council on Medical Education and Hospitals

6 The Council conducts an inspection of the institution and prepares a report which is submitted to the new American board

7 Approval of the educational institution occurs only by conjoint action of the Council and the American board involved

The phenomenal growth of certification in the specialties is a clear indication of the need for this protection of the public and the profession in the field of specialty practice The established procedures have operated unusually well and there is no indication that there is need for a departure from these procedures in allergy or in any other field It is particularly unfortunate that this new group has incorporated the terms "American Board" and Certification" in its title, since these terms have become identified with approved boards and their programs This terminology is certain to mislead young physicians who seek to become recognized as specialists in this field

## Current Comment

### WORLD DRUG NEEDS

In a recent article in the *Foreign Commerce Weekly* (May 11, p 3) T W Delahanty urges that thought be given to the great potential drug market in foreign countries Achievements during the war period seem to open the way for further salutary progress in supplying foreign demands for our medicinals—if we proceed with vigor and wisdom toward carefully planned goals" There is no doubt that American-made drugs gained new eminence during the past few years and there is no doubt that an enormous demand for drugs exists Whether this demand will be met by manufacturers in this country will depend largely on a thorough appreciation of the uniqueness of each area, its population and the habits of its people As has been pointed out Axis drugs are still considered standard remedies in many uninformed areas of the world despite military, lend-lease and cash shipments to the United Nations Furthermore, there is need for considerable education of the prescriber, dispenser and consumer if relatively unfamiliar drugs are to become commonly accepted items In 1945 our foreign drug sales were $116,000,000, almost double the expected volume When divided according to type of product, this sum consists of about 59 million dollars for prescription medicinals, 29 million for vitamins and almost 28 million for articles for self medication Thus, unquestioned opportunity awaits those interested in and equipped for servicing the world's health needs But, because of the competition that is certain to develop, every advantage which may now be possessed by this nation must be pressed and every opportunity judiciously developed

### THE THERAPEUTIC TRIALS COMMITTEE

The Council on Pharmacy and Chemistry has established the Therapeutic Trials Committee to aid in the cooperative evaluation of new measures of therapy On page 596 is a statement of the objectives, organization and procedure of the committee Even a casual reading will reveal the emphasis on the value of cooperation in modern research The benefits of coordinated research programs have been appreciated by a few scientific investigators for a long time, but apparently a catastrophe in the form of a global war was needed to make practical a plan The history of the formation of the Therapeutic Trials Committee seems to be a favorable omen for its success A formal proposal was made by a subcommittee of the National Research Council, the Board of Trustees of the American Medical Association and the Council on Pharmacy and Chemistry immediately responded to the proposal with the formation of the committee, and manufacturers and research workers in medical schools, hospital clinics and elsewhere enthusiastically asked for and promised participation Just where this new venture of the Council will lead is for the future to determine The activity is carefully planned all the way, as is characteristic of the Council Undoubtedly changes will occur as experience is gained, but progress is made only when action is taken Any step that contributes to the welfare of the population and to the medical armamentarium of the physician is real progress Research workers and manufacturers of articles of importance to public welfare should study carefully the plans of the committee Such study will certainly elicit enthusiastic support

### SYMPOSIUM ON MEDICINE AND LAW

Announcement has recently been made of the forthcoming second symposium series on Scientific Proof and Relations of Law and Medicine under the editorship of Hubert Winston Smith, M D , LL.B , professor of legal medicine, University of Illinois College of Law As was the case in the first series, in 1943, arrangements have been made for the publication of the papers comprising the second series, seventy in number, in approximately twenty-five medical and legal journals A master index has been prepared to enable those interested to know in what journals the individual papers are published, this index will include also citations to the journals in which the discussions of the 1943 series appeared[1] Papers comprising the present series are arranged in six groups, exclusive of certain prefatory items, as follows Legal and Scientific Aspects of Criminal Law and Criminology, Relations of Civil Law and Clinical Medicine, Scientific Crime Detection, Modes and Mechanisms of Scientific Proof, Medicolegal Problems of the Physician Arising in the Practice of Medicine, and Sociomedicolegal Problems This symposium is an ambitious and intelligent effort to clarify some of the problems in which medicine and law have common interests and to illustrate the breadth of the field in which such problems arise

1 Interested readers can obtain this index as long as the supply lasts for twenty cents from Dr Hubert Winston Smith Professor of Legal Medicine College of Law University of Illinois Urbana Illinois

# MEDICINE AND THE WAR

## ARMY AND NAVY

### JOINT ACTION TO RELIEVE SHORTAGE OF MEDICAL AND DENTAL OFFICERS

The War and Navy departments have announced joint action taken to relieve a very serious shortage f medical and dental officers which now exists in the combined requirements of the Army, Navy and Veterans Administration

Regardless of date of entry on active duty, only a two year period of service will after July 1 be required of all Army Medical Corps officers, including graduates of the Army Specialized Training Program except critically needed specialists A two year period of service will be required of all Navy graduates of the Navy Medical V-12 Training Program who after March 1, 1946 were or will be ordered to active commissioned duty on completion of internship Navy doctors already separated will not be recalled Under the Army s new two year policy, it is estimated that approximately sixty days after July 1 will be required to complete the release of approximately 3,000 army doctors affected by the change

By this action the requirements both of the Army and of the Navy can be met and in addition the Army can make available to the Veterans Administration approximately 1,000 badly needed medical officers and the Navy about 500

In order to meet the minimum requirements of the Army and Navy for dentists, and to establish comparable discharge criteria for the two services, the War and Navy departments have agreed that all dental officers partially or wholly assisted in their education by the federal government in the A S T P and the V-12 program and now on active duty on completion of such education will for the time being be released on completion of three years of commissioned active duty service Navy dentists already separated will not be recalled to active duty The length of service required for army dentists now on duty other than A S T P graduates has been reduced from thirty nine to thirty-six months effective immediately

The Navy will shortly make available to the Army approximately 800 dental officers When this transfer is completed, the period of service required of all dental officers will be further reduced Before discharge requirements can be reduced to two years for both services the Army will require additional dental officers To meet this need Selective Service has been asked to procure 1 500 young dentists who are being accepted with the understanding that no more than two years of service will be required from them

Transfers of dental officers from the Army or Navy to the Veterans Administration will not be required.

It should be noted that extension of the period of service required for navy doctors and dentists applies only to those whose education was subsidized by the federal government in the V-12 program or the A S T P

## ARMY

### ARMY AWARDS AND COMMENDATIONS

#### Colonel Franklyn A Rice

The Legion of Merit was recently awarded to Col. Franklyn A Rice, Cleveland, for 'his superior performance of duty as chief of the surgical service, Billings General Hospital, from March 25, 1943 to Dec. 3, 1945" The citation stated that his outstanding ability as supervisor of the surgical service and as an operating surgeon has been a tremendous contribution to the success of Billings General Hospital His surgical judgment and his capacity for achievement have been an inspiration to all associated with him" Colonel Rice is now chief of surgical service at the Regional Hospital, Fort Knox, Kentucky He graduated from the University of Wooster Medical Department, Cleveland, in 1909 and entered the service Aug 11, 1942

#### Lieutenant Colonel Milton W Erdle

The Legion of Merit was recently awarded to Lieut Col Milton W Erdle, Frankfort Ind., for exceptionally meritorious service as an Army Air Forces post surgeon in the United Kingdom from Aug 11, 1943 to Dec. 8, 1944 In southern England, during intense V bomb attacks in 1944, Colonel Erdle devised special equipment and organized and trained special medical surgical teams which cared for American casualties of these bombings and also rendered assistance to British officials in caring for civilian casualties Dr Erdle graduated from Indiana University School of Medicine, Indianapolis, in 1936 and entered the service Jan 5, 1941

#### Lieutenant Colonel Jean S Felton

The Army Commendation Ribbon was recently awarded to Lieut. Col Jean S Felton, Knoxville Tenn, for commendable service in the port surgeon s division San Francisco Port of Embarkation from Jan 15 1944 to June 30 1945 ' The citation accompanying the award directed attention to the fact that 'his tireless energy initiative intelligent and practical insight into the industrial activities, as evidenced by his development and execution of the outstanding industrial medical program of the San Francisco Port of Embarkation, has reflected great credit, not only on himself and his organization, but also on the army as a whole." Dr Felton graduated from Stanford University College of Medicine, San Francisco, in 1935 and entered the service Dec 15, 1940

#### Lieutenant Colonel Jerry O Crist

Lieut. Col Jerry O Crist, formerly of Centerburg Ohio, and now at Wakeman General Hospital, Camp Atterbury, Indiana, was recently authorized to wear the Army Commendation Ribbon by direction of the Secretary of War The citation reads that he 'accomplished with notable distinction his assignments as commanding officer of Post Hospital, Camp Breckenridge, Kentucky, from Oct. 6, 1942 to June 18, 1944 Exhibiting outstanding initiative, judgment and attention to duty and professional skill, Lieutenant Colonel Crist has brought commendation to his profession and this command." Dr Crist graduated from Ohio State University College of Medicine, Columbus, in 1931 and entered the service Oct 15, 1940

#### Colonel Benjamin Simon

Col Benjamin Simon, Quincy Mass, was recently awarded the Legion of Merit for his work as chief of neuropsychiatry because he 'effectively organized and trained the personnel of this service from its activation. By his able supervision and direction a high degree of efficiency was achieved in the care and treatment of many thousands of neuropsychiatric patients" Dr Simon was also awarded the Army Commendation Ribbon. He graduated from Washington University School of Medicine, St Louis, in 1931 and entered the service April 19, 1942

#### Brigadier General William A Hagins

The Distinguished Service Medal was recently awarded to Brig Gen. William A. Hagins Eighth Service Command surgeon Dallas Texas for his work in providing "an efficient, smoothly functioning medical service during military operations in the Philippines and in overcoming 'the many threats to the health of both combat and service troops" General Hagins graduated from the University of Georgia School of Medicine, Augusta, in 1914 and entered the service in 1917

# MEDICAL OFFICERS RELEASED BY THE NAVY

## NAVAL RESERVE MEDICAL OFFICERS RECOMMENDED FOR RELEASE FROM ACTIVE DUTY

### Alabama

| | |
|---|---|
| Buerger, Claude L Jr | Mobile |
| Chenoweth Beach M Jr | Birmingham |
| Daly Edward P | Birmingham |
| Gamble, Harold S | Headland |
| Griffin, George W | Birmingham |
| Hope, John C Jr | Mobile |
| Norvell, Lester R. Jr | Tuscaloosa |
| Stephenson Robert H | Brantley |
| Tucker William C | Dixiana |
| Ward James K | Birmingham |

### Arkansas

| | |
|---|---|
| Agar John S | Little Rock |
| Barker Ernest M | Booneville |
| Brett, William H. | Little Rock |
| Champion, Jess P | Little Rock |
| Cooper James O | Monticello |
| Dwiggins Jack H | Little Rock |
| Ferguson, Frederick F | Nashville |
| Hardgrave, George L Jr | Clarksville |
| Henry Robert L Jr | Little Rock |
| Riley, Winston E. | Eudora |
| Webb, James J | Blytheville |

### Colorado

| | |
|---|---|
| Heebner Robert A. | Estes Park |
| Lucas Joseph T Jr | Englewood |
| Milliken, Ralph M. | Whittier |

### Delaware

| | |
|---|---|
| Merscher Walter F | Wilmington |

### District of Columbia

| | |
|---|---|
| Castell Richard B | Washington |
| Cromer Jeremiah K | Washington |
| Hill Charles F | Washington |
| King, Allan E | Washington |
| Klotz, Ben | Washington |
| Lyddane, Eugene S | Washington |
| Mundell Benjamin J | Washington |
| Saidman Aaron G | Washington |

### Florida

| | |
|---|---|
| Bell Bernard T | Coral Gables |
| Byford, William H. | Homosassa Springs |
| Firestone, Henry A | Miami |
| Flynn Jack D | Tampa |
| Higginbotham, Samuel R. Jr | Tampa |
| Kennedy Sidney G Jr | Pensacola |
| Lane, Wilder S | Jacksonville |
| Lettner Elmer E | Jacksonville |
| McConnell Whitman H. | St. Petersburg |
| Pilkington, Joseph W | St. Petersburg |
| Sealey Romero M | Tallahassee |
| Shepard Vitol S | Palm Beach |
| Sory, Curtis H | Fort Lauderdale |
| Williamson Charles V | Miami |

### Georgia

| | |
|---|---|
| Barnett, Stephen T Jr | Atlanta |
| Benson, Marion T Jr | Atlanta |
| Bryson Eugene H | Augusta |
| Calhoun, William C | Macon |
| Chapman John F | Atlanta |
| Davis, Floyd E. | Augusta |
| Dubban Asa D | Sandersville |
| Goldsmith, Lauren H | Athens |
| Holmes Francis H | Milledgeville |
| Howard, Henry L | Savannah |
| Howard Marcus L. | Athens |
| Hydrick Peter | College Park |
| Jacobson Jacob R | Chickamaugal |
| Jones, Charles S | Atlanta |
| Knight, Arthur M. Jr. | Waycross |
| Legg Quentin J | Edison |
| Letton Alva H | Atlanta |
| McElroy Joseph D | Atlanta |
| Norris Jack C | Atlanta |
| Parker Joseph L Jr | Waycross |
| Richardson Sterling H. | Atlanta |
| Upchurch Wilborn E. | Atlanta |

### Indiana

| | |
|---|---|
| Blackburn Erwin | South Bend |
| Bucher Earl C | Seymour |
| Campbell Richard J | Indianapolis |
| Dickens Karl L. | Martinsville |
| Fouts Joseph R. | Albany |
| Gerding William J | Fort Wayne |
| Hawk, Edgar A | New Palestine |
| Kenney, Francis D | Hammond |
| Kuehne, Clem K. Jr | South Bend |
| Modisett Jackson W | Rosedale |
| Osborn, William N | Syracuse |
| Rivers, Glynn A. | Muncie |
| Schappell Arthur W | Indianapolis |
| Twyman Allen H | East Chicago |
| Weber John R. | Fort Wayne |

### Iowa

| | |
|---|---|
| Amick Perry P | Sac City |
| Blumgren John E | Logan |
| Carney Robert G | Iowa City |
| Fritz James M | Dubuque |
| Graham Duncan G | Sioux City |
| Hart, Joseph T | Des Moines |
| Irish Thomas J | Forest City |
| McNamara Robert J | Anamosa |
| Mahin Harry P | Washington |
| Mason Robert P | Wilton Junction |
| Odell, Lester D | Iowa City |
| Overmiller Wilbur C | Parry |
| Porter Richard C | Des Moines |
| Standefer Joe M | Tama |
| Walker Thomas G | Riceville |

### Kansas

| | |
|---|---|
| Adams Austin J | Wichita |
| Bice Francis J | Plainville |
| Blake Clyde D Jr | Hays |
| Brooks Dean K | Topeka |
| Cooper Arthur E | Logan |
| Jay, Alan R | Wichita |
| Lamborn Howard M Jr | Leavenworth |
| Lathrop John H | Kansas City |
| Laury David G | Ottawa |
| McCoy Charles T | Wichita |
| Mooney, Justin L | Kansas City |
| O Donnell Harry E | Junction City |
| Peck, James H A Jr | St. Francis |
| Preston Ralph R | Topeka |
| Riederer Robert E | Rozel |
| Shrader Charles D | Kansas City |
| Walsh Eugene A | Herndon |
| Wise, George W Jr | Topeka |
| Withers Martin S | Clay Center |

### Kentucky

| | |
|---|---|
| English Louis C | Louisville |
| Greene John F | Louisville |
| Gudex Thomas V Z | Louisville |
| Hogg Stephen P | Jackson |
| Love Jesshill | Louisville |
| Marshall Thomas M | Frankfort |
| Oldham, William J | Owensboro |
| Olney Robert B | Lexington |
| Pearlman Reuben C | Louisville |
| Runyon Leon I | Lexington |
| Skewis John E | Louisville |
| Steele James P | Louisville |
| Stinnette Kenneth L | Louisville |
| Stites James R | Louisville |
| Stith James B | Brandenburg |

### Louisiana

| | |
|---|---|
| Corales Richard H Jr | New Orleans |
| Danton, Bernard F Jr | New Orleans |
| Durant, Leland P | New Orleans |
| Frederic Gerard J | New Orleans |
| Joseph Gerald F | White Castle |
| Keller Theodore C | New Orleans |
| Landry Rudolph M | New Orleans |
| Lilly Charles O | New Orleans |
| Moch Joseph J. | Lake Charles |

### Louisiana—Continued

| | |
|---|---|
| Redding John O Jr | New Orleans |
| Reuter Frederick L | New Orleans |
| Saint Charles L | Elizabeth |
| St. Germain Ellis L. | Breaux Bridge |
| Spizer, David | New Orleans |

### Maine

| | |
|---|---|
| Amrein Harold C | Island Falls |
| Clapp Waldo A | Lewiston |
| Hall, Walter L. H | Oldtown |
| McCann Eugene C | Portland |
| Ohaneson Edward M | Portland |
| O Meara, Edward S | Ellsworth |
| Provost Pierre E | Augusta |
| Sapiro Howard M | West Scarboro |

### Maryland

| | |
|---|---|
| Barthel Robert A Jr | Catonsville |
| Billingsley, William K. Jr | Chevy Chase |
| Christhilf Stuart M Jr | Ridewood |
| Cohen, Jonas H | Baltimore |
| Elam, James O | Baltimore |
| Goldstein Eugene O | Baltimore |
| Jerardi Joseph V | Baltimore |
| Kammer William H | Baltimore |
| Kohn Walter | Baltimore |
| Kolodner Louis J | Baltimore |
| Krepp Martin W Jr | Baltimore |
| Mitchell, George W Jr | Baltimore |
| Morris Frank K. | Baltimore |
| Murdock, Harry M | Baltimore |
| Peacock, Roy M | Baltimore |
| Russell, John A | Avondale |
| Sevcik Charles V | Baltimore |
| Starr Robert R | Princess Anne |
| Wilder Joseph R. | Baltimore |

### Massachusetts

| | |
|---|---|
| Barrett, Thomas G | Marblehead |
| Bartol George M | Wellesley Hills |
| Beakey, John F | Cambridge |
| Breed Frederic B | Cambridge |
| Doret Stanley A | Salem |
| Drake, Ellery T | Boston |
| Drapeau Raoul L | Dracut |
| Holleran Harold J | Westfield |
| Hollis Charles H | Andover |
| Hurlburt Alton L | East Bridgeport |
| McDonald Francis C. | Concord |
| McGoldrick, Louis G | Worcester |
| O Connell, Thomas L | Belmart |
| Pekala Stanley J | Pittsfield |
| Rowley Harold F | Harwich Port |
| Saltzman Charles | Harding |
| Sesen Harold M | Lynn |
| Silverstein Charles | Dorchester |
| Smith Richmond W Jr | Walpole |
| Sostek Samuel B | Malden |
| Stanton Richard H | Newton |
| Tenney, Benjamin Jr | Boston |
| Tilley Robert F | Boston |
| Tucker Arthur S | Boston |
| Ward, John L. | Medford |
| Webster Andrew G II | Newton Center |

### Mississippi

| | |
|---|---|
| Beall Lawrence L | Cleveland |
| Brackin Thomas T Jr | State College |
| Cunningham Robert E Jr | Jackson |
| Griffin David W | Meridan |
| Shands Robert E. | New Albany |
| Spencer James L. Jr | North Carrollton |

### Missouri

| | |
|---|---|
| Ackerman Albert A | St. Louis |
| Bailey Frank A Jr | Webster Grove |
| Ballard Volney B | Kansas City |
| Brumm, Harold J | St. Joseph |
| Budke, Robert J | St Charles |
| Canty Eugene J | St. Charles |

# MEDICAL OFFICERS RELEASED BY THE NAVY

### Missouri—Continued

| | |
|---|---|
| Coates Thomas A | St Louis |
| Cooper, John M | Lees Summit |
| Cummins Walter Jr | Kansas City |
| Delano, James G | Jefferson City |
| De La Torre John J | Lemay |
| Dwyer, Frank X | Kansas City |
| Edele, Eugene H | St Louis |
| Everist Bruce W Jr | Gower |
| Fitzgerald William M | Creve Colur |
| Gainey Harold L | Kansas City |
| Johnson, Mitchell D | St Louis |
| Knight John S | Kansas City |
| Lahey Marion E | St Louis |
| Myers John S | Kansas City |
| Robertson Edwin N Jr | University City |
| Schoen Fredric L | St. Louis |
| Soule Samuel D | St Louis |
| Sullens William E Jr | Columbia |
| Tomlinson William L | Fornfelt |
| Trigg Joseph F | University City |
| Watkins Linn | Farmington |
| Webb, Leslie R Jr | Springfield |

### Montana

| | |
|---|---|
| Downing Charles F | Brockway |
| Harper, Robert D | Sidney |
| Hurly, John T | Glasgow |
| Marks, John E | Whitefish |
| Wier Joseph J | Roundup |

### Nebraska

| | |
|---|---|
| Alliband George T | Omaha |
| Altman Richard F | Omaha |
| Bulawa, Francis A. | Omaha |
| Carrig Milton H | Bloomfield |
| Finegan, James F | Omaha |
| Jackman Herbert S | Omaha |
| Jones, Harold W | Ponca |
| Kerns Thomas A | Auburn |
| Kostal Otto A | Hastings |
| Luce Roscoe P | Fairbury |
| Meier Duane A | Lincoln |
| Morris William E | Omaha |
| Richards Charles E | Franklin |
| Sanders, Wilfred N | Holdrege |
| Skokan William | Niobrara |
| Slattery Robert V | Omaha |

### Nevada

| | |
|---|---|
| Becker John C | Reno |
| Campbell William A. | Lincoln |
| Slavin Hale B | Las Vegas |

### New Hampshire

| | |
|---|---|
| Brooks Randall H | Colebrook |
| Crehan Joseph P | Berlin |
| Machaj Stanley W | Portsmouth |
| Teitelbaum Abraham D | Derry |

### New Jersey

| | |
|---|---|
| Scott, Kenneth H Jr | Plainfield |

### New Mexico

| | |
|---|---|
| Connor Wesley O Jr | Albuquerque |
| Rice Paul M | Albuquerque |

### New York

| | |
|---|---|
| Bookman John J | New York |
| Boutelle William E | New York |
| Brooks, Peter T | Brooklyn |
| Burghardt, John P | Bayside |
| Burns Thomas L | New York |
| Byer Jacob | New York |
| Carr Francis J Jr | New Rochelle |
| Cohen, Sidney | Flushing |
| Crosby John P | Lockport |
| Daum Samuel | Brooklyn |
| Eaton Ernest R | Brooklyn |
| Emerson Ernest B Jr | Rochester |
| Fraser, Frank A. | Beachhurst, L I |
| Hewson Robert J | Monroe |
| Lehr Saul | New York |
| Lenarsky Maurice | New York |
| Lille, John J | Brooklyn |
| McLean Roderck A. | Syracuse |
| Manheims Perry J | New York |
| Mendenhall John T | Roslyn L I |

### New York—Continued

| | |
|---|---|
| Morris, William A | Yonkers |
| Mullins, Patrick S | New York |
| Scholder, Bernard M | Mt Vernon |
| Shepard Charles C | Lockport |
| Silverman Moses | Brooklyn |
| Squires Alden W | New York |
| Stetson, Leon A | Canandaigua |
| Thomas, Charles C | Rochester |

### Ohio

| | |
|---|---|
| Charvat Thomas F | Cleveland |
| Czarnecki John D | Toledo |
| Davis Jacob L | Ashland |
| Goldman, Frederick M | Cincinnati |
| Hillabrand John F | Toledo |
| Lillie, Walter I | Columbus |
| Linn George G | Shaker Heights |
| Newell Leonard J | Dayton |
| Nusbaum Francis W | Chillicothe |
| O Linn Francis P | Youngstown |
| Sargis, Harold T | Cleveland |
| Schloss Stuart A | Cincinnati |
| Schwebel Samuel | Youngstown |
| Shiling Myrle D | Ashland |
| Totterdale William G | Warren |
| Wentsler, Norman E | Akron |
| Wharram Kenneth J | Painesville |

### Pennsylvania

| | |
|---|---|
| Beddow, David W | Aldan |
| Bell David M | Canonsburg |
| Benko Ernest J | Erie |
| Blanchard Donovan C | Franklin |
| Godfrey, Ellwood W | Narberth |
| Griffith George C | Philadelphia |
| Haddad Arthur K. | Philadelphia |
| Hand John G | Philadelphia |
| Hogsett Smith F Jr | Pittsburgh |
| Keil John H Jr | Wilkinsburg |
| Miller John R | Braddock |
| Piserchia Nicholas G J | Philadelphia |
| Reidenberg Leon | Philadelphia |
| Riemann Frederick A | Parkesburg |
| Riesman John P | Philadelphia |
| Sarner Joseph B | Melrose Park |
| Schuldnecht Page M | Lancaster |
| Shade Jacob G | Pottstown |
| Silknetter Ronald V | Altoona |
| Spangler Henry A | Carlisle |
| Truitt Robinson M Jr | Germantown |
| Walter Willard F | Turtle Creek |
| Waterman Julius L | Bradford |

### Tennessee

| | |
|---|---|
| Acker, Joseph E Jr | Knoxville |
| Gott John R. Jr | Murfreesboro |
| Maddux, Holt B | Memphis |
| Morris, N B | Nashville |
| Peterson Bedford F | Knoxville |
| Roberts Gilbert M Jr | Memphis |
| Stephens Amos L. Jr | Copperhill |
| Thackston, James F | Bristol |

### Texas

| | |
|---|---|
| Brown, James A | Houston |
| Casey, James D | San Benito |
| Collier, Gates | Dallas |
| Cooper Jack C | Denison |
| Drewry Lawrence E | Temple |
| Ford Richard B | Corpus Christi |
| Gaston Earl | Falfurrias |
| Giddings Harold D | El Campo |
| Goetz Joseph T | San Antonio |
| Goldfeder, Jesse | Tyler |
| Harper Jack C. | Dallas |
| Karbach Hylmar E. | New Braunfels |
| Patella, Armand M | Houston |
| Reeves Ernest E | Fort Worth |
| Scardino Peter L. | Houston |
| Searcy Roland M | Bryan |
| Stafford, Frederick B | Sherman |
| Vaughn James M | Tyler |
| Wight, Bennett A | Kermit |

### South Dakota

| | |
|---|---|
| Grove Raymond F | Dell Rapids |

### Virginia

| | |
|---|---|
| Clark, James J | Richmond |
| Eisner, Eugene A | Williamsburg |
| Hartwell Herbert R | Bedford |
| Hendricks Willis M | Roanoke |
| Hughes Charles B Jr | Wytheville |
| Jones John P | Richmond |
| Jones, Reverdy H Jr | Portsmouth |
| Levin Gershon J | Norfolk |
| McRae, Marvin E | Richmond |
| Roberts, John E | Alexandria |
| Romaine, Mason III | Petersburg |
| Sulfridge Hugh L Jr | Charlottesville |
| Whitehead, Philip C | Chatham |

### Washington

| | |
|---|---|
| Boisseau David W Jr | Renton |
| Brock Wesley M | Bremerton |
| Davidson William M | Seattle |
| Gelires Robert F | Seattle |
| Green Henry J | Seattle |
| Hamilton Con Dudley Jr | Oak Harbor |
| Kalez Marion M | Spokane |
| Peterson, Kermit D | Spokane |
| Ramsay John F | Seattle |
| Shaw Homer M | Seattle |
| Tidwell Robert A | Seattle |

### West Virginia

| | |
|---|---|
| Branaman Guy H Jr | Lewisburg |
| Dawson, Bank O | Dunbar |
| Derkach Stephen L | Glen Rogers |
| Dilley Charles K. | Marlinton |
| Ealy, David L | Moundsville |
| Fisher James E | Cumberland |
| Fisher, Loren L | Sissonville |
| Frantz Ivan D Jr | Clarksburg |
| Grace, James E | Cabin Creek |
| Jarrett John T | Dunbar |
| Jones Benjamin C Jr | Huntington |
| Jones Emory E Jr | Mount Hope |
| Kessel Russel | Charleston |
| McNamara Ronald J | Charleston |
| Murphy John H | Wheeling |
| Palmer David W | Wheeling |
| Pearson, John S | Bluefield |
| Rankin John O | Wheeling |
| Santer Michael A | Parkersburg |
| Scott Francis A | Huntington |
| Shafer Bliss K | Williamson |
| Sheppe William M | Wheeling |
| Skaff Victor S | Charleston |
| Stevens Wilkin R | Northfork |
| Stewart, James K | Wheeling |
| Villani Angelo J | Welch |
| Weier Karl E | Bluefield |
| West, Harold Edward | Wheeling |
| Wharton Ray H | Parkersburg |
| Zinn Lynwood D | Weston |

### Wisconsin

| | |
|---|---|
| Baumann Albert J | Milwaukee |
| Baumgartner Martin M | Janesville |
| Cordes, Victor J | Wauwatosa |
| Gaunt, James J | Milwaukee |
| Gillett, George N | Racine |
| Hipke Malcolm M | Milwaukee |
| Kantor Samuel | Beloit |
| Keenan Lawrence J Jr | Fond du Lac |
| Kishpaugh Harold W | Beloit |
| Nelson, Glenn E | Chippewa Falls |
| Owens Daniel E | Dousman |
| Ronneburger Ernest O | Cambria |
| Schweiger, Leo J | Cashton |
| Smits Raymond H | Milwaukee |
| Troup, Wilson J | DePere |
| Williams Lloyd P | Pine River |

### Wyoming

| | |
|---|---|
| Clark Raymond S | Sheridan |
| Groshart Gene M | Worland |

### Alaska

| | |
|---|---|
| Romig, Howard G | Anchorage |

### Hawaii

| | |
|---|---|
| West, Rodney T | Honolulu |

# ORGANIZATION SECTION

## National Health Program

### PLATFORM ADOPTED BY THE AMERICAN MEDICAL ASSOCIATION

*This is the last of the ten points in the platform The previous points have appeared in the last nine issues of The Journal*

10 Fundamental to the promotion of the public health and alleviation of illness are widespread education in the field of health and the widest possible dissemination of information regarding the prevention of disease and its treatment by authoritative agencies Health education should be considered a necessary function of all departments of public health, medical associations and school authorities

## Postwar Medical Service

### MINUTES OF MEETING OF MARCH 9

Chicago, Illinois

The meeting of the Committee on Postwar Medical Service was called to order by the Chairman, Dr Ernest E Irons, at 10 05 a m, March 9, 1946, in the Board of Trustees Room of the American Medical Association Building, Chicago Those present were

Dr Irvin Abell
Dr Frederick A Coller
Dr F S Crockett
Mr Graham L Davis
Capt. William E Eaton
Col Bryan C T Fenton
Dr Morris Fishbein
Dr E L Henderson
Mr Thomas A Hendricks
Dr Ernest E Irons
Dr Victor Johnson
Dr George F Lull
Col Hugo Mella
Dr J J Moore
Dr James E. Paullin
Dr Carl M Peterson
Lieut. Col William N Piper
Rev A M Schwitalla, S J
Dr R L Sensenich
Dr Austin E. Smith
Mr Barry C Smith

The Chairman introduced as a new liaison member of the Committee Dr F S Crockett, Chairman of the Committee on Rural Medical Service of the American Medical Association.

*Bureau of Information*—Dr George F Lull, Associate General Manager of the American Medical Association presented the following report on the activities of the Bureau of Information

The activities of the Bureau of Information have been accelerated in the past three months

A committee was formed at the February Conference of State Secretaries and Editors, with Dr R. B Anderson of Texas as chairman, to act in an advisory capacity to the Bureau of Information This was done to carry out the recommendation of the House of Delegates that " the American Medical Association should be urged to provide advice or service to state information services relating to methods of organization and procedure.

Directives already have been sent to each state medical association outlining a procedure in establishing committees to facilitate the collection of statistics at the local level The executive secretaries of the Ohio and Oklahoma state medical associations members of the advisory committee, are reviewing all forms and reports in order to simplify and correlate methods of reporting material from the states to the American Medical Association

An informal meeting was held with Dr V M Hoge of the Hospital Facilities Section of the U S Public Health Service to discuss methods of correlating the work of the Bureau of Information with hospital and health center planning at the local level.

In cooperation with the Committee on Rural Medical Service and the Council on Medical Service and Public Relations the Bureau of Information is working closely with the American Farm Bureau the Farm Foundation and other farm groups

Preparations are being made for an exhibit by the Bureau at the meeting of the American Medical Association at San Francisco in July Rural medical needs will be shown by means of a fluorescent colored pin map of the United States showing distribution of physicians and by various charts and graphs A pamphlet on 'Rural Medical Service" is being prepared for distribution at the exhibit booth.

These activities of the Bureau are in addition to its primary function of supplying information to returning medical officers relating to medical education, licensure and relocation.

*Surplus Property*—Father A M Schwitalla, Chairman of the Subcommittee on Surplus Medical Hospital and Dental Supplies, stated that there was relatively little to report at the present time. Authority over surplus located outside the United States has been transferred to the State Department, and this may affect the situation in the Philippines There has been considerable selling of surplus property to educational institutions Many institutions anxious to acquire surplus material have their own surplus property officials, and some have as many as eight or ten individuals besides clerical assistants in such an office.

Dr Fishbein thought that some arrangement might be worked out whereby state and national medical periodicals could receive informational material from the official bodies concerned with surplus property disposal that might be published regularly

Dr Lull informed the Committee that he had received an advance copy of a bulletin from the Office of the Surgeon General which offers the information that a list of surplus medical property is being prepared and that he hopes to receive the list. He further stated that any medical property over a one hundred and twenty day supply had been ordered turned over as surplus to the Office of the Surgeon General

*Postwar Rural Medical Service*—Dr F S Crockett, who the Chairman stated has been active in bringing together in conferences with representatives of the American Medical Association various organized rural groups, presented a statement regarding rural medical care

The farm people have as their voice certain organizations In the Northwest it is the Farmers Union. They have taken a position rather radically in favor of the Wagner Murray Dingell bill since they are representing the poorer group of farmers, those with annual incomes around five or six hundred dollars This is the only farm group with that particular leaning Of the others the National Grange not truly a farm group is the oldest organization of the country people strong in New England and in Washington and Oregon The National Council of Farm Cooperatives appears to take an individualistic view The National Cooperative Milk Producers Federation represents dairy people all over the Union with whom the Committee on Rural Medical Service has met. This group took a position of opposition to the Wagner Murray Dingell bill The Farm Foundation occupies a peculiar position. As a research organization it undertakes to tie in the activities of the other organizations and in this health matter has established a health committee representing all the organized farm groups. Our committee met at the Farm Foundation headquarters last September to explain the Fourteen Point Program of the American Medical Association and other matter In June 1945 the American Farm Bureau Federation and Associated Women, representing close to a million farm families through its health committee asked the American Medical Association to cooperate with it to find out what could be done in the matter of improving rural medical service. For a number of years the younger men have been going in less and less numbers to rural areas Several factors economic social and professional are involved. We bring up our young doctors trained in hospitals requiring internships and residencies and expect them to go out where none of the diagnostic or consulting facilities exist except remotely They are loath to go out there. The ones that do go most often do so with the idea of skimming the cream of the practice and in a few years go to a city The Associated Women of the American Farm Bureau Federation are spark plugging the attempt to improve rural service They are taking exactly the attitude that we take Their representative has appeared before Senate and House committees opposing and supporting the same things we oppose and support with no instigation from us.

A number of states in view of the coming need for information on rural and urban communities have conducted surveys Georgia has made a remarkably good analysis of the entire state situation Virginia more recently has done a similar job and one which perhaps equals that in Georgia Indiana has made a survey of hospital and health facilities but the report is not yet received the Medical Society of the State of New York made a county by county survey outside New York and Brooklyn covering diagnostic facilities and making recommendations regarding deficiencies. The whole problem is being studied and a tremendous amount of information is being obtained. Other states are working on the same thing

One of the big troubles in getting doctors to stay in rural communities is Here comes a good doctor to a small community of four or five hundred people not the county seat Farmers will call on him for many things but their attitude is illustrated by a doctor who came in one day to a medical meeting saying that farmers going to Lafayette to do their trading would step into his office and ask him what doctor they should see when they got to town The Associated Women of the American Farm Bureau Federation realize that situation They have said there must be a tremendous amount of educational work done among their own rural people

The plan of the Committee on Rural Medical Service fits in with the concept and activities of the Committee on Postwar Medical Service. Our committee spent all last year after meeting with the various farm groups organizing rural health committees in the state medical societies and by Jan 1 1946 nineteen states had reported committees and some six or seven had promised to do so Since then additional committees have been appointed The Farm Bureau has had much the same sort of lag It has tried to get its local bureaus to appoint committees to get together with medical society committees only about twelve states reported committees but pressure is being exerted The Hill Burton bill is coming along and will have much influence on the placing of doctors in smaller communities

The Committee on Rural Medical Service has received the permission of the Board of Trustees to enlarge itself so that it will have members who can be in charge of the committee s endeavors in the various areas For instance in the deep South Arkansas Louisiana Mississippi Alabama Florida and Georgia have been taken as one area and Dr John Paul Jones of Camden Ala has been made a member of the committee and will have the responsibility of getting the area going Dr H B Mulholland of Charlottesville Va has as his area Maryland Virginia West Virginia and probably Kentucky to do a comparable job Some one in the Southwest—Texas—will be appointed for that area Dr L W Larson Bismarck N D is responsible in the Northwest These men will have ideas of what is going on in their areas so that we shall have definite knowledge of the rural medical problems

One thing must be decided If we are to say we need a certain rural medical situation a plan to accomplish it must be devised Local cooperation and local tax support must be obtained. It is first the duty of communities to support these things and to seek state and federal aid only after local taxation has become inadequate Increased publicity is going to be needed for this The public we are going to work with is the farm population This year should be a year of action Unless something is accomplished people soon lose interest and desirable activity goes by the board

The Chairman called on Mr Barry C Smith to discuss the subject

This is an extremely difficult proposition It is perfectly natural for a well trained young physician to hesitate to go out where he won t have desirable and proper facilities The obvious answer is to see that facilities are placed there but simply building a hospital does not assure that it will be staffed either by physicians nurses technicians or anybody else It is going to take a long time and a great deal of patience to get a complete solution The experience of the Commonwealth Fund has not been very wide although it has been intensive in two or three states We tried the fellowship plan offering fellowships for the complete four years in medical school and two years internship to men who would agree to practice in country areas for a certain length of time. The men agreed but along toward the end of their fellowships began to get a little restive A few refunded their fellowships in order to get out of the agreement A few served their three years and then departed. The enterprise was so unsuccessful in general that we closed it out a few years ago No fellowships have been awarded since 1940

The Hill Burton bill probably will pass and if properly administered will be a good thing but it should not be anticipated that there is going to be a perfectly equipped hospital at every crossroads in the country in the near future. The problem is not going to be solved in any short period of years We ought to try to solve it but it is going to take quite a while If we accomplish in fifty years what the supporters of the Hill Burton bill think will be accomplished in five we shall be doing fine

In the experiment of the Commonwealth Fund in upper New York State the smaller hospitals are grouped around an urban center Rochester The area about Rochester is rural very prosperous by no means thinly populated So far the experiment is going very well In building hospitals we put them where they are needed not in a place where there are five or six people to the square mile

*Intern and Residency Opportunities for Veteran Medical Officers*—Dr Victor Johnson presented the following statement

At the last meeting of this committee I mentioned our proposal to establish a special category of approved residencies calling them temporarily approved residencies The need stems from the fact that we have been successful in stimulating hospitals to establish residencies and were considerably behind in our inspections Residencies are temporarily approved on the basis of a rather detailed written statement from the institution concerned. We have taken this question up in the meantime with the various specialty boards and virtually all of them now have agreed to collaborate in this program Each board with possibly one or two exceptions is designating one or two individuals to represent it the Council is designating the headquarters staff to represent it We shall confer with the representatives of the boards and if the information available seems to warrant approval the approval can be granted within a week or two instead of the usual months Specialty boards have agreed that credit will be allowed for work done in the temporarily approved institutions even though subsequent inspections might show that the institutions do not warrant permanent approval We shall be as careful as we can shall not admit all comers and shall get as much information as we can prior to inspection so that subsequent inspection will enable us to transfer this hospital from the temporary to the approved list We shall do all we can to guard the quality of the residency

The Chairman asked Dr Johnson how many surgical residencies are available, mentioning a communication received from a Cincinnati physician, chief of a surgical service at a general hospital in that city, who is much upset over the number of medical officers who want surgical residencies and cannot get them Dr Johnson said that the exact figure could not be obtained but that it was somewhere around 1,250 and that the bottleneck is in surgery because a large majority of the returning officers want surgical training

*Educational Program Under the G I Bill*—Dr Johnson made the following brief statement

We were a bit upset at the meeting of the Committee in January because it appeared that all the agreements we had reached with the Veterans Administration might go by the board we had agreed as to just what the procedure would be for hospitals and for residents seeking education under the G I bill Since then the Veterans Administration has come through and an item was published in THE JOURNAL January 26 Reprints were made and sent to hospitals to local veterans agencies in the various states and to state approval bodies urging them not to approve institutions unless they were of a high caliber our own lists of approved institutions were sent with the reprints The response from the state approval institutions and from the state veterans agencies was gratifying They said this is extremely useful information to us and we are going to follow your directions I think it has done a great deal of good in facilitating the participation of hospitals and residents under the G I bill

Father Schwitalla observed that there still is a bottleneck He said After the veteran sends in his application and gets his certificate there is a long delay which probably is in the local office Some wait for four or five weeks and perhaps longer and the important thing is that the man does not get his subsistence or the school its tuition which start on the day when the veteran finally gets his go sign The veteran loses a lot of money Some way ought to be devised whereby the subsistence payment could be made retroactive. Dr Johnson said that Father Schwitalla's observation is a reflection of what is to be found in all educational fields and he thought it might be well for the Committee on Postwar Medical Service to raise the question with the Veterans Administration of the desirability of making retroactive payments to applicants

The matter was left in the hands of the subcommittee with authority to act, and a report was requested for the next meeting

*Survey of Supply of Medical Students*—The Chairman brought to the attention of the Committee a letter addressed to Dr Frank H Lahey Chairman of the Directing Board of the Procurement and Assignment Service by the Director for Manpower of the Office of War Mobilization in which the plea of the Procurement and Assignment Service for the deferment of premedical and predental students was refused This letter was printed in THE JOURNAL February 23 page 499 without comment.

Dr Johnson said 'The number is not as much less than normal as was anticipated It was surprising that there was such a small reduction—in terms of the prewar numbers Probably what is happening is that the stronger institutions are draining off the cream and the weaker ones are taking all comers so that we may not be faced with a lack of quantity of students but with a lack of quality

*Veterans*—Father Schwitalla presented for the subcommittees of which he is chairman the following statement

There are many problems in connection with veterans affairs that are of interest to this committee. There is very little that is new but the developments raise certain questions Before very long the Committee should be much interested in getting a progress report from General Hawley on his success in locating general hospitals near medical schools because it is on that fact or that policy that the development of a medical corps in the Veterans Administration depends Consequently we should find out to what extent the Veterans Administration is getting cooperation from the faculties of medical schools

It would be desirable to have a statistical report on the number of medical students and residents under the G I bill and on how many of the hospitals and medical schools are collecting the $180 permitted without any further statement of cost. The feasibility of paragraph 3 of directive number 9 which estimates the cost to medical schools as $500 a year ought to be explored So far no contracts have been made by the Veterans

Administration with the medical schools We should try to find out why no contracts have been closed if that is true

Another thing emerging in this picture of vital interest to this committee is the care of the veteran in the hospitals private as well as public and veterans hospitals To what extent is the veteran going into the voluntary nongovernmental hospital?

Dr Fishbein informed the Committee that a report had been received from General Hawley which gives the number of physicians, nurses and other personnel that have accepted appointment since the enactment of Public Law 293 creating the new Department of Medicine and Surgery in the Veterans Administration and which further states that 797 new physicians have accepted appointment. (*This report was printed in* THE JOURNAL, March 16, p 710)

*Informational Reports*—Col. Bryan C T Fenton presented copies of a recently published army regulation dealing with professional graduate education for Medical Corps officers, saying that this is the first time it has been possible to get a regulation published on this subject that this is a distinct educational advance on the part of the Army, and that as long as there are A U S officers in active service it will apply to them as well as to members of the regular Medical Corps He said that Colonel Piper had asked him to inform the Committee that as of March 1 1946, 27 943 Medical Corps officers had been released, that the total remaining in the Medical, Dental and Nurse Corps are Medical Corps 20,178, Dental Corps 6 492, Nurse Corps 19 845, and that release is at a rate of about 1 000 a month

There was a discussion as to whether and when A S T P students would be called for active service Dr Lull said that students who have finished their nine months intern courses are going to be called, and Colonel Fenton stated that all A S T P s must serve. Dr Johnson said he had been told in Washington recently that no seniors or house officers would be released on points but from juniors down they would be Father Schwitalla thought that the hospitals or the men concerned should be given some option in the matter He said that some hospitals had taken the students on the basis of a sixteen months internship and now would lose them after only a twelve or nine months internship Colonel Fenton said he would send a memorandum regarding this matter which might be incorporated in the minutes The statement received from Colonel Fenton is as follows

Men who graduate from medical school subsequent to Jan 1 1946 will be deferred for twelve months internship at the completion of which they will be called to active duty

Interns who complete a nine months internship during the months of January, February and March 1946 will be called to active duty at the completion of the specific internship

Interns who complete nine months internship during the period of April 1 and June 30 1946 may be deferred on request until July 1, 1946

With reference to such deferments of this group the Procurement and Assignment Service issued a mimeographed information pamphlet form 386 dated Dec. 20 1945 which directed state chairmen Procurement and Assignment Service and hospital superintendents to submit the names of such interns who desire deferment until July 1 1946 These lists were to be submitted to the Federal Office Procurement and Assignment Service Washington D C not later than Feb 1 1946

*Junior and senior residents regardless of the proportion of their specific* residency completed on April 1 1946 are being called to active duty, effective April 1 1946

Capt William E. Eaton stated that all the men in the Navy V-12 program who are finishing their internship about the first of April will be called to active duty and that those who are just beginning their internships will continue on a twelve months basis and will be subject to call at the end of twelve months

Mr Graham L Davis reported that the American Hospital Association is beginning to raise some question about its being the sensible thing to build 200,000 additional hospital beds for veterans, under the program outlined in the Hill-Burton bill (S 191) it is expected that there will be an orderly development of hospital service in this country the veteran is a civilian and apparently should get his hospital service like other civilians, it is difficult to see how the building of 200 000 new beds, which apparently is being planned independently will fit into the national program It was thought by several members that this phase would be clarified within a few months when the plan of the Veterans Administration to set up its hospitals near and in connection with medical schools is more fully developed

# Washington Letter

*(From a Special Correspondent)*

June 10, 1946

## Einstein Supports World Control of Atom

Dr Albert Einstein was one of a group of leaders in science politics and military life who advocated international control of the atom bomb in the forum broadcast 'Operations Crossroad," originating from Washington Dr Einstein said that Americans must use their ability to reason and use it now or human society will disappear in a new and terrible dark age of man kind In accord with this view were Joseph E. Davies former ambassador to Russia Air Force Gen Harold C Kenney, atomic scientist Harold O Urey, Senator Brien T McMahon, Mrs Wendell L Willkie, Harold L Ickes, Representative Jerry Voorhis Harold E Stassen, Supreme Court Justice William O Douglas Secretary Wallace and Archibald MacLeish The atom bomb test scheduled for next month at Bikini Atoll in the Pacific was described by Dr Louis Ridenour, physicist of the Massachusetts Institute of Technology, as 'a gigantic boon doggle.'

## Navy Venereal Disease Rate Rises Since VJ Day

The Navy Bureau of Medicine reports that the venereal disease rate among navy men overseas and aboard ships has risen rapidly since VJ day The overall rate has more than doubled since the war ended, and among shipboard sailors the venereal disease rate has almost tripled Among those stationed overseas, the rate has multiplied five times The increase is traced to more generous shore leaves and overconfidence in quick cures An intensive educational campaign had cut the rate down to 28 per thousand men during the war, whereas in March the total was 77 3 per thousand men 66⅔ in the United States, 83 7 overseas and 92 7 aboard ship

## Closer Relationship Between Doctors and Dentists Recommended

Need of closer cooperation between the medical and dental professions was advocated by Dr J Ben Robinson, dean of the University of Maryland's Dental School, at the first annual convention since 1941 of the Five-State Postgraduate Clinic of Dentists held here Delegates were from Virginia, West Virginia, Maryland, Delaware and the District of Columbia Representative Rivers, Democrat of South Carolina, lauded the achievements of dental surgeons in the war and cautioned against dangers of the regimentation of medicine

## Research on Rheumatic Fever Launched by Navy

The U S Navy has started research by a unit at Dublin, Ga., to find a cure for rheumatic fever which is rated a more lethal childhood infection than infantile paralysis tuberculosis or pneumonia A two story hospital houses research activities in which youthful sailor patients receive treatment. The hospital was opened a year ago as a treatment center for rheumatic fever It is similar to the hospital established a year earlier at Corona Calif Aspirin and rest comprise the main treatment given the 1 200 patients, but 102 have been selected for special clinical investigation

## Death of Babies Aboard Ship Traced to Virus Disease

Representative Jackson, Democrat of Washington reports that the War Department has revealed the cause of the deaths of eight servicemen's babies brought to the United States on the brideship' *Zebulon B Vance* as a virus disease pneumoenteritis The disease has never occurred in human beings in this country before, it is reported An Army board of inquiry has absolved the medical staff of the ship of any negligence or misconduct regarding the deaths of the babies after arrival of the ship May 19 in New York from Le Havre.

## Mental Hospital Bills Introduced in Congress

Companion bills have been introduced in both House and Senate at the request of St. Elizabeths hospital authorities which would allow the voluntary internment of persons for mental care and treatment

### Fifteen Hundred Dentists to Be Drafted into Army

Major Gen Norman T Kirk Surgeon General of the Army, reveals that Selective Service Headquarters has been asked to draft 1,500 dentists for army duty to permit discharge of dental officers with long service. Recent graduates of approved dental schools will be sought primarily as inductees They will be offered commissions, and their term of service will be limited to two years

# Official Notes

## THE SAN FRANCISCO SESSION

### Hotel Reservations Should Be Canceled by Those Unable to Attend

The Hotel Committee for the San Francisco Session of the American Medical Association has assembled approximately 50 per cent more bedrooms this year than were used in the last session held in San Francisco, in June 1938 Nevertheless the demand for rooms exceeds the supply and probably 300 or 400 Fellows may not be able to find accommodations The members of the committee are doing everything possible to provide bedrooms for as many of those who wish to attend the session as possible Those who have been assigned rooms and find that they are not able to attend are requested to notify the hotel committee as promptly as possible so that their rooms can be released to others who have not been able to obtain them

## REGISTRATION UNDER THE HARRISON NARCOTIC ACT

Physicians, other than those in the armed services, who are registered under the Harrison Narcotic Act or under the Marihuana Tax Act must effect registration on or before July 1 to avoid a penalty Each year, despite the annual warnings in THE JOURNAL, this requirement is overlooked by some physicians and unpleasant consequences follow Failure to register adds a penalty of 25 per cent to the tax payable and in addition subjects the physician to the possibility of a fine not exceeding $2,000 or to imprisonment for not exceeding five years, or to both As an act of grace the Commissioner of Internal Revenue has in past years given some tardy registrants the choice between paying sums by way of compromise, a procedure authorized by law, or of accepting criminal prosecution. If this procedure does not produce the required promptness in reregistration, the commissioner will have no other alternative than to institute criminal prosecution.

# Medical Legislation

## STATE LEGISLATION

### Louisiana

*Bills Introduced*—H 272 proposes the enactment of a mental health act to provide for the discovery and treatment of mental disorders H 339 and S 66 propose the creation of a state board of chiropractic examiners and defines chiropractic as "a system of health based upon the use of such natural methods as the palpation and adjustment, by hand, of the segments of the spinal column and adjacent tissues, the use of light, heat, cold air, water and the dietary and diagnostic methods including x ray" These proposals would require any person desiring to practice chiropractic first to obtain a license from the chiropractic board, "which license shall not entitle such person to practice anything other than as defined in this act and provides further that nothing in the act shall be construed to allow chiropractors to prescribe or dispense drugs or to practice surgery, nor to prevent or restrict licensed practitioners of medicine or surgery, or osteopathy in their lawful practice." Section 13 of the senate proposal provides 'All laws, or parts of laws in conflict herewith are hereby repealed and the title 'chiropractor,' or the practice of chiropractic as defined in section 1 of this act, shall not be construed as practicing medicine or surgery or osteopathy" A similar section in the house bill omits the word "not" H 364, relating to hospital fees, proposes that when a state supported hospital has treated a patient who has been injured by the negligence of some person and thus has a right of action for the recovery of damages against such person, the governing authorities of such hospitals shall be subrogated to the right of action of the patient to the extent of reasonable charges for services rendered, including physicians' and surgeons' fees H 372 proposes a comprehensive licensing act for nurses and the creation of a Louisiana State Board of Nurse Examiners H 451 proposes a constitutional amendment authorizing the legislature to establish a system of medical care, treatment and attention to needy individuals and in connection therewith to erect construct and maintain a new charity hospital to provide adequate facilities for the proper care of the chronic and of the acutely ill, to provide adequate space and facilities for the treatment of needy individuals through a modern outpatient department and to provide necessary buildings for interns nurses and other personnel H 453 proposes that every railroad company or corporation operating railroads in the state which has collected or received hospitalization fees from its employees shall provide hospital facilities in the state of such capacity and equipment as will be sufficient for the care and accommodation of their sick or injured employees who are residents of the state H 561 proposes to authorize the granting of a divorce on due proof of the permanent and incurable insanity of one spouse, provided the insane party shall have been under the regular treatment for insanity and confined in an institution for the insane for a period of at least three years immediately preceding the commencement of the action The proposal would also require, before the granting of a divorce, a thorough examination of the insane person by three physicians who are recognized authorities on mental diseases one of whom shall be a superintendent of a state hospital for the insane and the other two shall be appointed by the court before whom the action is pending, all of whom shall agree that such person is incurable H 644 proposes the creation of a state board of pharmacy Among other things, the proposal defines the term 'prescription' as including 'orders for a drug or drugs or a chemical or chemicals or medicines or combinations or mixtures thereof transmitted to pharmacists through word of mouth, telephone, telegraph or other means of communication by a duly licensed physician dentist, veterinarian or other medical practitioner licensed to write prescriptions intended for the treatment or prevention of disease in man or animals and such prescriptions received by word of mouth, telephone, telegraph or other means of communication shall be recorded in writing by the pharmacist and the record so made by the pharmacist shall constitute the original prescription to be filled by the pharmacist." H 672 proposes to require all persons applying for a license to marry to file a certificate signed by a physician duly licensed to practice medicine by the Louisiana State Board of Medical Examiners, which certificate shall state that the applicant has been given an examination including a standard serologic test, for the discovery of syphilis, made not more than fifteen days prior to the date of issuance of such license, and that, in the opinion of said physician, the person either is not infected with syphilis or if so infected, is not in a stage of such disease which is or may become communicable to the marital partner H. 688 proposes to authorize any state board, commission or board of governors to proceed by injunction to enjoin and prohibit any person from the practice of any profession required to be licensed by said board, commission or board of governors when such person is practicing such profession and has not been granted a license.

### Missouri

*Bill Enacted*—S 456 was approved May 17, 1946 It provides for the creation of a division of the state department of education to be known as the division of registration and examination and assigns as boards of said division the State Board of Medical Examiners, State Board of Osteopathic Registration and Examination, State Board of Chiropractic Examiners and others

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE—*This is a condensation of the verbatim report of the hearings*—ED)

*(Continued from page 541)*

United States Senate Committee on Education and Labor

APRIL 26 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Pepper, Smith and Donnell

SENATOR MURRAY I ask to have incorporated in the record a statement on behalf of the Coordinating Council of the five medical societies in Greater New York

### Statement of Miss Hazel Corbin, R N, General Director, Maternity Center Association

MISS CORBIN Needless maternal death can be banished everywhere in the United States That all mothers do not get good and safe and satisfying care is evident Last year nearly 200 000 women had no care from any qualified medical attendant whatsoever when their babies were born—and that was not just because of the war shortage of doctors The maternal death rate in many communities and in some states is as high as the worst national rate ever recorded in our history The latest Census Bureau statistics—that is, for the year 1943—show that New Mexico Arizona Colorado and other states have *maternal death rates far in excess of our national maternal* death rate in 1936 which was then considered by statisticians as the highest among the civilized countries with which we draw comparisons In Mississippi, New Mexico and Texas the Negro maternal death rate was double that for the white race In Virginia and New Jersey it was three times the white rate This is not evidence that Negro mothers are more prone to death in childbirth On the contrary in New York City during 1944 where 99 per cent of all mothers were hospitalized the maternal death rate for white mothers was 17 per 10,000 live births For Negro mothers it was 21 You see, when good care is provided to Negro and white mothers alike the end result is nearly alike In one Southern county during 1944 the maternal death rate was 84 per 10 000 live births One third of all the mothers in the country—the poorest third a large majority Negro—were delivered by nurse-midwives of the county health department These nurse midwives are public health nurses who have special training in obstetrics The mortality rate for this group of mothers was exactly zero! The stillbirth rate for the county was 45 9 per thousand live births For cases attended by nurse midwives the stillbirth rate was only 14

The *Maternity Center Association, which* I represent today, approved the proposed Maternal and Child Welfare Act of 1945, S 1318 introduced into Congress by Senator Pepper for himself and nine other Senators and by Representative Mary T Norton

We were therefore happy to learn that Senator Pepper has proposed a series of amendments to title I, part B, of the Wagner-Murray-Dingell bill which would incorporate the basic philosophy and the basic provisions of S 1318 It is our opinion that these amendments strengthen S 1606 and doubly assure the creation and maintenance of high standards in obstetric practice throughout the country We were also pleased that under S 1606, with Senator Pepper s amendments included, no means test would be required for maternity care.

It is therefore our hope that your committee will consider favorably the inclusion of the amendments made by Senator Pepper We hope too that an amendment may be added to require advisory committees on the state level

*(Senator Donnell questioned Miss Corbin regarding the work of the Maternity Center)*

SENATOR DONNELL Do you regard that general philosophy as correct namely to have grants MISS CORBIN For the state aid

SENATOR DONNELL For the aid to the states, federal aid, yes MISS CORBIN That is right

SENATOR DONNELL To carry out the plans administered by the state? MISS CORBIN That is right

SENATOR DONNELL Do you favor a plan under which, on the one hand, the federal government provides funds to the states to assist the states in carrying out state-operated plans as against a plan under which the federal government would itself operate a plan nationwide for maternal and child health services? MISS CORBIN Definitely

SENATOR DONNELL That is, you favor the state plan that I have indicated, aided by federal grants as against a federal plan of federally operated maternal and child health services, is that right? MISS CORBIN That is right.

SENATOR DONNELL You also mentioned, as I understood it, that you hope that an additional amendment will be made to part B of S 1606, namely an amendment which will provide for advisory committees on the state level? MISS CORBIN Yes

SENATOR DONNELL I take it by that you indicate the thought that the problems may be different in the different states, and that it is advisable to have local advisory committes to cooperate in carrying out the purposes of that part of the bill, is that right? MISS CORBIN That is right

### Statement of Mrs Mary H Oxholm, Chairman Spokesman for Children, Inc, New York

MRS OXHOLM Spokesmen for Children was incorporated under the laws of New York State Oct 3, 1945 with the purpose in view of (1) studying the health and welfare needs of children, (2) drawing the attention of the public to our findings, (3) enlisting public support for legislation affecting children considered sound by our board of directors and (4) opposing legislation that is considered detrimental to children. The officers of Spokesmen for Children are Mrs Theodor Oxholm, chairman Mrs Shepard Krech, treasurer, and Mrs Louis S Gimbel Jr, secretary The directors of our board are both lay and professional people who have a proved interest in maternal and child health and welfare. We have a nationwide membership of over 300 individuals Educational material provided by Spokesmen is being used by twenty-six other national organizations interested in children in the work carried on by their branches and affiliates

Spokesmen for Children has endorsed the Maternal and Child Welfare Act of 1945, S 1318, and members of the organization are in favor of the Maternal and Child Health and Services to Crippled Children Section title I, part B of the National Health Act of 1945 S 1606, H R 4730 although we regret that child welfare services are not included in this section. We believe child health and welfare services should go hand in hand that plans should be made to care for the whole child not just part of him

*(Mrs Oxholm described at length health care in Ulster County N Y)*

For the sake of our children we believe every state should be encouraged to develop a maternal and child health program and when necessary should be given federal grants-in aid to accomplish this goal

### Statement of Dr T Duckett Jones, Representing American Council on Rheumatic Fever of American Heart Association

*(Dr Jones presented a comprehensive statement on rheumatic fever and concluded)*

DR JONES "This conference is strongly in favor of the extension of public programs supported by federal state and local funds for the study, prevention and treatment of this disease"

SENATOR PEPPER Do you feel that the people of the United States are getting the medical care that they are entitled to have, for example with respect to say rheumatic fever and heart disease? DR JONES I would not hesitate to say that I feel not only myself, but other members of the Rheumatic Fever

Council do not feel that they are, or they would not have directed me to come here to make such a statement to you

SENATOR PEPPER And do you look on this bill as contemplating a plan or program by which the people who need medical care respecting rheumatic fever may obtain such care more adequately? DR JONES Senator Pepper, could I express that opinion as an individual, because I have not been directed by the council and it has not studied that?

SENATOR PEPPER Your individual opinion DR JONES I personally feel that it is the logical means whereby good programs of care and at least a beginning in the eventual accomplishment in this problem can be made

SENATOR PEPPER Doctor, do you feel that the voluntary plans will achieve that result and give the people the care that they should have in this field? DR JONES Again personally?

SENATOR PEPPER I mean that. DR JONES From my personal point of view, I work for voluntary agencies and feel that voluntary agencies and services and facilities have a tremendously important part to play in any program I personally feel however, that they will never successfully meet all of the pattern necessary in order to give a complete care program to individuals with these diseases

SENATOR PEPPER And one of the reasons is that generally the people by experience with voluntary plans, the people who need it most do not join or join and stay in a little while and then drop out? DR JONES Well I should say that, so far as this disease is concerned, the majority of the individuals getting the disease are either in the lower middle income level or in the actually lower income level both of which groups have difficulty in meeting voluntary insurance patterns, and that those plans are as yet not complete enough to give full coverage and it is my opinion that they probably will not be able to That is a personal opinion

SENATOR DONNELL Dr Jones you state, of course, that you are giving your personal opinion DR JONES That is right, sir

SENATOR DONNELL And that the authority that has been conferred on you by the council for which you appear is limited by the resolution that you read That is correct, is it not? DR JONES That is true, because the council has not met and has not considered the bill

### Statement of George J Hecht President, Parents Institute, Inc

*(Mr Hecht stated that he was a publisher of magazines)*

MR HECHT I feel that the children of America are being made in this bill the football of medical politics I feel that the maternal and child welfare provisions of this bill namely title I (B) is virtually a rider, having little to do with the main purpose of the bill, namely compulsory health insurance. As you all know I am sure, this bill has very little chance of passing this session of Congress It is a highly controversial bill and I understand that Senator Barkley on the floor of the Senate has said that it is the intention to adjourn the session by the end of July or beginning of August

---

APRIL 30 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Pepper, Morse and Donnell

### Statement of Charles G Bolte, Chairman, American Veterans Committee, Accompanied by Dr E Richard Weinerman, Chairman, Health Subcommittee, American Veterans Committee

MR BOLTE The American Veterans Committee is an organization of World War II veterans which is working for a more democratic and prosperous America and a more stable world. One of the cornerstones of a more democratic America is adequate medical care for all its citizens regardless of financial status I have with me eighteen to twenty telegrams from American Veterans Committee chapters from Rhode Island to Washington and from Detroit to Dallas Texas

Some veterans were frankly amazed and hurt on their return from overseas to learn from their wives that the medical profession had actually fought this E M I C program and continued to attack it even after it had proved its importance. As yet this program has not undermined our American way of life as opponents of such matters always seem to warn.

*(Mr Bolte condemned the medical profession on many counts such as the fee schedules for veterans service He praised the Army Medical Service)*

We are convinced that we cannot depend on the so-called voluntary plans for our total health needs These depend for their survival on the uncertainties of personal choice to join or stay out and seem doomed from the start to a precarious and actuarially unsound existence

*(In response to questions from Senator Donnell Mr Bolte said his organization had 50 000 members He himself had gone directly from Dartmouth into the Army He told how different chapters had voted on the health program)*

*(Senator Donnell questioned Mr Bolte and his adviser Dr Richard H emerman as to free choice of physician and control of medical practice under the bill also as to costs)*

SENATOR DONNELL You have made a study of the British system to ascertain whether or not there has been a change for the better or for worse, generally speaking, in Great Britain as compared with the situation before the institution of compulsory health insurance? DR. WEINERMAN I was fairly fortunate because in the Army before the invasion and before we went to the continent, I was stationed as an army medical officer in England and found I was fortunate enough to have been billeted in a private English home at a small community where I stayed for some months, and being a doctor and interested in these matters I made a point to talk to both doctors and people about the health insurance plan in England, and despite the fact that the medical profession in England today is opposed to further extension of their plan which is quite different from this bill, they have had, for many years, a health insurance plan which is more similar to this bill and which the British Medical Association and the doctors in England are very much in favor of They like their health insurance plan The doctors I spoke to told me so The people I spoke to pointed out that the thing that is important over and over again was that the cash barrier to their family physician had been removed By prepaying the small amount that was required they went to the doctor when they thought they had to go to the doctor That was the biggest feature That made preventive medicine possibly not to a complete extent but far greater than ever had been possible before I think because of that and because of the closer contact between patient and doctors, that the quality of medicine in England was improved from what it had been

*(Dr Weinerman attacked an advertisement against the Wagner-Murray-Dingell bill issued by the Pennsylvania State Medical Society)*

SENATOR DONNELL Doctor you are not seriously contending to this committee that the expression of the House of Delegates of the American Medical Association is not a current up to date expression? You are not contending that, are you? DR WEINERMAN No I believe it is a majority expression It does not allow for exact up to the minute expression or for a large minority expression

SENATOR DONNELL Let us get a little more modern time Let us take April 22 This April 30 Eight days ago Let us take the stated meeting of the Medical Society of the County of New York where there was a certain series of resolutions adopted by a vote of 503 to 152 My information is that this took place at the conclusion of a forty-five minute debate That would be a modern up to date expression by the New York Medical Society would it not? DR WEINERMAN Yes sir I should think it is quite significant that 150 something of those doctors stood up in favor of such legislation when the claim has been made that the vast majority, perhaps 90 per cent of the doctors are opposed I think it is significant. SENATOR DONNELL It is quite significant also is it not, that 76 and a fraction per cent voted for these resolutions That is significant, likewise? DR WEINERMAN Yes

*(Senator Donnell read into the record the resolutions of the New York County Medical Society against the Wagner-Murray-Dingell bill)*

SENATOR DONNELL We do agree, do we not on the fundamental integrity of the American Medical Association and of its effort whether mistaken or not, to give an honest view to the American public on the subjects on which it expresses itself? DR WEINERMAN Senator, in answer to that I would have to say this That as a doctor, knowing about S 1606 as so many doctors do only through my mail and through what I read in the medical journals if I were as busy a practitioner as is the

average doctor and had no time to study the bill itself but only to read my mail and to read the medical journals, I do not think, Senator, I could truthfully say that I would have an unbiased opinion of the bill. And that is the way most of the doctors have come to take a stand on this bill.

SENATOR DONNELL. Doctor, I do not think that answers just what I asked you, namely, as to whether we would agree on the fact that, whether mistaken or not, the American Medical Association is attempting to give to the public what it considers to be an honest expression of opinion. We would agree on that, would we not? DR. WEINERMAN. Well, sir, I think we would agree that the American Medical Association is attempting to give to the people its analysis of the bill.

SENATOR DONNELL. Yes, and it believes itself to be giving an honest expression of opinion. We have no doubt of that, have we? DR. WEINERMAN. I suppose not.

SENATOR DONNELL. You are yourself going to apply for membership in the American Medical Association, as you have stated? DR. WEINERMAN. Yes, sir.

*(Senator Donnell queried Dr. Weinerman about the National Physicians Committee and other organizations opposed to the bill.)*

*(Dr. Weinerman related that he is now employed by the Department of Agriculture.)*

MR. BOLTE. I tried to emphasize in my testimony the feeling that veterans had about medicine. I think the Senator's questioning rather tended to get us away from that major line of emphasis. It seems that we have come out of the war with a feeling about medicine that most of us got better medical care in the Army than we ever had before. We went up when we were sick, when we went on sick call we had to go on sick call, and we did not have to worry about having the money to pay the bills, because we knew that the doctor was there and we knew that we got the very best of care. And I think a great many of us have come out wanting to continue that care personally and also to get it for our families. Because we just felt that we got better care in the Army than before and we want that to continue without the cash intervening and being a drawback and making us get sick because we do not have the money to go to a doctor when somebody in the family first begins to become ill.

SENATOR MORSE. Would you say that the experiences that you have had with medical care in the Army have tended to educate the members of the Army, as a great many other citizens are being educated, to favor the clinic technic of medical treatment, where you pass from office to office within the clinic and come under the jurisdiction and care of qualified specialists on different ailments. MR. BOLTE. I think very much so, sir. We did get the benefits of specialized care, which we might not have had before, just from having the one family practitioner. We also got a tremendously increased development of what I referred to in the testimony as health consciousness, the importance of health and the importance of catching any illness or disease in its early stages; and actually an awful lot of us in the Army learned more about personal health and hygiene and the necessity of taking care of ourselves than we knew before.

SENATOR MORSE. Do you think that the health education program that has been carried on in this country, particularly during the last twenty years, and the increased emphasis during the last ten, plus the experiences with medical care that the members of our armed forces have had during the war, has had a tendency among our people to decrease not particularly the importance of the family doctor but educate the people to the understanding that he is just, in most instances, the first adviser in the case of serious illness, and that he must be supplemented with clinical care? MR. BOLTE. I think that realization, Senator, has only grown up among those who have been able to afford constant access to a family practitioner, and beyond that to go on to a specialist. Most people cannot afford, certainly, the specialist, and a great many cannot afford the regular family practitioner and have had to have the welfare medicine, which of course is not at all similar to what is proposed under this bill.

SENATOR MORSE. As I have said before, I have certain reservations as to this plan which I will discuss at greater length on the floor of the Senate later but under this plan or some prepayment plan such as exists in my state and in the state of Washington do you think that one of the beneficial effects will be a greater development of the so-called clinical method of treatment rather than the one doctor method of treatment? MR. BOLTE. I should think it would, sir.

SENATOR MORSE. I perhaps ought to ask this of the doctor, rather than of you. Do you think it is a fair statement to say that members of the medical profession itself are recognizing more and more the importance of division of labor, shall we say, among specialists within their fraternity, rather than having a doctor try to qualify himself on all types of illness and treat in general practice? DR. WEINERMAN. Senator, I agree with you completely. I would like to say that Colonel Lueth reporting to the American Medical Association, surveyed some 20,000 of the army medical officers. One of the questions referred to group practice and, as I think Mr. Bolte has indicated in his testimony, half of all doctors polled indicated when they came back they would like to practice in a group.

SENATOR MORSE. Would I be unfair to the medical profession if I should suggest or at least raise the question as to whether it is true or not that in the field of modern medicine, with great discoveries that have been made in recent years, the new technics that have been developed in our medical schools, it is practically impossible for any modern day doctor to qualify himself in all the technics so as to give adequate medical attention to his patients? DR. WEINERMAN. Absolutely, Senator. The field is so complex today, and delightfully so—I mean that we have progressed so far—that a doctor can take a corner of medicine and become proficient in it. He cannot be efficient if he attempts to cover the entire field.

SENATOR MORSE. Would you say that as more and more new medical discoveries are made it is going to become less and less possible for the average doctor to qualify himself to give what we will come to believe is adequate medical care to his patients without the use of specialists and joint conferences with other doctors and clinical attention? DR. WEINERMAN. I think that is absolutely necessary, sir.

SENATOR MORSE. Well, if that should come to pass, or if that is coming to pass, and if the doctor is going to see to it, as I think the ethics of his profession require him to see to it that the best possible care is made available to his patients once he takes jurisdiction over the case, is it not true that the expense will be so great that millions of our citizens cannot afford to pay that expense. DR. WEINERMAN. Under the present system, sir.

SENATOR MORSE. Well, as this increased scientific knowledge on the part of the medical profession develops, which will call for what I have suggested to be clinical treatment and the attention of specialists—and specialists, rightly so, are expensive—is it not true that the average citizen will be unable to pay for the medical care that he ought to have if he was to have what I have phrased as adequate medical attention?' DR. WEINERMAN. Under the present pay as you go system, sir, that will be absolutely true.

SENATOR MORSE. Well let us talk in terms of trends anyway, because we have to think in terms of where we are going. It is a bit paradoxical, then, would you say, to find the opposition that we are finding among the medical fraternity to an attempt on the part of a society through its government to give to its citizens adequate care, find opposition to that, when the doctors themselves—and it is to their everlasting credit—through new scientific discoveries are enlarging the sphere of medical knowledge so as to make it more and more difficult for them to give adequate medical care themselves because of their limited knowledge, as individuals, of their own profession, and making it more and more difficult for them to give adequate medical care to the patient concerned because of his inability to pay for the specialized service that would be required? DR. WEINERMAN. It is inconceivable, Senator.

SENATOR MORSE. Frankly I do not want this record to close with any implication in it, if it is a false implication, that Mr. Bolte says to the Congress 'It is this bill or nothing.' MR. BOLTE. I would not want to give that impression at all.

SENATOR MURRAY. Right there I want to interpose this statement. That when the bill was filed by the sponsors it was expressly stated that we did not consider the bill perfect and the final answer, and we expect, of course, that the bill will be studied by this committee and that some improvements will be made to it. That is the situation in every bill that has ever been filed in the Congress since I have been here. I know of no perfect bill that ever went through Congress. I am sure that the bill can be improved on as a result of our study, but the basic concept of the bill will, I think, continue to be recog

nized as absolutely correct MR BOLTE I assume, sir, that your committee as a result of these hearings would, quite probably, do some redrafting

SENATOR MORSE In other words, you recognize that in hammering out any legislative pattern in the Congress of the United States it comes out a compromise pattern. That is the way democracy works in the halls of Congress fortunately so Well now, in this instance let me say that the Senator from Missouri again, as I have found to be his custom, is raising very important points that deserve the careful consideration of a committee such as this on the legislation that comes before us and I think he has raised some vital points here this morning that the members of this committee are going to have to consider carefully and out of which discussion I think some compromises will flow Let me mention one My thinking on it has not crystallized at all You remember that you were cross examined by the Senator in regard to the provisions of the bill that pertain to a limit on the maximum number of patients that a doctor under the plan may handle That concerns me too I am not ready to phrase the amendment But I take it for granted that any amendment which would permit of flexibility as to the number of patients that a doctor can handle in accordance with special abilities—some doctors can handle more than others—certainly would not defeat the basic objective of the bill MR. BOLTE I should not think so Senator

SENATOR MORSE I think some serious consideration should be given by the proponents of this bill to the matter introduced by the Senator from Missouri This matter of choice which the Senator refers to I think, is a pretty important one. May I put this question to you on that matter A great deal of emphasis is being made here that part of the medical profession an overwhelming majority of the individual doctors that are opposed to the bill, believe that it is going to do something to the medical profession as a part of our private property economy Do you think it is unfair to say that at the present time the choice which the average American citizen is free to exercise in selecting his doctor largely bottoms on his economic ability to pay for that choice? MR. BOLTE I think it is absolutely essential to say that, Senator It seems to me that the passage of this bill would actually provide so much more choice than the average citizen now has that there is simply no comparison. I know people personally who do not have any choice of doctors at all when they get sick. They take what they can get in the charity ward. They do not have any choice whatever I think this bill provides for a broadening of choice.

SENATOR MORSE In connection with this issue of choice, Doctor do you think that it is unfair for me to suggest that the economic status of the patient not only determines to a large degree in this country what doctor he is going to get to treat him but that the doctor himself in giving such treatment as he does give, is influenced somewhat to varying degrees—depending on the individual but to varying degrees—by the economic status of the patient once he accepts him as a patient? DR. WEINERMAN Do you mean sir that he is limited in the amount of treatment he can give him because of what he can afford? SENATOR MORSE Yes DR. WEINERMAN Yes I think that is right.

SENATOR MORSE We are right down here in this issue to the discussion of some basic political philosophy too How far should a representative government go in protecting the health of its citizens? That cannot be escaped in the discussion of this bill do you think? DR WEINERMAN No sir

SENATOR MORSE We are now on this free choice matter After all the extending of charity treatment by the medical profession fine as it has been, has not been adequate to give adequate medical care to large numbers of American citizens that have not had the funds with which to pay for it do you agree? DR WEINERMAN I agree. May I add, sir that as veterans we are not looking forward to charity medicine. We would rather prepay our own way

SENATOR MORSE I am talking now about the population as a whole. In spite of all the good work the medical profession has done by way of giving freely of its service to so called charity cases the fact is that that exercise of free choice on the part of the medical profession has not been sufficient to give adequate health protection and treatment to large numbers of our people. DR. WEINERMAN I would agree to that from personal experience, sir

SENATOR MORSE It has been my observation that when cases have been pointed out to the medical profession it has never failed to give its attention I know of no case where it has not given attention I am a member of various clubs and lodges and service organizations We have had our so-called crippled children's program and dental program and health program, where we call the attention of the medical profession of our city and county to outstanding cases and they always respond But we know that where we pick out one case there are many, many cases that we do not even know about and nobody knows about which go unattended If as of tomorrow the medical profession said 'We will handle all of the cases" it would not be very long before they would be wanting a lot of financial assistance to do it do you not think so? DR WEINERMAN And administrative assistance too

SENATOR MORSE If this service is to be rendered it has to be paid for DR. WEINERMAN I think it is worth our paying for

SENATOR MORSE We must take into account all of the modifications that will have to be made when we take up the question of military service rejections Some of them are congenital Some of them could not be helped by the medical profession at all. But boiling them all down we still had too many young men—too many young men who did not meet the minimum health standards which we in our civilization of which we are wont to boast, have not had MR. BOLTE And it was a shocking experience to all of us Senator I think.

SENATOR MORSE Now, on this subsidy matter on the basis of the questions I have already asked, the facilities already provided the medical profession and the patients of this country constitute a form of subsidy is that not true? DR. WEINERMAN Yes sir, I think a great percentage of the hospitals that already exist are governmentally owned.

SENATOR MORSE Do you see any great difference between some subsidy in the payment of medical fees for protection of American health and the payment of American tax dollars that are now being paid for the protection of American health and money that goes right into the pockets of veterinarians for the protection of the country's livestock? MR. BOLTE I think what we hope for under this bill Senator is that we will come to the point where we will take care of all our people as well as we take care of our livestock.

SENATOR MORSE Or try to It is surely as important to eliminate contagious diseases by way of federal support, if necessary among the poor people of the country as it is to eliminate Bang's disease among the cattle of poor farmers of the country because their herds are likely to spread it to those of the rich farmers too MR. BOLTE I should say it is at least as important yes sir

SENATOR MORSE Which again gets us back to this basic problem of what is the obligation in a constantly evolving but we hope progressively evolving society a democratic society with representative government to protect with tax dollars the health of all our people that is the thing that I have to wrestle with all the time Because at least I think—I suppose there are those who doubt it—I am as strong a proponent of private property economy as anybody in the Senate. But I recognize that too little government is just as dangerous for public welfare as too much government Hence I say to my friends although there are certain parts of this bill that I am going to discuss by way of proposed amendments later on there is no getting away from the fact that we have to move in the direction of adequate health treatment of all our people

We had a discussion here this morning with questions and answers about the views of the American Medical Association whether or not they are honest views I share the opinion of the Senator from Missouri that they are honest views on social and economic questions But my question will show the one modification that I would make and the question is this Do you agree with me Doctor that the members of the American Medical Association that testify in opposition to this bill are special pleaders in the sense that they are testifying from a particular economic point of view? DR WEINERMAN Senator that is fairly difficult to answer The ones that testify may have a far more favorable point of view than the great mass of doctors whom they purport to represent

SENATOR MORSE The opponents are using and I think very effectively judging from my mail the slogan "political medicine Would you agree with me that in democracy, in any democracy, politics is in its high sense represented by rule

of the majority but at the same time the protection of the legitimate rights of the minority within our constitutional guaranties, but that politics is to be desired and not deprecated in the administration of a democracy? DR. WEINERMAN With that definition of the term, yes, sir

SENATOR MORSE And that if we are really going to promote the greatest good for the greatest number within a private property economy we must make political approaches through government to it? DR. WEINERMAN Certainly, sir

SENATOR MORSE We, as your representatives, are politicians of course but that does not mean even contrary to cartoon conceptions that we seek only banal and undesirable objectives We can even have high motives too DR. WEINERMAN I think the framers of this bill did sir

SENATOR MORSE And under our form of government you cannot tackle a problem such as adequate health programs for all the American people except through our political forms I know of no other way of doing it in a democracy Do you? DR. WEINERMAN No, sir

SENATOR MORSE I will simply close by this observation that I think this is a great debate that is going to be confronting us because it has many ramifications on how to strike this balance between fulfilling what I think is a necessary objective of a democratic form of government and at the same time protect the legitimate private property rights of the medical profession that is the balance we must strike in the final solution of this bill I think it can be ironed out so that one can be struck I tell my doctor friends that it never will be struck because of the obstacles inherent in the situation if we simply say to the American Medical Association We turn it over to you and place on you the professional responsibility of providing adequate medical attention to 130 million American people It never has and physically it never will, without the friendly cooperation of the government I want to see a bill drafted and amended so that the two groups can work together That is not going to be done in my judgment to the satisfaction of the medical profession if the American Medical Association overemphasizes the special pleading aspects of its case

*(Senator Pepper took up the questioning and explained certain points of control in the bill)*

SENATOR PEPPER Now I happen to be a lawyer by profession gentlemen and occasionally we have lawyers that have to be disbarred, and sometimes we have lawyers that engage in sharp practice Sometimes no doubt, they engage in unfair practice with respect to their clients Now is it unthinkable that there might be a few doctors among all this great army of doctors who might, for the benefit of the additional fees try to undertake to serve more patients than they could give as the bill says a high standard of care? DR. WEINERMAN I think one of the main contributions of the American Medical Association to the country has been its very vigilant safeguarding of quality and exposing and even disbarring if I may use that term certain physicians that have malpracticed

SENATOR PEPPER Now, the Senator from Missouri has spoken about the good moral quality and the high purposes and so on, of the American Medical Association, but this bill would not be limited to practice just by members of the American Medical Association, would it? DR. WEINERMAN No, sir

SENATOR PEPPER Any doctor that is a qualified doctor under state laws would have the right as the bill specifically gives him to take patients, if patients select him under this bill, would he not? DR. WEINERMAN Yes sir

SENATOR PEPPER So there might be a great many doctors who are not in the American Medical Association? DR. WEINERMAN Yes, sir but in all fairness I believe the great majority of practicing physicians are in the American Medical Association

SENATOR PEPPER It is no disparagement to say that there may be a few of its members who would yield to the pecuniary opportunity of taking care of more patients in order to make more money than they can really give care to the patients It is just a matter of balance of interest There may be a few fellows that might take advantage of the patients and in order to make more money take on more patients than they could accommodate You have to balance that possible detriment to the public as against the technical denial of choice if the Surgeon General should exercise the authority that this section (j) gives to him do you not? DR. WEINERMAN Yes, sir

SENATOR PEPPER And it is all right if you want to find out how many cases of abuse there are but that is pointed out by some of the critics of this legislation as the effort of an authoritarian state—as some of these gentlemen are now beginning to call a government that does anything to help the people—that this is designed by people who have the point of view of the authoritarian state to deny the individual the right to a free choice of doctors You do not think that is a fair way to describe that provision in the bill? MR. BOLTE That is just what I said earlier to the Senator That this is in effect putting into law what already exists in common practice DR. WEINERMAN Senator, might I say with regard to this section (j) of which you are talking that the millions of Americans literally millions who for the first time in their existence will have access to any physician in their community far outweigh the hypothetical few that may come late to their favorite doctor and have to go to another Now, I recognize the justice of the criticism that occasionally a few people may not get the doctor of their first choice, but we are considering the common good, and when you weigh that, sir, against the millions that will have medical care for the first time, do you want to throw this bill away because of that point? I think that is a very false construction

SENATOR DONNELL I hope Senator Pepper and Senator Morse do not leave because I have enjoyed a very eloquent address here Senator Pepper's address was beautifully phrased and presented, as it always is

SENATOR MURRAY Under this bill, instead of witnessing any deterioration of professional ability or character of service, will it not mean a vast improvement to the great majority of the medical profession DR. WEINERMAN Well, Senator, when we talk about quality of medical care we should really talk about it and not just use the word Quality of medical care means having the doctor give the patient not only the best service that he knows how to give but all the service that the patient needs at the time the patient needs it Now, today, as has been pointed out by Senator Morse and others the doctor is able to give his patient if the patient comes to him at all, only such services as the patient can pay for or as the doctor is willing to give free There is a very difficult limitation Under the bill such financial barriers are broken down and the quality of service becomes exactly the quality of medicine that the individual doctor is capable of If he is a good doctor, he will give good service

*(Senator Murray explained how the bill conserves the quality of medical care)*

SENATOR PEPPER I want to apologize to my able friend from Missouri that I am going to miss his brilliant continuation of this inquiry, but I want to leave my interest to my good friend Dr. Morris Fishbein, who is somewhat acquainted with this subject in case something else may come up

(Senator Pepper leaves at this point)

SENATOR DONNELL In the first place, before starting the questioning I appreciate the point of view of the chairman, of course, and of the Senator from Florida and the Senator from Oregon I think it is a fine contribution that each of you gentlemen has made to the discussion of this measure, to point out, through effective questioning which I appreciate is not quite the type of questioning that would be sustained by a judge in court as against objections on the ground of pleading But nevertheless I myself have asked the same kind of questions and I think that this is a forum in which we may not only question the witnesses but to some extent indicate views and trends

I do not desire to have my question understood as making determinative whether or not this bill shall be adopted, the decision of the question as to whether this bill properly protects the private property rights of the doctors I do not regard that as the fundamental question at all I appreciate, Mr Chairman that the doctors have expended years of time and quantities of money in the acquisition of education, and I think they are entitled to consideration of that standpoint too But as I see it there is a much broader question here than the mere preservation of the property rights I am sure my close friend from the state of Washington likewise regards that as subordinate to the larger questions of national public policy We have here as I see it questions of private initiative, the preservation of the system of private initiative, that is involved at least to some extent in this case So I do not want it to be understood that I am standing on the proposition that whether this bill should be supported or not is to be determined by its effect on the private property rights of doctors Senator Morse made the point that these gentlemen of the American Medical Association are in a sense special pleaders Are you of the opinion, Doctor, that these members of the American

Medical Association by and large who are opposing compulsory health insurance are doing so because they think it is going to hurt them financially? Is that their reason for doing it? DR WEINERMAN No, sir, I do not think that is their reason

SENATOR DONNELL You do not think they are here in the sense of coming here and advocating something simply because of its effect on their own pocketbooks do you? DR WEINERMAN Senator, I think a few doctors probably feel that they would be hurt I think the mass of doctors do not feel that and their opposition to the bill stems from other things

*(Senator Donnell questioned Dr Weinerman at great length about conditions of medical practice and social activities Dr Weinerman replied authoritatively although it was clear he had little first hand knowledge of much that he spoke about*—ED)

*(There was extended discussion of the organization functions and power of the advisory board created by the Wagner-Murray-Dingell bill)*

---

AFTERNOON SESSION

### Statement of Mrs Charles W Sewell, Administrative Director, Associated Women of the American Farm Bureau Federation

MRS SEWELL I am coming to you as a farm woman an Indiana farm woman, engaged at the present time as the administrative director of the Associated Women of the American Farm Bureau Federation In the American Farm Bureau Federation the Associated Women are an entity and an affiliate and our membership is deemed as on behalf of the wives or members of the family of an American Farm Bureau member

*(Mrs Sewell covered much the same material as given to the conference on rural medical care)*

We are greatly interested in proposals designed to provide compulsory federal hospital and health insurance Our chief concern is to get more adequate medical care and hospitalization for our farm folk. We are wondering if the personnel set up to administer such a health program would know no more about the subject than those placed in positions of authority in other government bureaus dealing with agriculture

We wonder if it would require as many trips to the county seat to secure stamps for medical care as it has done to get gasoline tires farm machinery and rubber boots in order to carry on agricultural production.

We wonder if the stork could delay his visit while necessary red tape was cut, or if we might receive a directive such as the sheepmen were presented advising them in the face of shortage of herders for the critical lambing season to 'postpone the lambing until more favorable weather"

We have repeatedly expressed our opposition to compulsory insurance plan by resolution

In short I am trying to tell you that the American farmer wants adequate medical care and hospitalization at reasonable cost he wants the medical profession both as individuals and as an organization, to acquaint themselves with the needs of rural America and our attempts to formulate programs that will help to fill them Only with adequate farm income can we hope to realize adequate medical care The parity principle must be extended to medical care. For example an appendectomy at $150 when corn is $1 per bushel is vastly changed when corn drops to 30 cents per bushel

We believe such problems will be best attacked at the local level in conferences arranged between organized groups of farm people, the hospital associations public health officials and county medical societies all working together at that local level in friendly discussion Here each will be fully aware of the exact conditions in that particular area There will be no need for lost motion or loss of precious time between such groups no expensive record keeping and no yards of wasteful red tape to untangle or unwind.

SENATOR MURRAY How long have you been studying this problem of the need of medical care in the rural sections? MRS SEWELL Fourteen years

SENATOR MURRAY What have you done during those fourteen years to bring about a better distribution of doctors and hospitals? MRS SEWELL We have tried very hard to accomplish an educational program of the need for prepayment of medical care and hospitalization program

SENATOR MURRAY But yet the situation is such that great areas in the rural sections of the country are without adequate modern medical care and hospitalization? MRS SEWELL Of course we cannot leave out the last four or five years of the war and put back the doctors

SENATOR MURRAY The only part you disagree with is the part which provides for the compulsory insurance system? MRS SEWELL The part which provides for the compulsory insurance system

SENATOR MURRAY If it were not for that if it provided a voluntary system you would be satisfied MRS SEWELL I think we would so far as it coresponds with our resolution Again I could not go further than that until after another annual meeting when it would be brought to the delegates

SENATOR DONNELL Senator Murray referred to this as a long drawn out process of education I appreciate that any educational program takes a while but as a matter of fact this process of voluntary health insurance has been going rapidly in the last two or three years MRS SEWELL It has The Missouri Farm Bureau Women were the first to take this matter up and begin the organization in the little township units and into the counties and then Mr Chester G Starr was made the director and in the clipping service I have there you will find a typical report which appears by the action of the Missouri Farm Bureau

SENATOR DONNELL Does the Missouri Farm Bureau itself affiliate with the Blue Cross system? MRS SEWELL It acts in conjunction with the Blue Cross and there is a committee set up in the township which in turn works with the Blue Cross

---

MAY 1 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Pepper Aiken and Donnell

### Statement of the Honorable Lewis B Schwellenbach Secretary of Labor

SECRETARY SCHWELLENBACH This is highly important legislation and should receive favorable consideration by the Congress at the earliest possible time

*(Secretary Schwellenbach repeated the phraseology of most of the proponents as to the state of the nation's health)*

According to a recent study made by the Bureau of Labor Statistics of family income and spending (Bulletin 822) average—and I emphasize the word average —average annual expenditures for medical care according to income class were in 1941, under 500 $27 500 to 1 000 $40 1 000 to 1 500 $63 1 500 to 2 000 $86 2 000 to 3 000 $102 3 000 to 5 000 $152 5 000 and over $310 Thus the highest amount paid on the average for medical care by families receiving a yearly income of less than $1 500 was $63 per annum. This figure is particularly significant since according to the same survey about 50 per cent of the families of this country received incomes below $1 500 in 1941 Over 33 per cent of the families received an aggregate income of less than $1 000 and were able to spend on the average only $27 to $40 per year for medical care. While incomes have increased since 1941 the costs of medical care have likewise increased A study by the Bureau of Labor Statistics discloses that the cost for all medical services plus medicines and drugs from 1941 to December 1945 increased 15 1 per cent, for medical services alone 17 4 per cent and for hospital services alone 27 8 per cent. I call to your attention the fact that these statistics refer to family income and not to individual income

The American Medical Association apparently takes the position with respect to the average person in the low income group that despite the absence of a large financial reserve he gets by very well Although the unpredictable illness may require budget payments he pays debts incurred within a reasonable time.' These contentions, however are not supported by the facts It is just not true that people of low incomes faced with the overwhelming burden of prolonged and serious illness 'get by very well'

No one who has given serious thought to medical care problems in this country can I am convinced, successfully challenge the basic conclusion that achieving adequate medical care for all the people requires that the costs be distributed over periods of time and over large groups of the population. Through national health insurance the costs of meeting the economic hazards

whose consequences are lack of essential services and dependency are reduced from the maximum which each individual must be prepared to meet to the average costs of affording overall protection Care is guaranteed by the financial stake each individual acquires through his payment into the insurance fund. Adequacy of care will be assured by the expansion of facilities and the development of services and training which this bill, together with the Hill-Burton hospital bill will make possible. The redistribution of medical costs that the proposed national health act will achieve will accomplish the spread of ability to pay and will direct federal funds into areas which have been unable to support doctors hospitals and laboratory equipment The program will eventually relieve doctors of the double burden of having to be both bill collectors and medical practitioners Furthermore, the bill will help to avoid the concentration of physicians in large urban centers where they are attracted by the possibility of stable income and will enable wage earners to support aggregate expenditures for medical care in a way to insure permanent stability of income to those who render medical care.

As I indicated at the beginning of my remarks, the Federal Security Agency and the Department of Labor have agreed that it would be desirable to include in S 1606 certain amendments which are intended to broaden the coverage of maternity care and medical care to children to include noninsured as well as insured and to make the care adequate for all mothers and children, to remove certain ambiguities and to provide for improved coordination in the administration of the provisions of title I part B, and title II These amendments have already been submitted to this Committee. I regard their incorporation into the bill as indispensable

SENATOR DONNELL Mr Secretary, may I ask you, please just what was the course of procedure adopted in the preparation of this statement? SECRETARY SCHWELLENBACH Well, the same procedure which is uniformly adopted in the Department of Labor I do not dictate the statements myself We had a meeting I had meetings with various members of the *staff when the bill first came up I read it and attempted to* study it and had my general ideas about it and then referred the various parts to Miss Lenroot, head of the Children's Bureau, and Dr Eliot of the Bureau of Labor Statistics, to get certain figures. The actual preparation of the statement was done in the solicitor's office in the department.

SENATOR DONNELL Do you know who was the person who actually prepared the statement? SECRETARY SCHWELLENBACH I think Mr Tyson actually prepared the statement

*(Senator Donnell, through questions brought out that Secretary Schwellenbach was not personally familiar with the proposed amendments to the Wagner-Murray-Dingell bill)*

SECRETARY SCHWELLENBACH I do not think that you will find in any department of government that there is a situation where if, as I have in the Children s Bureau, they come in with a recommendation that certain amendments should be made to a piece of legislation amendments involving questions in which they are particularly skilled and which they are trained by work and long experience, there is no question about it, I will not dispute it with you I did not prepare these amendments I did not think of them. They were prepared by experts

SENATOR DONNELL The point I am getting at is what I regard as fundamental This is not a criticism of you If there is any criticism I think it is of the entire system We have in your presence here this morning illustrated the prevalence of the practice of bringing in the heads of departments who incorporate into their statements what purports to be their own personal opinion as for illustration I regard their incorporation into the bill as indispensable SECRETARY SCHWELLENBACH When Miss Lenroot and Dr Eliot came in and told me these amendments were necessary, I accepted their views, and it becomes my view

SENATOR DONNELL I understand your statement on that, Mr Secretary The point I make is this that it appears to me what we really should have here, and this is not at all critical of you, what we should have is the personal opinion of the people who have studied these matters rather than merely the use of the prestige of the name of the member of the Cabinet of the President of the United States, who, naturally, could not possibly give detailed personal attention to all these details

SENATOR DONNELL There is a quotation in here from the American Medical Association, which is at page 8 You say apparently takes the position, with respect to the average person in the low income group that despite the absence of a large financial reserve he gets by very well' " I dare say, Mr Secretary, that you could not tell us here personally what the context is in which that is used by the American Medical Association or what publication? I am talking about you personally, what publication that appears in of the American Medical Association, could you? SECRETARY SCHWELLENBACH It was a statement by Dr R L. Sensenich, Chairman of the Board of Trustees, American Medical Association, printed in 'Health Insurance in America" It was a publication of the Chamber of Commerce of the United States

SENATOR DONNELL *Did* you see it in that publication or was that information given to you by somebody else who prepared this portion of this statement? SECRETARY SCHWELLENBACH The information was secured by someone else. That is true.

SENATOR DONNELL You have not seen that publication or the statement by Dr Sensenich yourself, have you? SECRETARY SCHWELLENBACH No, I have not

SENATOR MURRAY It seems to me this is somewhat irrelevant. If the statement is not true, if it is an incorrect statement, of course, it would be proper for you to show that, Senator, but it seems to me that if the statement is made and is taken from some publication the Secretary would be entitled to regard it as truthful and accurate If it is not it would be easy for some one to show that it is not.

SENATOR DONNELL I am not raising a question as to the correctness of the quotation I do not know the context, however, and neither does the Secretary, in which this is used

SENATOR MURRAY What difference would it make, whether he saw the original statement at the time it was published or whether he read it in some newspaper If it is true, that is the important thing

SENATOR DONNELL Have you ever read it anywhere in any newspaper or anywhere else SECRETARY SCHWELLENBACH I never read it.

*(Senator Donnell brought out that some of the amendments concern health insurance)*

SENATOR DONNELL Mr Secretary is there any one in the Department of Labor who has been directed to specialize along the line of study of compulsory health insurance in other nations? The experience that other nations have had in compulsory health insurance? Any one in your department who has been instructed by you or at your direction to make a study of the experience of compulsory health insurance in other nations? SECRETARY SCHWELLENBACH Unless the Bureau of Labor Statistics has been directed by the Congress to do it, I have not directed it, and it has not been done since I have been in, for ten months.

SENATOR DONNELL And you have not been informed of the fact that any one has been directed by Congress or any one else in your department to make a study of the experience in compulsory health insurance in other nations? I am right in that, am I not? SECRETARY SCHWELLENBACH Yes

SENATOR PEPPER Mr Chairman, I would like to intervene just to make an observation to my good friend Senator Donnell We are here for the purpose of trying to find out whether it is in the public interest to adopt this bill or not, and with all deference and respect to my colleague, he is conducting this examination as if the secretary were a criminal instead of a cabinet official, and he is trying to find out whether he is entitled to probity and credibility

SECRETARY SCHWELLENBACH Well—

SENATOR PEPPER Whether there are two titles, what are the numbers? The Senator, I assume, knows the number of titles in the bill To ask a Cabinet official how many titles are in the bill can only be for the purpose of trying to show that the Cabinet officer does not know anything about the bill I do not think that the Senator, on reflection, would want to encumber the record and take the time of the Secretary and his colleague with that kind of rather petty cross examination, if he will permit me to say so I hope that, since the Secretary has indicated he has read the bill several times and he has come here to testify about its substance and contents, that the able Senator will confine his inquiry to the substance and substantial merits of the matter and some of the substantial things which the Secretary said which the Senator has every right to controvert in any way he might want to do so Is that not a fair suggestion?

SENATOR DONNELL Mr Chairman, I appreciate the suggestion from my friend the Senator from Florida, but I may say this, that I think the Secretary would not at all coincide in

the statement that I have conducted this examination as if the Secretary were a criminal. SENATOR PEPPER. I withdraw that

SENATOR DONNELL. Mr. Secretary, has there been anything like that presented to you this morning? SECRETARY SCHWELLENBACH. No. I do not think there is much sense in some of the questions, but I do not mind it.

SENATOR DONNELL. There is a disagreement and every person must use his own judgment. I may say to the Senator from Florida that the theory on which my questions are asked of the Secretary was that the Secretary of Labor comes here with great prestige, and justly so. The statement that he makes goes out all over the nation as the statement of the Secretary of Labor and is entitled to great weight from that standpoint. I think it is perfectly filled with sense if I may use that expression, to interrogate the Secretary as to his own personal knowledge of the contents of the statement which goes out of here with the personal pronoun "I" expression of opinion. I think we are entitled to know, and I think in any proceeding in the land, before a Senate committee, House committee or a court, the examination I am making is perfectly proper.

SENATOR PEPPER. You are exactly right. In a technical court, where you were trying to break down the witness and show he had not personally observed everything he talked about, in a court of law, where a trial was being carried on, the Senator is absolutely correct and he has followed that procedure all through this case, as if he were trying a bitterly contested law suit, and subjecting every witness to the most scrutinous and most severe cross examination which he, as a very eminent lawyer, is able to apply, and I put, at rather long last, the point as to whether the Senator thought we were trying a bitterly contested lawsuit here and that we had to apply to every witness all the cross examination which the able Senator is able to apply to a witness in a lawsuit. If we are trying a lawsuit, we can draw this thing out for six months but I was hoping that the Senator would not ask every witness how many titles were in the bill and all the little things that have but one purpose, and that is trying to make a meticulous inquiry of every word. And all the time the Senator is asking these questions he is sitting at the counsel table advised and assisted by an expert handing him papers and giving him counsel.

SENATOR DONNELL. Yes, which I think is extremely valuable.

SENATOR PEPPER. I do not complain about that with all deference to the Senator. He has brought out some very fine points. But could he not regard this as a hearing before a Senate committee, where we are trying to get the facts and limit his cross examination to questions that would be a little bit more to the general merit and content rather than the character of cross examination in the courts? I submit that with all deference and friendship to the able Senator from Missouri.

SENATOR DONNELL. I appreciate the courtesy of the Senator from Florida. I still submit, however, that inquiry as to the personal knowledge of a witness is of importance and I think that the examination that I have conducted is entirely proper.

*(The debate continued on the nature of Senator Donnell's examination of Secretary Schwellenbach.)*

SENATOR DONNELL. Mr. Secretary, have you read the testimony submitted by the Public Health Service to this committee? Have you read it yourself? SECRETARY SCHWELLENBACH. No.

SENATOR DONNELL. Do you know who testified on behalf of the Public Health Service to this committee? SECRETARY SCHWELLENBACH. No.

SENATOR DONNELL. Let me read you this sentence and this again is not said critically of you but of the system. At page 3 you say: "I am sure you all must have been impressed, as I have been, with testimony submitted by the Public Health Service to your committee ." Now you have not read it and you never saw a line of it did you? SECRETARY SCHWELLENBACH. I think your criticism is absolutely right on that one.

SENATOR DONNELL. I think it is too. I will not pursue this line of questioning further but I think it has been developed here first that there has been a change in the plan that prevailed when the distinguished Secretary was in the Senate. In those days the Senate did not follow the practice of bringing in the top head man in the department, at least to the extent they do now, like the Secretary of Labor. In the second place, we have developed the fact that the Secretary did not write one word of this statement, although he said he struck out a portion of what was submitted to him. SECRETARY SCHWELLENBACH. I made a lot of suggestions.

SENATOR DONNELL. I have no doubt of that and I should amend my statement to that effect. In the third place as the Secretary himself correctly says without any qualification, he thinks my point where it says 'I am sure you all must have been impressed, as I have been, with the testimony submitted by the Public Health Service to your committee' that my criticism is sound and is well founded. Am I right? SECRETARY SCHWELLENBACH. I agree. I should not have said that.

SENATOR DONNELL. Yes, sir. In the next sentence you say 'It is clear, I think, that there is ample basis for the conclusion reached by the Public Health Service that . .' maybe you agree with that?

SENATOR PEPPER. Allow me, at that point to say this will you note the two conclusions attributed to you and state whether or not you do, as an individual sitting here persona, not in absentia agree with those conclusions?

SECRETARY SCHWELLENBACH. Yes, sir. And I might tell the Senator I have had a little experience in the medical business. I practiced law in the city of Seattle for a good many years. I represented an insurance company. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. I have had personal contact. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. With all of the leading members of the medical profession there. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. And I had a lot of experience with reference to the matter. About every night I would get into an argument with one of them. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. About this general question. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. And I told them then. I remember I made a speech before the King County Medical Association, probably in 1925. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. In which I told them unless they would change their system and start out immediately on a voluntary system that the time was going to come when the government was going to take this up. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. I never got very far in any of my arguments or any of my discussions. SENATOR DONNELL. Yes.

SECRETARY SCHWELLENBACH. This is not a new matter to me. I have been thinking about it for a long time.

*(There was much more debate on the nature of Secretary Schwellenbach's testimony and his lack of personal knowledge of his statement.)*

SENATOR DONNELL. Do you, generally speaking, favor the portion of the bill incorporated in title I as far as it pertains to the grants of aid for the carrying out of state plans? SECRETARY SCHWELLENBACH. Yes, subject to the amendments.

SENATOR DONNELL. To the amendments. I understand. Now Mr. Secretary, that is on the theory I think, at least in part, that the local state governments, the local people, the local administration are able to analyze local needs, generally speaking somewhat better than the national government, which is removed from the state to some extent is that right? SECRETARY SCHWELLENBACH. In some areas of the country that is true and in some areas unfortunately it is not true. If all the states of the Union had as forward looking ideas about the necessity of taking care of people as the state of Washington has there probably would never have been any need for the federal government to have any social programs. I am not making any comparison with Missouri (laughter).

SENATOR DONNELL. I was going to ask about Missouri. SECRETARY SCHWELLENBACH. There is at least one man from Missouri who has a very definite understanding of the needs.

SENATOR DONNELL. And that is the President whom you have in mind? SECRETARY SCHWELLENBACH. Yes, sir.

SENATOR DONNELL. Now this legislation you understand to be favored by the administration is that right? SECRETARY SCHWELLENBACH. Yes, sir.

SENATOR DONNELL. And you think it is in line with the recommendations of President Truman. Doubtless you are correct. That is your view, is it not? SECRETARY SCHWELLENBACH. Yes.

SENATOR MURRAY. Mr. Secretary in your statement here you set forth the medical expenditures of families in the various

income groups at the bottom of page 5 Now you do not know that statement to be correct of your own knowledge? You never made that study did you yourself SECRETARY SCHWELLENBACH No

SENATOR MURRAY Do you think that is any reflection on your credibility here today when you come to make a statement that this is true? You got the information I assume from somebody in your department? SECRETARY SCHWELLENBACH The Bureau of Labor Statistics makes those up

SENATOR DONNELL Have you read the recommendations of the House of Delegates of the American Medical Association with respect to this measure? SECRETARY SCHWELLENBACH No sir

SENATOR DONNELL So you did not take that into consideration in formulating your final opinion on the merits of this program SECRETARY SCHWELLENBACH No because my contacts were with the best doctors in Seattle and the best doctors in Spokane. I never agreed with them. They are part of the American Medical Association the finest gentlemen I have ever met. Now that does not mean that because they happen to belong to the Association and because the Association as a whole takes a position that I agree with them

SENATOR DONNELL I understand you disagree with them. You understand that your view here is expressed as diametrically opposed to the views of the American Medical Association? SECRETARY SCHWELLENBACH Yes I have made speeches before the Seattle branch of the American Medical Association

SENATOR AIKEN I think all of us have heard a good many doctors criticize the Association privately and quietly and do not dare to do it out loud for fear of consequences

SENATOR DONNELL You know, Mr Secretary as we do all of us that by far the great majority of all practicing physicians in this country belong to the American Medical Association we know that do we not as a matter of general knowledge? SECRETARY SCHWELLENBACH It is pretty nearly necessary that they do

SENATOR DONNELL They do? SECRETARY SCHWELLENBACH If you want to get into that subject Doctors like to get into hospitals, when they have patients who are sufficiently ill They want to get their patient into a hospital Very often they have difficulty getting into a hospital if they do not belong to the medical association which is a branch of the American Medical Association I know of one doctor in Seattle whom I succeeded in keeping out of hospitals but I had to do it because of the fact that he was not qualified as a member of the medical association.

SENATOR DONNELL That is to say he was a man that was not properly entitled, in your opinion to be in the hospitals and at the same time the society had not taken him in either that is correct, is it not? SECRETARY SCHWELLENBACH He was getting into hospitals despite the fact that every other doctor in town knew he should not be in the hospitals

SENATOR DONNELL And he was not able to obtain membership in the American Medical Association or the local medical society is that right? SECRETARY SCHWELLENBACH Well not on the basis of the methods and procedures that he used.

SENATOR DONNELL But at any rate Mr Secretary you are not undertaking to pass on the question as to whether an expression by the House of Delegates of the American Medical Association is fairly representative of the opinion of the medical profession you are not undertaking to tell us that? SECRETARY SCHWELLENBACH No I do not know anything about that matter

### Statement of Dr Martha M Eliot, Associate Chief of the Children's Bureau of the U S Department of Labor

(*Dr Eliot described her career*)

DR. ELIOT I have been responsible for the health work in the Children's Bureau and the programs of the administration of the Social Security Act since it was passed I am appearing here today in support of the National Health bill S 1606 Miss Lenroot, the chief of the Children's Bureau has asked me to express her great regret that she cannot be here to testify herself in favor of the national health bill She is in New York serving as the secretary of the Temporary Social Commission of the United Nations

The chief barrier to care is the ceilings on the amounts of federal funds available under the Social Security Act. At the end of the fiscal year 1945 there were 20 000 crippled children on state registers who were not receiving the care known to be needed The Emergency Maternity and Infant Care program has shown us how inadequate the facilities for good maternity care in many places are especially in rural areas Many maternity hospitals and homes are ill equipped to give safe care many physicians who include obstetrics in their general practice have had relatively little basic training and little or no opportunity for postgraduate training in this field Good maternity care available to all is a goal that is attainable within the next ten years if the authority to act and the resources to provide it become available

(*Dr Eliot stated that there are 41½ million children under 18 years of age*)

SENATOR DONNELL Might I ask one question there of Dr Eliot On the chart with respect to birth rates in each state I observe with great interest the fact that Iowa Missouri and Illinois in one group and over here New York New Hampshire and Massachusetts each appear to have less than 21 live births per thousand of population I believe New Jersey likewise is included in that list. I do not find that that prevails in any other part of the country What is the explanation of that DR. ELIOT I have no explanation, Senator

SENATOR AIKEN I think Mr Chairman the Senator from Missouri ought to explain that, rather than Dr Eliot. SENATOR DONNELL I could not do that with respect to the matter of the states of Vermont and New Hampshire as well as Senator Aiken could but it is a curious fact right in the center of our country there as to those three states

DR ELIOT Under the conditions which exist today the prospect that the baby's mother will live through childbirth that the baby will be born alive and will survive and grow into a sturdy well child, varies by reason of where he lives the income of his family and his race Over 7,000 mothers die from childbearing each year In 1943 the maternal death rate in Minnesota was 14 mothers per 10 000 live births In New Mexico it was 47 or over three and one half times as high If every state did as well as Minnesota the lives of 3 000 mothers would have been saved in that year Over 100 000 babies die in their first year of life in the United States The lowest rate in 1943 was in Connecticut, 30 per thousand live births In New Mexico which is the state with the highest infant mortality rate 92 babies died in their first year per thousand births If every state had done as well as Connecticut in 1943 the lives of 31 000 babies would have been saved The maternal death rate for Negro mothers was 143 per cent higher in 1943 than for white mothers In the same year the infant death rate for Negro babies during the first year of life was 64 per cent higher than for white babies Seven eighths of all urban babies were born in hospitals in 1943 compared with only one half of all rural babies Three fourths of white babies were born in hospitals in that year compared with only one third of Negro and other non white babies

SENATOR AIKEN Good roads have something to do with that too DR ELIOT Good roads have something to do with that, no doubt.

SENATOR PEPPER Excuse me Dr Eliot. Are you going to give us the number of deliveries that are by midwives? Do you happen to have that in these figures? DR. ELIOT I think we refer to them but I can tell you now it is something over 200 000 there are something over 200 000 women who do not have the care of a physician at the time of birth

SENATOR PEPPER How many births are there in a year in the country? DR. ELIOT At the present time they are running between 2½ million and 2,200,000

SENATOR PEPPER That would be about 10 per cent roughly DR. ELIOT Yes, or a little less than 10 per cent

SENATOR PEPPER A little less than 10 per cent then have no doctors let alone a doctor DR ELIOT That is right The state of Mississippi had the least favorable proportion of births in hospitals in 1944 when 69 per cent of all the births in the state were at home.

(*At Senator Pepper's request Dr Eliot described the E M I C program*)

SENATOR DONNELL Generally speaking would you say that the state health departments did a good job in carrying on the actual operations? DR. ELIOT Very decidedly, Senator Donnell

(*Dr Eliot gave statistics on handicapped children*)

DR. ELIOT All the data available would seem to point to the conclusion that it would be neither desirable nor feasible to undertake to exclude even a small proportion of children from

the benefits of this program and that we must talk in terms of all children, rather than selected income groups when establishing public responsibility for their health and medical care.

SENATOR PEPPER Mr Chairman may I interrupt just one minute? What you have said here is of particular interest to me Dr Eliot in wishing to know what your attitude toward the means test is in furnishing this care to mothers and children Do you favor a means test? DR ELIOT No Senator Pepper I would not Under this bill which would provide the personal health services through some federally collected funds whether it turns out to be what is known as insurance or some other method of collecting of funds so far not yet declared, nevertheless, under this bill all persons entitled to those personal health benefits would presumably get their care as a right, as an entitlement Now one does not want at the same time, certainly to introduce in another part of the same bill a provision which would establish a means test for noninsured children

*(Senator Pepper described 3 cases of people who could not pay for medical care)*

SENATOR MURRAY Would it be possible for these low income families and especially the larger families, to be provided for under a voluntary insurance system? DR ELIOT To my way of thinking, the amount that it costs to provide for really complete medical care of the kind that I visualize for these children under a voluntary scheme certainly would be impossible in the lower groups and by lower groups I mean the type that we have been describing here—say a family of four with less than $2 700

SENATOR MURRAY There was a lady testifying here yesterday who seemed to have great confidence in the idea that a voluntary system could be provided that would cover the entire country and give medical care to everybody in the United States It seems to me, in listening to her testimony that she had not given very careful study to the facts and was not familiar with the subject, as you seem to be You have made a careful study of it, and I think your judgment on the proposition that a voluntary system would not provide proper medical care for those families should be accepted by the committee

SENATOR MURRAY Would it be possible to get those hospitals in rural areas, in poorer sections of our rural areas of the country, without the hospital bill? I mean without this insurance system that we are talking about DR ELIOT Of course, one of the questions I raised when I was testifying as to that bill S 191, was "Who is going to care for the hospitals?" It is fine to build them but who is going to get the people into those hospitals? Either a provision has to be made there or somewhere because people simply cannot pay for hospital care for children for maternity care, in many many instances unless it is made possible for them We need a lot more professional personnel and I have listed here some of them We have about 2 500 pediatricians We reckon that we ought to have 7,400 We perhaps need 5 000 more obstetricians in the country to do a really good maternity care job for every mother in the country We need probably 34 000 dentists trained in children s dentistry We have now 19 000 public health nurses and we without question I think need 50 000 more We need some 15 000 additional graduate nurses for institutional and private duty We need some 10 000 additional psychiatrists That is a round figure because we do not know how many we need to handle these services for children For instance, there are twenty five states in which there is not a single child guidance clinic in any community in the state. Therefore there is no question of the need in that area

SENATOR MURRAY Are the present medical schools of the country adequate to furnish these? DR ELIOT It is awfully hard for me to answer that question Senator Murray I think we need more doctors There is not any doubt we need more doctors Now I do not know whether the present medical schools are sufficient if their facilities are expanded. But I know that certain of the medical schools are placed in smaller cities One I am most familiar with is Yale in New Haven You cannot undertake to teach too large a group of medical students within a given city where the clinical facilities for instruction are limited by the size of the city So just whether there should be more medical schools or whether the existing ones should be expanded I am not in a position to say I should think there might be a need for some more.

It has been asserted by various witnesses appearing before this committee—almost as a truism—that the quality of medical care will deteriorate under a national health program financed by an insurance plan which entitles all insured persons to care and permits per capita methods of payment to physicians and the establishment of panels The Children s Bureau experience in administering medical care programs however is that the quality of care can actually be improved The result under a national health program will depend on the amount of responsibility assumed by the federal state and local health agencies with the advice and assistance of the medical and allied professions for (1) the provision of adequate facilities (2) the establishment of standards of medical and institutional care (3) making available or arranging for consultation service and for facilitation of group practice of specialists and general practitioners, (4) review of care rendered (5) recruitment training and adequacy of remuneration of professional and technical personnel and (6) effective and fair administration in the interests of the people to be served and the persons and agencies furnishing service and care Improvement in quality of care can be accomplished even under conditions that call for a rapidly expanding service provided as a 'right This has been shown in a relatively small and limited way in the maternity and infant care offered the wives and infants of service men during the war

SENATOR DONNELL Have you read Dr Getting s testimony? DR ELIOT I think I have read it all I am not certain

*(Senator Donnell by his questions reemphasized the action of the Association of State and Territorial Health Officers as expressed by Dr Getting)*

*(To be continued)*

## Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St., Chicago 10 Secretary

American Academy of Tuberculosis Physicians San Francisco June 30 Dr Oscar S Levin P O Box 7011 Denver 6 Colo Secretary

American Association for the Study of Goiter Chicago June 20-23 Dr Thomas C Davison 478 Peachtree St N E Atlanta 3 Ga Secretary

American Association for the Surgery of Trauma San Antonio Texas June 26-28 Dr Gordon M Morrison 520 Commonwealth Ave Boston Secretary

American Association of Genito Urinary Surgeons Stockbridge Mass June 20-22 Dr Charles C. Higgins 2020 E 93d St Cleveland 6 Secretary

American College of Allergists San Francisco June 28 30 Dr Fred W Wittich 401 LaSalle Medical Bldg Minneapolis 2 Secretary

American College of Chest Physicians San Francisco June 27 30 Mr Murray Kornfeld 500 N Dearborn St Chicago 10 Executive Secretary

American College of Radiology San Francisco June 29 Mr Mac I Cahal 20 N Wacker Drive Chicago 6 Secretary

American Medical Women s Association San Francisco June 29 30 Dr Beulah Cushman 25 E Washington St Chicago Secretary

American Neurological Association San Francisco June 26-28 Dr Henry Alsop Riley 117 E 72d St New York 21 Secretary

American Ophthalmological Society San Francisco, June 26-28, Dr Walter S Atkinson 129 Clinton St Watertown N Y Secretary

American Orthopedic Association Hot Springs Va June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2 Secretary

American Physiotherapy Association Black Mountain N C June 16-22 Miss Margaret A. O Neill 1790 Broadway New York 19 Secretary

American Proctologic Society San Francisco June 30 Dr Harry E Bacon 2031 Locust St Philadelphia 3 Secretary

American Radium Society San Francisco June 28 29 Dr Edward H Skinner 1103 Grand Ave Kansas City 6 Mo Secretary

American Society for the Study of Sterility, San Francisco June 29 30 Dr John O Haman 490 Post St. San Francisco 2 Secretary

American Society of Clinical Pathologists San Francisco June 27 30 Dr A S Giordano 531 N Main St South Bend Ind Secretary

American Urological Association Cincinnati, July 22 25 Dr Thomas D Moore 899 Madison Ave Memphis 3 Tenn Secretary

Association for the Study of Internal Secretions San Francisco June 28-29 Dr Henry H Turner 1200 N Walker St Oklahoma City Secretary

Idaho State Medical Association Boise June 17 20 Dr F B Jeppesen 105 N 8th St. Boise Secretary

Maine Medical Association Poland Spring June 23-25 Dr Frederick R. Carter 142 High Street, Portland 3 Secretary

Montana Medical Association of Great Falls July 18 20 Dr Raymond F Peterson 9 W Granite St Butte Secretary

National Gastroenterological Association New York June 19 21 Dr G Randolph Manning 819 Broadway New York 23 Secretary

Society for Investigative Dermatology San Francisco June 30 Dr S William Becker 55 E Washington St Chicago 2 Secretary

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

## ALABAMA

**Personal.**—Mr. A. T. Rossano Jr., U. S. Public Health Service, recently director of the division of industrial hygiene, Colorado State Board of Health, Denver, has been appointed to a similar position for the division of industrial hygiene of the Alabama Department of Public Health.

**Gift of Portraits.**—A feature of the recent meeting of the Medical Association of the State of Alabama was the presentation of portraits of Hon. Chauncey Sparks, governor of the state, and Dr. William D. Partlow, Tuscaloosa. The portraits were given to the University of Alabama and were accepted by the president, Raymond R. Paty, LL.D., and for the Medical College of Alabama by the dean, Dr. Roy R. Kracke. The portrait of the governor was painted by Mr. Milner Benedict and that of Dr. Partlow by Mr. John Clary Parker, New Orleans. The gift denoted the appreciation of Alabama and friends of the governor and Dr. Partlow for their work toward procuring the Medical College of Alabama, where the portraits will hang.

**Faculty Appointments.**—On May 1, Dr. Roy R. Kracke, dean, Medical College of Alabama, Birmingham, made available a complete list of faculty appointments for the new school. Included in the list appear the following:

Department of anatomy: Dr. Charles M. Goss, professor and chairman; James O. Foley, Ph.D., and Thomas E. Hunt, Ph.D., associate professors.

Department of biochemistry: Emmett B. Carmichael, Ph.D., professor and chairman; Alan Hisey, Ph.D., assistant professor.

Department of bacteriology and clinical pathology: Dr. Ralph McBurney, professor and chairman; Dr. William H. Riser Jr., associate professor of clinical pathology.

Department of pathology: Dr. Roger D. Baker, professor and chairman; Dr. Jasper D. Bush, associate professor; Drs. Albert E. Casey and Joseph A. Cunningham, assistant professors.

Department of physiology and pharmacology: John M. Bruhn, Ph.D., professor and chairman; Robert S. Teague and Samuel R. Tipton, Ph.D., associate professors; Philip Hitchcock, Ph.D., assistant professor.

Department of gynecology: Dr. William N. Jones, professor and chairman; Dr. Marye Y. Dabney, professor of clinical gynecology; Drs. Gilbert F. Douglas and Lee F. Turlington, associate professors of clinical gynecology; Drs. Louise H. Branscomb and James H. Williams, assistant professors.

Department of medicine: Drs. James S. McLester, professor and chairman; Dr. Seale Harris, professor emeritus of medicine; Dr. Roy R. Kracke, professor of clinical medicine; Dr. Ray O. Noojin, associate professor of medicine (dermatology and syphilology) and executive officer of the department; Drs. Edgar G. Gevhun Jr., Joseph E. Hirsh and James B. McLester, associate professors; Drs. William S. Armour, Ivan C. Berrey, James O. Finney, Ellis D. Lineberry and Richard O. Russell, assistant professors; Dr. Tom D. Spies, visiting professor of research medicine; Dr. Carl F. Vilter, visiting associate professor of research medicine.

Department of obstetrics: Dr. James R. Garber, professor and chairman; Dr. Thomas M. Boulward, associate professor; Drs. John Casangelo, Semond U. Newfield and James L. Seibold, assistant professors.

Department of orthopedic surgery: Dr. John D. Sherrill, professor and chairman; Dr. H. Earle Conwell, associate professor.

Department of otorhinolaryngology: Dr. Gilbert E. Fisher, professor and chairman.

Department of ophthalmology: Dr. Alston Callahan, professor and chairman.

Department of radiology: Dr. Nelson Banfield Carter, professor and chairman; Dr. Allison E. Imler, associate professor.

Department of pediatrics: Dr. Alfred A. Walker, professor and chairman; Dr. Beach Chenoweth, associate professor and executive officer of the department; Drs. Hughes Kennedy Jr., Clifford L. Lamar and John W. Simpson, associate professors; Drs. Ruth R. Berrey, Jerome C. Chapman, Wallace A. Clyde, Claude C. McLean, Jerome Never and Stewart H. Welch, assistant professors.

Department of public health: Dr. George A. Denison, professor and chairman; Dr. John E. Christzbert and Guy M. Tate, M.S., assistant professors.

Department of surgery: Dr. James M. Mason, professor of clinical surgery and chairman; Dr. Earle Dreumen, professor of clinical surgery; Drs. Neal L. Andrews and Alice McNeal, associate professors of clinical surgery (proctology and anesthesiology respectively); Drs. Dan C. Donald and Frank C. Wilson, associate professors; Drs. John I. Carmichael, William H. Beddow, Benjamin M. Carraway, Joseph M. Donald, J. M. Forney, Robert I. Guthrie (executive officer of department), Hugh M. C. Linder, James M. Mason III and William J. Rosser, assistant professors.

Department of neurology, neurosurgery and psychiatry: Dr. Walter G. Haynes, professor and chairman (neurosurgery); Drs. Garber Galbraith (neurosurgery), Frank A. Kay (psychiatry), Wilmot S. Littlejohn (neurology) and Donald Ramsdell, Ph.D. (psychology), associate professors; Drs. Samuel C. Little (neurology) and William B. Patton (neurosurgery), assistant professors.

Department of urology: Dr. Walter F. Scott, professor of clinical urology and chairman; Dr. Bruno Barclare, associate professor of clinical urology; Drs. Thomas Collins, Robert M. Cothran, Charles F. Lewis and Jarratt P. Robertson, assistant professors.

## ILLINOIS

**Special Society Election.**—On May 4, Dr. Joseph A. Luhan, Chicago, was elected president of the Illinois Psychiatric Society. Other officers include Dr. Delmar Goode, Downey, and Dr. Charlotte G. Babcock, Chicago, secretary-treasurer.

**Personal.**—Dr. Douglas Boyd has been appointed president of the Highland Park Board of Health, succeeding Dr. Donald E. Rossiter, Highland Park, who resigned effective April 1. Dr. Rossiter had held the position since 1931, except while on military leave.

**Cook County First to Place Milk Control in Health Department.**—Cook County is said to be the first county in Illinois to pass an ordinance regulating the handling, labeling, sale and distribution of milk and milk products. The ordinance provides that only pasteurized milk and milk products are to be sold within the area of jurisdiction of the health department and gives the county health department the responsibility to enforce it. The county health department, of which Dr. Edward A. Piszczek, Chicago, is director, has just made available a report covering health activities for the period 1941-1945. The report presents graphically the service of the department to the suburbs and Cook County. The first organized public health work in this area was begun on July 1, 1940, when the Cook County Public Health Unit was established in the Bureau of Public Welfare as a cooperative agency of the board of commissioners, Illinois Department of Public Health, and U. S. Public Health Service. On Dec. 10, 1945 the board of commissioners reorganized the unit and established the Cook County Department of Public Health to serve all of Cook County except Chicago, Evanston and Winnetka-Kenilworth. The health department extends its services to more than 600,000 people in an area of 735 square miles.

### Chicago

**Personal.**—Dr. Louis B. Shapiro, recently released from military service, has been appointed clinical director of the Chicago State Hospital.

**John Mote Joins Armour Laboratories.**—Dr. John R. Mote, formerly associate director of research at the House of the Good Samaritan, Boston, and assistant in the department of preventive medicine, Harvard Medical School, Boston, has been appointed medical director of the pharmaceutical division of the Armour Laboratories. Dr. Mote graduated at Harvard Medical School in 1935 and went to London in 1940 as liaison officer to assist in setting up the Harvard-American Red Cross Hospital. While in London he was medical adviser to the American Red Cross and American liaison officer in the Ministry of Health. When he returned to the United States in 1941 he enlisted in the United States Naval Reserve and at the request of the British Supply Council became medical director of the British Supply Mission.

**Statue of Apollo Unveiled.**—A statue of Apollo, commemorating the founding of the first chapter of Alpha Omega Alpha, national honorary medical fraternity, on the Chicago campus of the University of Illinois in 1902, was unveiled in ceremonies at the University of Illinois College of Medicine June 5. The statue is situated between the archway of the Medical, Dental and Pharmacy Building, 1853 West Polk Street, and the entrance to the Research and Educational Hospitals of the university. Speakers at the unveiling ceremony included Dr. Walter L. Bierring, Des Moines, Iowa, national president of Alpha Omega Alpha; Dr. Josiah J. Moore, national secretary-treasurer of the group, Dr. Raymond B. Allen, executive dean of the Chicago colleges and Dr. David J. Davis, dean emeritus of the college of medicine. Dr. Warren H. Cole, was master of ceremonies. The statue was financed by alumni and members of the local chapter and the national organization of Alpha Omega Alpha. Mrs. Olga Chassaing, the artist who made the original model for the statue, died in 1943. Her husband, George Chassaing, also an artist, completed her work.

**Physicians and Lawyers Cooperate in Medical Testimony.**—The Chicago and Illinois Bar Associations joined with the Chicago Medical Society to correct abuses arising from inexpert medical testimony in civil and criminal courts, the Chicago *Daily News* reported May 20. They have announced adoption of the Minnesota Plan and sent copies of it to all judges and hearing officials. Under the plan, when questionable testimony is offered, the judge, lawyer or physician should write a letter to the medical society giving the name of the medical witness, the name and number of the case and where and when it was tried. A committee of the medical group will, at its own expense and with the aid of the bar association, obtain a transcript of the record, and, if need be, call in

specialists in the field of medicine involved If the committee finds that the medical witness testified falsely or lacked knowledge of the subject and his testimony disregarded the truth proper disciplinary action will be taken before the Illinois Department of Registration and Education Likewise judges and other parties taking part in such cases will write a similar letter to the appropriate bar group if there is reason to believe that the attorney using such testimony did so knowing its falsity or lack of qualification of the witness

## KENTUCKY

**Health Center Named for Physician.**—The new Paducah-McCracken County Health Center has been named the Van A Stilley Clinic after Van A Stilley, who did so much to promote public health improvement in West Kentucky according to Paducah newspapers, April 19 Dr Stilley died in 1944 while president of the Kentucky State Medical Association He served many years as field director in the Paducah area in the state department of health The health center, which cost about $83 000 was built by the city and county in cooperation with the federal government

## LOUISIANA

**George Haik Named Professor**—Dr George M Haik New Orleans, has been appointed professor of ophthalmology at the Louisiana State University School of Medicine, New Orleans. He succeeds the late Dr Theodore J Dimitry

## MASSACHUSETTS

**State Health Department News**—The Massachusetts Department of Public Health announces the following news concerning its personnel

Dr William J Welch has been appointed physician in chief of the Mobile Blood Donor Unit of the division of biologic laboratories

Dr Donald A Martin acting superintendent of the Lakeville State Sanatorium in Middleboro has been appointed director of the Massachusetts hospital and health center survey program

Dr Robert E Ober has returned from service with the Mediterranean Allied Air Forces to his position as epidemiologist with the division of communicable disease

Dr Robert A MacCready recently discharged from the Medical Corps U S Army where he held the rank of major has returned to the Massachusetts Department of Public Health as epidemiologist in the division of communicable disease. He will be in administrative charge of the department s laboratory approval program.

Mary Carr Baker formerly supervisor of public health education is now field program supervisor of the department s new blood program. As field representative Mrs. Baker supervises collaborative activities between the department the American Red Cross and community organizations in arranging for local participation in the blood donor service.

Philip W Johnston Ph D has returned to the division of maternal and child health as research consultant in field service in child growth and development, his duties including the preparation and validation of tests of vision and hearing for school children

Dr Leon A Alley has returned from five years in the Army of the United States to resume his position as superintendent of the Lakeville State Sanatorium in Middleboro

## MICHIGAN

**Resolution on Cars for Medical Veterans**—On May 6 the council of the Wayne County Medical Society unanimously adopted a resolution asking the presidents of automobile manufacturing companies to allocate cars to medical veterans Dr Winfred B Harm Detroit newly installed president of the county medical society was designated by the council to be the first physician in the area to have a telephone installed in his automobile. Dr Clarence L Candler is president-elect of the county medical society Dr Warren W Babcock secretary and Dr James J Lightbody chairman of the board of trustees all of Detroit. Dr Ralph A. Johnson is editor of *Detroit Medical News* official journal of the society

## NEW YORK

**Physician Honored**—Dr Frederick L. Sinclair Oswego was guest of honor at a dinner given by the Oswego Academy of Medicine recently in recognition of his completion of fifty years in the practice of medicine He was voted an honorary member of the academy and also honorary member of the medical staff of the Oswego Hospital Dr Sinclair was presented with a gold wrist watch

**City Library Rejects Book on Chiropractic**— The Case for Chiropractic in the Literature of Medicine issued recently by the New York State Chiropractic Association was rejected by the Rochester Public Library John A Lowe director of the library ordered all copies sent to local branches returned to the sender Mahlon E Blake president of the Rochester Chiropractic Society In a statement to the press Mr Lowe said that the practice of chiropractic is not licensed in New York The book is "trying to stimulate interest in going into the practice' On the basis of the small demand for this type of literature, the volume was rejected

### New York City

**Botanical Garden Receives Gift for Medicine**—An anonymous gift of $250,000 has been received by the New York Botanical Garden in the Bronx to finance an expanded program of research at the garden in the use of plants in medicine, according to the New York *Herald Tribune*

**Personal**—Louis I Dublin Ph D second vice president and statistician of the Metropolitan Life Insurance Company, has been named an officer of the order of public health of the Republic of France in recognition and appreciation of a survey of child health and other health problems carried on in France by Dr Dublin as representative of the American Red Cross during the fall of 1945

**Appointments at Warner and Company**—Dr Ralph D Shaner formerly medical director of Hoffmann LaRoche Inc, has been appointed to a similar position with the William R Warner and Company, Inc Heinz M Wuest Ph D, formerly director of research at Hoffmann-LaRoche Inc has been named vice president, scientific and technical director and head of the Warner Institute for Therapeutic Research

**Meeting to Commemorate Food and Drugs Act**—On June 25 the New York State Bar Association will hold a meeting at the headquarters of the city bar association 42 West 44th Street, to commemorate the fortieth anniversary of the original Federal Food and Drugs Act of June 30, 1906 Among the speakers will be

Hon Watson B Miller Washington D C Introduction to the Act
Mr Charles W Dunn New York Its Legislative History
Mrs Harvey W Wiley Washington, Its Great Founder
Mr Fred B Lanton formerly of Washington Its Distinguished Administrators
Paul B Dunbar Washington Its Administrative Progress
Mr W R M Wharton New York Its Inspection Evolution.

An evening session on the "National Food Drug and Cosmetic Law instituted by the 1906 act will be addressed by Hon. J Howard McGrath, Washington A Fundamental Law of the Land" Dr Thomas Parran, Its Basic Significance for Public Health' Mr Clarence Francis New York 'Its Basic Value to Food Industry Mr S DeWitt Clough Glencoe Ill, 'Its Basic Value to Drug Industry and Dr H Gregory Thomas, 'Its Basic Value to Cosmetic Industry"

## OHIO

**Fifty Years of Practice**—Dr John H Thesing Cincinnati, recently completed fifty years in the practice of medicine ——On April 2 Dr Edwin J Koontz Wadsworth observed his fiftieth year in medical practice

**New Executive Director for Hearing and Speech Center**—George J Fortune Cleveland recently released from military service has been appointed executive director of the Cleveland Hearing and Speech Center Western Reserve University School of Medicine Mr Fortune has been director of pupil personnel services in the Garfield Heights city schools He will succeed Lowell C Ruch who has been with Garfield Heights and the Hearing and Speech Center for the last eleven years and who will take a similar post in Los Angeles The Cleveland Hearing and Speech Center known as Garfield House, which was the name of the project established in 1924 now has headquarters on the Western Reserve campus Its former home is now occupied by the Cleveland Health Museum (THE JOURNAL, June 9 1945 p 453 Feb 16 1946, p 438)

**Appointments at Western Reserve**—Dr John H Dingle, director of the commission on acute respiratory diseases U S Army epidemiologic board Washington D C., has been appointed Elisabeth Severance Prentiss professor of preventive medicine to succeed Dr James A Doull at Western Reserve University School of Medicine Cleveland who resigned to join the staff of the U S Public Health Service (THE JOURNAL Oct. 13 1945 p 524) Other appointees who served with Dr Dingle as members of the commission with the army include Dr George F Badger Baltimore who has been named associate professor of biostatistics and Drs Alto E. Feller, Iowa City, Charles H Rammelkamp Jr Boston and Richard G Hodges New York who will hold positions in the departments of medicine and pediatrics The appointment of the group of five army scientists figures in a move to establish the medical school and university hospitals at Western Reserve as an important center in the study and promotion of disease prevention and will initiate a preventive medicine program which has a direct bearing on prevention in the clinics and

hospitals and in the population of Cleveland as well as the rest of northern Ohio ' In a statement to the press Dr Joseph T Wearn dean of the medical school said that ' findings in the Selective Service boards and studies such as those carried out by the respiratory disease commission have demonstrated quite clearly that preventive medicine is on the eve of a great advance Many things they have learned can now be applied Dr Dingle was in charge of the commission on acute respiratory diseases throughout the war and recently the Surgeon General of the U S Army Medical Corps appointed him peacetime director

## PENNSYLVANIA

**New Chairman of State Medical Board**—Dr Charles L Shafer Kingston has been appointed chairman of the Pennsylvania State Board of Medical Education and Licensure succeeding the late Dr Paul R Correll

**Personal**—Dr Jacob H Garber Elizabethtown was named on April 8 deputy coroner of Elizabethtown Borough——Dr Roval H McCutcheon Bethlehem was elected president of the Pennsylvania Tuberculosis Society April 26——Dr Eugene L Stelke has resigned as superintendent of the Danville State Hospital, Danville to accept a similar position at the Philadelphia State Hospital Dr Vincent J Cassone Danville has been named acting superintendent

### Philadelphia

**Million Dollars for Surgical Research**—Dr Theodore L Chase a retired Philadelphia surgeon now living in Reno Nevada has increased his contribution of $450 000 to Temple University School of Medicine to $1 000 000 The gift is to establish and endow a surgical research foundation with special emphasis on cancer (THE JOURNAL Dec 1 1945, p 972)

**William Parkinson Honored**—The General Alumni Association of Temple University has selected Dr William N Parkinson, dean of the school of medicine and director of the Temple University Hospital to receive the Alumni Distinguished Service Award for 1946 in recognition of his 'years of conspicuous service to the university Dr Parkinson graduated at Temple University School of Medicine in 1911 and has been dean since 1929 He also served as assistant dean of the school from 1922 through 1925 when he was appointed chief surgeon and director of hospital work for the Florida East Coast Railroad

### Pittsburgh

**The Mellon Lecture**—John S Nicholas Ph D Sterling professor of biology Yale University New Haven gave the twenty-ninth Mellon Lecture sponsored by the Society for Biological Research of the University of Pittsburgh School of Medicine May 16 His subject was "An Analysis of Mammalian Development.'

**Coordinating Conference**—The Pennsylvania Department of Welfare sponsored the first annual coordinating conference at the Western State Psychiatric Institute and Clinic Pittsburgh April 4 5 Psychiatry and the community was the theme of the conference which aimed to bring together interested persons in the fields of psychiatry psychiatric nursing psychology and psychiatric social service. About 700 persons attended Among the speakers were

Dr Howard K Petry Harrisburg Pa The Present Status of the Pennsylvania Mental Hospital System
S M R O Hara secretary of welfare Developments Anticipated in the Future
Dr Samuel B Hadden Philadelphia Croup Psychotherapy
Drs Theodore L Dehne Philadelphia Asa C Isham Robert A Clark Floyd H Bragdon and John A Malcolm Treatment of Overactive and Agitated States
Drs Samuel W Hamilton Washington D C Alexander H Colwell and Hilding A Bengs Harrisburg Psychiatric Hospital in the Community
Drs James H Wall White Plains N Y Robert H Israel North Warren Pa and Henry A Murray Washington D C Problems of Social Service Nursing and Psychology

## SOUTH CAROLINA

**State Medical Election**—Dr Olin B Chamberlain Charleston was named president-elect of the South Carolina Medical Association at its meeting in Myrtle Beach April 30 and Dr James C McLeod Florence was installed as president. Dr William H Moncrief State Park was elected vice president of the association and Dr Julian P Price, Florence, reelected secretary-treasurer

**Harry Wilson Returns as Director of Industrial Health**—Dr Harry F Wilson has returned from service in the army to resume his position as director of the division of industrial health South Carolina State Board of Health Dr George H Zerbst, Columbia, who acted as director of the division during Dr Wilson's absence has been seriously ill and is on leave at the present time

**James McLeod Candidate for Governor**—Dr James C McLeod, Florence, president of the South Carolina Medical Association, announced on May 14 that he would be a candidate for the Democratic nomination for governor of South Carolina in the state primary election in July Dr McLeod who was born in Florence, graduated at Cornell University Medical College in 1922 He is the son of the late Dr Frank H McLeod founder of the McLeod Infirmary

## HAWAII

**Lectures on Pharmacology**—Chauncey D Leake Ph D., vice president and dean, University of Texas Medical Branch Galveston opened a group of lectures on recent advances in practical pharmacology in Hawaii May 3 under the auspices of the Honolulu County Medical Society Dr Leake also gave lectures from May 6 to the 17th

## GENERAL

**Diploma Stolen**—Dr Karl V Kaess Commander (MC) announced that his license to practice medicine in California was stolen from his car in San Francisco, Oct 20 1945 The license was dated June 4, 1945 and its number was A 11004

**Publication of Southern Surgeon to be Resumed**—On July 1 publication of the *Southern Surgeon* will be resumed according to Dr Benjamin T Beasley, Atlanta Ga, managing editor It was necessary to discontinue publication during the war The *Southern Surgeon* is published by the Southern Surgeon Publishing Company, 701 Hurt Building Atlanta Ga

**Survey of Nursing Organizations**—Raymond Rich Associates have been appointed to direct a structural study of six national professional nursing organizations Its sponsoring committee includes representatives of the American Nurses Association National League of Nursing Education National Organization for Public Health Nursing National Association of Colored Graduate Nurses Association of Collegiate Schools of Nursing and American Association of Industrial Nurses

**Gastroenterologic Meeting**—The National Gastroenterological Association will hold a meeting June 19 21 at the Hotel Pennsylvania New York, under the presidency of Dr Anthony Bassler New York. The program will be devoted to symposiums on peptic ulcer, infectious hepatitis carcinoma of the gastrointestinal tract psychosomatic medicine and the gallbladder

**Special Society Election.**—Walton B McDaniel Ph D Philadelphia was elected president of the Medical Library Association at its meeting in New Haven, March 25 27 Other officers include Dr Christopher Abbott Being Newark N J vice president, Miss Heath Babcock Albany N Y secretary and Mr Jurgen G Raymond New York treasurer It was decided to hold the 1947 convention in Cleveland the exact date to be determined later

**Oswald Avery Awarded Kober Medal**—Dr Oswald T Avery of the Rockefeller Institute for Medical Research New York has been presented with the Kober Medal of the Georgetown University School of Medicine Washington, D C for his investigations connected with pneumonia The selection was made by the Association of American Physicians under the terms of the Kober Foundation provided by the late Dr George M Kober former dean of the Georgetown medical school

**Conference of Presidents**—The second annual Conference of Presidents and other officers of state medical associations will be held June 30 at the Sir Francis Drake Hotel San Francisco under the presidency of Dr Andrew S Brunk, Detroit The speakers will include

Dr Julian P Price Florence S C Why Have a Conference of Presidents?
Dr Carl E Anderson San Francisco Nationwide Sickness Insurance How and When?
Dr Lowell S Goin Los Angeles The Public Health the Politician and the Doctor
Dr Edward J McCormick Toledo Ohio Saving Lives and Saving Democracy

**Legion Gives $50,000 for Heart Study**—The American Legion and its auxiliary gave $50,000 May 11, to the American Heart Association to assist in its campaign against rheumatic fever and heart disease Each group gave $25 000 Half of the fund will be used in obtaining reportable data on rheumatic diseases in stimulating a case finding program among school children and on the community level in initiating an immediate

guidance program for prevention and care and in the vocational rehabilitation and training of victims The other $25,000 will be used for research into the relationship of bacteria to the occurrence and recurrence of rheumatic fever

**Orthopedic Association Meeting**—The 1946 meeting of the American Orthopaedic Association will be held in Hot Springs, June 27-29, under the presidency of Dr J Albert Key, St Louis Among the speakers on the program will be

Dr Steele F Stewart Honolulu Hawaii Preemployment Back Examinations and Their Significance
Dr Sterling Bunnell San Francisco Active Splinting to Move Joints into Position for Function and for Paralyses
Dr Gordon Murray Toronto Ont, Canada End Results of Bone Grafting for Nonunion of the Carposcaphoid, Based on the Study of 100 Cases
Harry Platt M S London England Some Problems Related to Tumors of Bone
Dr David M Bosworth New York Fracture Dislocation of the Ankle with Fixed Displacement of the Fibula Behind the Tibia

**Meeting of Genitourinary Surgeons**—The fifty seventh meeting of the American Association of Genito-Urinary Surgeons will be held at the Red Lion Inn Stockbridge, Mass, June 20-22, under the presidency of Dr Alexander R. Stevens New York Speakers included in the program will be

Drs. James C McClelland and Kenneth F Davis Toronto Ont, Canada Patent Urachus Associated with Urinary Tuberculosis
Dr John K Ormond Detroit The Treatment of Stress Incontinence
Drs Arthur H Crosbie and Joseph Fischmann Boston Bladder Complications in Fractured Pelvis
Dr George N Papanicolaou New York Cytology of the Urine Sediment in Neoplasms of the Urinary Tract
Dr William P Herbst Jr Washington D C The Present Picture in Chemotherapy in Prostatic Carcinoma
Drs Meredith F Campbell New York and John L Work Montclair N J Massive Fatal Air Embolism Following Suprapubic Prostatectomy

**Association for the Study of Goiter**—The 1946 meeting of the American Association for the Study of Goiter will be held at the Drake Hotel Chicago June 20 22, under the presidency of Dr J De J Pemberton, Rochester, Minn Included among the speakers will be

Dr Johannes Wahlberg Helsingfors Finland The Histophysiology of the Thyroid
Dr Brown M Dobyns Rochester Minn The Tissue Changes in Experimental Exophthalmos.
Dr Ernest P McCullagh, Cleveland Comparative Effects of Pituitary Irradiation Therapy and Electrocautery to the Pituitary in Cases of Severe Exophthalmos of Graves Disease.
Dr Saul Hertz Chestnut Hill, Mass Use of Radioactive Iodine Therapy in Graves Disease
Dr Willard O Thompson Chicago The Present Status of Thiouracil in the Treatment of Toxic Goiter
Dr Brien T King Seattle Further Report on the Operation for Bilateral Vocal Cord Paralysis

**New Allergy Fund**—On May 13 the organization of the American Allergy Fund was announced It is said to be a national nonprofit society 'dedicated to the exclusive support of study and research in allergy and the education of physicians and the public in this field.' The new fund aims to encourage undergraduate, graduate and postgraduate study in allergy, to sponsor professional and public education in allergy and to stimulate, support and reward research in the problems of allergy Mr S S Kalwary is executive secretary of the American Allergy Fund, 300 Stone Building 10616 Euclid Avenue, Cleveland 6, and members of the board of trustees are Drs Harry L Alexander St. Louis, James H Black Dallas Texas Stearns S Bullen Rochester N Y Milton B Cohen, Cleveland Jonathan Forman, Columbus Ohio Jerome Glaser, Rochester, N Y Francis M Rackemann, Boston, Harry L Rogers Philadelphia and Oscar Swineford Jr Charlottesville Va.

**Book Center Announces Program.**—The American Book Center for War Devastated Libraries, Inc, has been formed to assist in rebuilding the devastated libraries of the war areas It is collecting and shipping abroad scholarly books and periodicals which will be useful in research and necessary in the physical economic, social and industrial rehabilitation and reconstruction of Europe and the Far East According to an announcement the center cannot purchase books and periodicals it must depend on gifts from individuals, institutions and organizations Each state will be organized to participate in the program through the leadership of a state chairman Other chairmen will organize interest in the principal subject fields Cooperation with these leaders or direct individual contributions are welcome Any one wishing to cooperate should ship their donations to the American Book Center in care of the Library of Congress Washington 25 D C All shipments should be sent prepaid via the cheapest means of transportation The new group is sponsored by the Joint Committee on Books for Devastated Libraries which is made up of representatives of various national library associations

**Prevalence of Poliomyelitis**—Reports of cases of poliomyelitis for the periods indicated have been received from the division of public health methods, U S Public Health Service, as follows

| Division and State | Total to May 25 | | Week Ended June 1 | |
|---|---|---|---|---|
| | 1946 | 1945 | 1946 | 1945 |
| New England states | | | | |
| Maine | 1 | 8 | 0 | 0 |
| New Hampshire | 2 | 0 | 0 | 0 |
| Vermont | 7 | 3 | 0 | 0 |
| Massachusetts | 8 | 14 | 0 | 0 |
| Rhode Island | 0 | 1 | 0 | 0 |
| Connecticut | 9 | 5 | 0 | 0 |
| Middle Atlantic states | | | | |
| New York | 68 | 151 | 4 | 3 |
| New Jersey | 10 | 12 | 0 | 4 |
| Pennsylvania | 20 | 15 | 1 | 3 |
| East North Central states | | | | |
| Ohio | 22 | 26 | 1 | 0 |
| Indiana | 7 | 14 | 1 | 1 |
| Illinois | 21 | 19 | 5 | 1 |
| Michigan | 10 | 9 | 1 | 0 |
| Wisconsin | 14 | 7 | 0 | 0 |
| West North Central states | | | | |
| Minnesota | 4 | 8 | 2 | 0 |
| Iowa | 17 | 3 | 3 | 0 |
| Missouri | 11 | 18 | 0 | 0 |
| North Dakota | 1 | 5 | 0 | 0 |
| South Dakota | 0 | 1 | 0 | 0 |
| Nebraska | 1 | 3 | 0 | 0 |
| Kansas | 9 | 3 | 1 | 0 |
| South Atlantic states | | | | |
| Delaware | 0 | 0 | 1 | 0 |
| Maryland | 4 | 6 | 0 | 0 |
| District of Columbia | 1 | 1 | 0 | 0 |
| Virginia | 9 | 17 | 0 | 5 |
| West Virginia | 3 | 6 | 0 | 1 |
| North Carolina | 16 | 21 | 5 | 4 |
| South Carolina | 5 | 17 | 1 | 4 |
| Georgia | 12 | 12 | 0 | 5 |
| Florida | 138 | 25 | 31 | 0 |
| East South Central state | | | | |
| Kentucky | 7 | 13 | 1 | 1 |
| Tennessee | 9 | 14 | 0 | 0 |
| Alabama | 9 | 34 | 26 | 3 |
| Mississippi | 21 | 18 | 5 | 1 |
| West South Central states | | | | |
| Arkansas | 16 | 7 | 1 | 1 |
| Louisiana | 36 | 8 | 3 | 0 |
| Oklahoma | 9 | 12 | 3 | 1 |
| Texas | 96 | 95 | 26 | 24 |
| Mountain states | | | | |
| Montana | 21 | 3 | 3 | 0 |
| Idaho | 0 | 1 | 0 | 0 |
| Wyoming | 1 | 0 | 0 | 0 |
| Colorado | 25 | 6 | 6 | 0 |
| New Mexico | 9 | 5 | 0 | 0 |
| Arizona | 5 | 4 | 0 | 0 |
| Utah | 6 | 5 | 2 | 5 |
| Nevada | 0 | 0 | 0 | 0 |
| Pacific states | | | | |
| Washington | 47 | 27 | 1 | 1 |
| Oregon | 4 | 2 | 0 | 0 |
| California | 139 | 56 | 11 | 3 |
| Total | 890 | 740 | 144 | 71 |
| First 22 weeks 1946 and 1945 | | | 1 034 | 811 |
| Median 1941 1945 | 499 | | 545 | |

**National Research Council Fellows**—Winners of the National Research Council fellowships awarded under a grant of $100,000 from the National Foundation for Infantile Paralysis have been announced. Of the ten winners nine are physicians including one woman, and one is to receive his Ph D in June The fellows will conduct their studies in nine different states and Melbourne, Australia, with allowances ranging from $2,220 to $6 000 a year The fellows are

Dr Charles L. Wilson Montreal Canada who will study orthopedic surgery in the department of surgery, Washington University School of Medicine St Louis
Dr Margaret H D Smith Baltimore who will do virus research at the Rockefeller Institute Princeton N J
Bernard A Briody Jr New Haven Conn who will study the interference phenomenon' in viruses at the Walter and Eliza Hall Institute of Research Melbourne, Australia
Dr Peter L Beal Chicago who will investigate immunology of the lymphogranuloma venereum psittacosis group of virus at the Virus Research Laboratory California State Department of Health Berkeley
Dr Robert H Green Charleston S C who will study vaccinia and neurotropic viruses at the Rockefeller Institute for Medical Research, New York
Dr Thomas Gucker III Boston who will make a study of the circulation to the bone and the musculature in normal and paralytic extremities and the relation of circulatory changes to the inhibition of growth at Children's Hospital Boston
Dr John H Heinen, Chicago who will study 'mechanism of action of parathormone in the department of physiology University of Chicago
Dr Louis J Strobino Bethel Conn who will study determination of normal bone protein in various age groups and in pathologic conditions at the Alfred I du Pont Institute of the Nemours Foundation Wilmington, Del.
Dr Edward L Pratt Boston who will study alterations in electrolytes and body fluids occurring in several conditions, particularly dehydration and acidosis at Yale University School of Medicine New Haven Conn
Dr John R Neefe, Jersey Shore Pa who will study infectious hepatitis at the hospital of the University of Pennsylvania Philadelphia

**Medical Events in San Francisco**—The 1946 session of the Society for Investigative Dermatology will be held at the Hotel Whitcomb, San Francisco June 30 Dr Henry E. Michelson Minneapolis will deliver the presidential address on The History of Lupus Vulgaris ——In addition to a series of scientific papers features of the American Proctologic Society s meeting at the Bellevue Hotel June 28-30 will include a review of the literature of 1944 to 1946 by Drs Raymond J Jackman, Rochester Minn on Benign Diseases of the Colon and Rectum and Francis D Wolfe, Chicago on 'Malignancy of the Colon and Rectum. There will also be a symposium on pilonidal disease by Drs. Theodore F Reuther Chicago Emil Granet and Douglass Palmer both of New York, and Karl Zimmerman Pittsburgh——Sir Stewart Duke Elder London, England as guest of honor will discuss Ophthalmology During the War and in the Future at the eighty-second meeting of the American Ophthalmological Society at the Hotel Mark Hopkins June 26-28——The annual banquet of the American Society of Clinical Pathologists meeting at the Palace Hotel June 28-30 will be addressed by Dr George Dock Pasadena Calif on Clinical Pathology in the Eighteen-Eighties" The Ward Burdick Medal will be presented to Dr Philip Levine Linden N J for his contribution on 'The Present Status of the Rh Factor ——Included among the speakers at the annual meeting of the American Academy of Tuberculosis Physicians in the Palace Hotel June 30 will be Dr Hamilton H. Anderson, San Francisco on 'Antibiotics in Experimental Tuberculosis' Dr Harry J Corper and R E Stoner Denver "An Improved Procedure for the Diagnostic Culture of Mammalian Tubercle Bacilli,' and Marcio M Bueno Rio de Janeiro Brazil "Anatomic Concepts Regarding Pathologic Aspects of Lymph Nodes and Lungs ——International Night will be a feature of the 1946 session of the American College of Chest Physicians at the Hotel Sir Francis Drake June 27-30 Participants will include Drs Donato G Alarcon, Mexico City William E Ogden Toronto Peter A. Theodos Athens Greece David P Marais South Africa Cape Town Shu Fan Li Hong Kong China Miguel Jiminez Mexico City Paulo Seabra Rio de Janeiro and Manuel Quisumbing San Pablo Philippine Islands——Dr Frederick W O Brien Boston will deliver the Janeway Lecture of the American Radium Society during its 1946 session at the Assembly Hall Health Center June 28 29 his subject will be "Radium Treatment of Cancer of the Cervix A Historical Review ——Among the speakers before the American Neurological Association at the Fairmont, June 26-28 will be Drs Howard D J Fabing Cincinnati on Cerebral Blast Syndrome in Combat Soldiers Edward B Schlesinger Rochester Minn 'Clinical Application of Curare Derivatives and Bernhard Dattner New York and Samuel S Kaufman Washington D C Penicillin Treatment in Neurosyphilis"——Dr Robert Doerr professor emeritus of hygiene and bacteriology University of Basel Switzerland will be guest of honor during the meeting of the American College of Allergists at the Clift Hotel June 28 30 His subject will be Integration and Differentiation of Allergic Phenomena"——The Association of Allergists for Mycological Investigation will hold an evening session at the Clift Hotel June 28 the program to be a symposium on mold allergy ——An afternoon session June 28 at the Clift Hotel will be given over to a Pan American Congress on Allergy and meeting of the International Association of Allergists——Fellows of the International College of Surgeons and their wives are invited to a luncheon and drive through the countryside to St. Gothards Tavern in St. Helena, Napa County July 4 transportation will be furnished by the San Francisco and Los Angeles Guilds of the International College of Surgeons Additional information may be obtained from Dr Felix Cunha 450 Sutter Avenue San Francisco——The American Medical Women s Association will meet at the Canterbury Hotel, June 28-July 1 this session to be more of a social nature.

## CORRECTION

**Rabies in Ecuador**—A news item in THE JOURNAL April 6 page 959 reported that 400 human beings were reported to have died of rabies in Quito Ecuador This total should have been 4, according to the source of the news item. A subsequent report received from Dr Hugh S Cumming Washington, director of the Pan American Sanitary Bureau indicated that the total figures for rabies during the years 1944 1945 and 1946 up to May 15 show 222 persons bitten, 145 persons treated and 10 deaths

# Government Services

### Inter-American Affairs Transferred to State Department

On April 10 an executive order was signed transferring corporations of the Office of Inter-American Affairs to the Department of State effective May 20 According to the *Newsletter* of the Health and Sanitation Division, Institute of Inter-American Affairs field operations and future programs will not be affected by the transfer A statement by President Truman indicated that the executive order terminates the Office of Inter-American Affairs and places those of its functions involving continued cooperation with the other American republics in a regular department of the United States government.

### Fellowships Available

The National Foundation for Infantile Paralysis has approved a grant to the U S Public Health Service for establishment of one hundred and twenty-five fellowships to train physicians and sanitary engineers in public health. Each fellowship provides a year s graduate training in a school of public health or a school of sanitary engineering The fellowships will be administered by the committee on training of public health personnel which consists of representatives of schools of public health the state and territorial health officers the American Public Health Association and the U S Public Health Service. The fellowships are available during the academic year beginning either in the fall of 1946 or in the fall of 1947 and are open to men and women citizens of the United States under 45 years of age Applicants for fellowships may secure details by writing to the Surgeon General, U S Public Health Service attention Public Health Training 19th and Constitution Avenue N W Washington D C Owing to the anticipated heavy enrolment in graduate schools completed applications for training in the fall term of 1946 should be filed promptly The awards committee will act on applications on June 15 July 1 July 15 and August 1

### Grants for Cancer Research

The National Advisory Cancer Council of the U S Public Health Service has approved thirteen federal grants-in-aid for cancer research totaling $149,430 Applications for research funds were reviewed at the quarterly meeting of the council March 29 at the National Cancer Institute, National Institute of Health, of the U S Public Health Service Bethesda Md. Established by Congress in 1937 the National Advisory Council advises the Surgeon General on all matters pertaining to the control of cancer and makes recommendations to him for granting of federal funds for research The following projects were approved at the last meeting Roscoe B Jackson Memorial Laboratory Bar Harbor Maine, Biologic Studies on Neoplasia in Mice," Clarence C Little Sc.D director $29 450 Barnard Free Skin and Cancer Hospital St. Louis "Integration of Changes in Experimental Carcinogenesis" Edmund V Cowdry Ph D director $25 000 Harvard University Cambridge, Mass Chemotherapy of Cancer Experimental and Clinical" Dr Arnold M Seligman Brookline director $18 000 Michael Reese Hospital Chicago The Role of Nutrition in the Origin and Growth of Tumors Dr Albert Tannenbaum director $10 000 Children s Hospital Boston, for the establishment of a consultation service to provide assistance in diagnosis and treatment of tumors of infancy and childhood and a study of the clinical pathologic and epidemiologic aspects of tumors of early life, Dr Sidney Farber director, $10 000 St Vincent s Hospital New York, 'Etiology and Treatment of Hodgkin s Disease," Robert Chambers Ph D, and Dr Antonio Rottino directors $10 000 New York University New York Tissue Culture Studies on the Etiology of Hodgkin s Disease and the Effect of Cell Free Filtrates on the Explanted Growths" Dr Chambers, director $10 000, Cornell University Medical College, New York, Studies on Ovarian Tumors, Dr Jacob Furth, director $9 480 Michigan State College, East Lansing Mich "Serologic Studies of Avian Lymphomatosis and Related Manifestations Ben R. Burmester Ph.D director $3 000 Institute for Cancer Research, Lankenau Hospital Philadelphia. "Effect of Trypanosome Endotoxins on Tumor Growth, Theodore S Hauschka director $2 500 University of Minnesota, Minneapolis Induction of Leukemia and Mammary Cancer in Mice Arthur Kirschbaum, Ph D director $2 000

# Deaths

**Walter Steen Jensen** ⊕ Colonel M C, U S Army, Washington, D C born in Brooklyn on Aug. 11, 1894 served with the Rainbow Division during World War I and received the Purple Heart and an Oak Leaf Cluster for meritorious service College of the Medical Evangelists Los Angeles 1924, entered the medical corps of the U S Army as a first lieutenant in 1925 rose through the various grades to that of colonel Army Medical School and the Medical Field Service School in 1929 School for Aviation Medicine Randolph Field, Texas in 1933 and later appointed on the faculty as director of neuropsychiatry served as executive and consultant at the Army and Navy General Hospital in Hot Springs National Park, Ark. during the spring of 1941 was medical director of the Newfoundland Base Command, St Johns, and supervised health activities of all army projects in that vicinity, formerly liaison officer to Newfoundland health authorities, in March 1942 was assigned to the air surgeon's office as deputy air surgeon of the Army Air Forces and in 1944 assigned to important post overseas, awarded the Legion of Merit for 'exceptionally meritorious conduct in the performance of outstanding services from July 31, 1941 until Oct. 5 1942 member of the American Psychiatric Association, Aero Medical Association of the United States and the Association of Military Surgeons of the United States fellow of the American College of Physicians, died April 4, aged 51

**Rollin Howard Stevens** ⊕ Detroit, University of Michigan Homeopathic Medical School, Ann Arbor, 1889, born in Blenheim Ont Canada, Jan 7 1868 an Affiliate Fellow of the American Medical Association founder of the Michigan Society of Social Hygiene of which he had been president member and past president of the Radiological Society of North America, American Association for the Study of Neoplastic Diseases of which he had been vice president, American Radium Society, Detroit Roentgen Ray and Radium Society, Detroit Dermatological Society and the American College of Radiology, member of the American Roentgen Ray Society American Cancer Society British Institute of Radiology and the American Academy of Dermatology and Syphilology fellow of the American College of Physicians specialist certified by the American Board of Radiology Inc at one time lecturer on dermatology at his alma mater and associate clinical professor of dermatology and syphilology and assistant clinical professor of roentgenology at the Detroit College of Medicine and Surgery for many years affiliated with the Grace Hospital, consulting radiologist to the Eloise Hospital Eloise, director and secretary of the Radiological Research Institute the January 1938 issue of *Radiology* was dedicated to him, died in the Grace Hospital May 16 aged 78.

**Cassius D Wescott**, Chicago Rush Medical College Chicago 1883 born in Salisbury Center N Y, May 25 1861 member of the American Medical Association, serving as chairman of its Section on Ophthalmology 1918-1919 and member of the House of Delegates from 1922 to 1925, member and past president of the American Ophthalmological Society Chicago Ophthalmological Society Institute of Medicine of Chicago and the Chicago Pathological Society fellow of the American College of Surgeons member of the American Association of Railway Surgeons and the Chicago Milwaukee and St. Paul Railway Surgeons Association specialist certified by the American Board of Ophthalmology, commissioned a first lieutenant in the medical reserve corps in 1911, formerly instructor and assistant professor of ophthalmology at his alma mater at various times on the staffs of the Eastern Hospital for the Insane Kankakee, Ill Illinois Charitable Eye and Ear Infirmary Central Free Dispensary Washington Boulevard, Presbyterian, Cook County St. Luke's and St. Anthony's hospitals lecturer on the eye at the Illinois Training School for Nurses from 1891 to 1915 died in the Wesley Memorial Hospital May 6 aged 84, of bronchopneumonia and fracture of the left hip incurred in a fall.

**Welch England**, Parkersburg, W Va. University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, 1926 born in Lindside, W. Va., Feb. 19 1902 specialist certified by the American Board of Otolaryngology member of the American Medical Association, American Academy of Ophthalmology and Otolaryngology, Southeastern Surgical Congress and the Association of Military Surgeons of the United States, served as a member president and secretary of the Academy of Medicine of Parkersburg, fellow of the American College of Surgeons formerly councilor of the Fourth District of the West Virginia State Medical Association, on the staff of the Camden-Clark Memorial Hospital in 1942 commissioned in the medical corps of the Army of the United States, serving until late in 1945 when he was honorably discharged with the rank of lieutenant colonel died April 29 aged 44 of heart disease.

**William Nicolas Boldyreff**, Battle Creek, Mich, Imperial Medical Academy, St. Petersburg, Russia, 1898 born in Vononezh, Russia, Jan. 10 1873 associate professor at his alma mater from 1902 to 1912 professor of anatomy and public health at the Imperial Lyceum in St. Petersburg 1911-1912, and toxicology and pharmacology at Kazan University from 1912 to 1918, lecturer at the Japanese universities in 1920 and 1921, in 1922 associate physiologist at Western Reserve University in Cleveland received the Pokrovsky prize in 1903 Pavlov prize in 1906 and the International Hygienic Exhibition prize at Dresden in 1911 honorary member of the Esthonian Medical Society and the International Society of Medical Hydrology; served as director of the Pavlov physiological institute of the Battle Creek Sanitarium principal research devoted to physiology of digestive system, died February 27, aged 73 of carcinoma of the liver

**Henry Nathan Blum** ⊕ New Orleans, Medical Department of Tulane University of Louisiana New Orleans 1900 born in 1876; specialist certified by the American Board of Ophthalmology, member of the American Academy of Ophthalmology and Otolaryngology fellow of the American College of Surgeons formerly professor of ophthalmology at the Louisiana State University School of Medicine assistant professor of ophthalmology at his alma mater and assistant professor and associate professor of ophthalmology at the Tulane University Graduate School of Medicine, served at various times and in various capacities on the staffs of the Charity Hospital, Flint-Goodridge Hospital and the Touro Infirmary, where he died April 13, aged 69 of cerebral hemorrhage

**Perry L Boyer** ⊕ Colonel, U S Army retired Alexandria, Va University of Maryland School of Medicine Baltimore, 1899, Army Medical School, 1902, entered the medical corps of the U S Army in 1901 served in France and Germany with the first division American Expeditionary Forces during World War I his last command was at the army hospital in Jefferson Barracks Mo; retired Feb 29 1936 for disability in line of duty; member of the Military Order of the Carabao and the Association of Military Surgeons of the United States died in the Walter Reed General Hospital Washington, D C, April 17, aged 68, of right paranephric abscess.

**James Herbert Young** ⊕ Newton Mass Harvard Medical School, Boston 1906, born in Amesburg Mass., May 31 1882 specialist certified by the American Board of Pediatrics member of the American Academy of Pediatrics and the New England Pediatric Society, for many years assistant in pediatrics at his alma mater served as consultant in pediatrics at the Massachusetts Eye and Ear Infirmary and New England Baptist Hospital physician to children's medical service, Massachusetts General Hospital and physician and chief of the department of pediatrics Cambridge Hospital, died February 18 aged 63 of cerebral thrombosis

**William James Cochrane** ⊕ Lake City Minn., College of Physicians and Surgeons of Chicago 1895 an Affiliate Fellow of the American Medical Association past president of the Wabasha County Medical Society chairman of the bicounty tuberculosis commission a captain in the medical corps of the U S Army during World War I, served as health officer president of the board of the Lake City Hospital and local surgeon for the Chicago Milwaukee and St Paul Railroad president of the Lake City Bank and Trust Company; died February 1, aged 78, of generalized carcinomatosis

**Burr Ferguson**, Birmingham, Ala. Columbia University College of Physicians and Surgeons New York 1896 born in Montgomery Ala Dec 21 1872 member of the American Medical Association, at one time medical officer for the Tennessee Coal and Iron Company served during World War I and later with the Red Cross in Siberia and Albania and the U S. Public Health Service in The Netherlands and England author of "Facts of Phagocytes" died in the Veterans Administration Facility Tuscaloosa, April 3, aged 73 of cerebral thrombosis

**Frank Augustus Brockmyre**, Canandaigua, N Y; the Hahnemann Medical College and Hospital, Chicago, 1901 member of the American Medical Association; on the staff of the Frederick Ferris Thompson Hospital where he died February 7 aged 68, of cardiovascular renal disease

**Raymond Gilbert Bugbee** ⊕ Providence R I, McGill University Faculty of Medicine, Montreal, Que, Canada, 1909, fellow of the American College of Surgeons, physician and surgeon on the staff of the Andrews House, Brown University where he had been for many years athletic surgeon; affiliated with the Rhode Island Hospital and the Providence Lying-In Hospital died February 3 aged 63, of coronary thrombosis

**George Theophilus Bynoe** ⊕ Brooklyn, Howard University College of Medicine Washington D C, 1911 died in the Brooklyn Hospital February 13 aged 62 of chronic myocarditis

**Hugh Angus Cameron,** Detroit Hahnemann Medical College and Hospital of Philadelphia 1896, University of Michigan Homeopathic Medical School, Ann Arbor 1921, died February 5 aged 76 of cerebral hemorrhage.

**George Kirwin Campbell,** Kansas City Mo George Washington University School of Medicine, Washington D C, 1930 member of the American Medical Association specialist certified by the American Board of Orthopaedic Surgery Inc. died in the Research Hospital February 7 aged 41, of cerebral hemorrhage

**William Arthur Cave,** Torrance Pa University of Pittsburgh School of Medicine 1909 member of the American Medical Association and the American Urological Association, served during World War I on the staff of the Torrance State Hospital died February 11, aged 62 of tuberculosis of the colon

**Earl Gaines Conn** ⊕ Chrisman Ill Bennett Medical College Chicago 1914 for many years president of the local high school director of the First National Bank died in St Elizabeth Hospital, Danville February 8 aged 62 of cerebral hemorrhage

**Eugene Crandle,** Gorham Ill St Louis College of Physicians and Surgeons 1904 member of the American Medical Association died in the Holden Hospital Carbondale February 1, aged 78 of coronary occlusion

**Holt Darden,** Blakely Ga Emory University School of Medicine, Atlanta 1925, died January 30 aged 46 of accidental suffocation

**Daniel William Davis** ⊕ Akron Ohio Starling Medical College Columbus 1895 served during World War I, died in the City Hospital February 5, aged 79 of bronchopneumonia

**Arleigh Clinton Delaplane** ⊕ Cincinnati Baltimore Medical College 1902 served in the medical department of the Pennsylvania Railroad for forty years died February 13 aged 66 of a coronary thrombosis

**Charles Magna Driver,** Mounds Okla University of Louisville (Ky) Medical Department 1898 served during World War I died in the Veterans Administration Facility Muskogee February 5 aged 76 of cerebral hemorrhage

**Charles Alvie Everett** Brookhaven Miss, University of Louisville (Ky) Medical Department, 1910, member of the American Medical Association served as superintendent of the Natchez Charity Hospital in Natchez and the South Mississippi Charity Hospital in Laurel died in McComb, February 8 aged 62 of coronary occlusion

**Ulysses S Grant Ferrell,** Cairo W Va Baltimore University School of Medicine 1893 died February 2 aged 80 of coronary thrombosis

**Charles Joseph Valentine Fries Jr** ⊕ Philadelphia Hahnemann Medical College and Hospital Philadelphia, 1912 also a graduate in pharmacy, clinical professor of ophthalmology at his alma mater, where he had been head of the department interned at the Pittsburgh Homeopathic Medical and Surgical Hospital a lieutenant in the medical corps of the U S Navy during World War I on the staffs of the Hahnemann and Women's Homeopathic hospitals died in Wynnewood May 7 aged 55, of coronary thrombosis

**Heraclio Gonzalez,** San Antonio Texas Escuela de Medicina de Nuevo Leon Monterrey Mexico 1901, died February 1, aged 66 of coronary occlusion

**Adelbert Louis Gramsch** ⊕ Ridgewood N J New York Homeopathic Medical College and Flower Hospital New York 1910 member of the American College of Chest Physicians acting superintendent of the Bergen Pines, Bergen County Hospital formerly superintendent of the Southern Pines Sanatorium in Southern Pines N C at one time affiliated with the New Jersey Sanatorium for Tuberculosis Diseases in Glen Gardner, died in the Hackensack (N J) Hospital February 2 aged 62 of carcinoma of the tongue

**Andrew Jackson Harness,** Miami, Fla Kentucky University Medical Department Louisville, 1904 member of the American Medical Association, served during World War I, died January 30 aged 62, of cancer of the lung

**Edward Voriece Jacobs,** Meridian, Calif, Missouri Medical College St Louis, 1884, died January 12, aged 84 of cerebral hemorrhage and pneumonia

**B F McClure,** Jackson, Ky (licensed in Kentucky in 1894), died February 1 aged 98, of arteriosclerosis

**Robert Shelmerdine McCombs,** Philadelphia, University of Pennsylvania Department of Medicine, Philadelphia, 1901, served during World War I, on the staff of the Children's Hospital author of "Diseases of Children for Nurses", died in the Pennsylvania Hospital February 9, aged 65, of coronary thrombosis

**Charles Franklin Magee,** Moscow, Idaho, McGill University Faculty of Medicine, Montreal, Que, Canada, 1903, served in the medical corps of the Canadian army during World War I, died February 11, aged 71, of influenza and cardiovascular renal disease.

**Henry Hudson Merrell,** Chicago, National Medical College *Chicago 1896 member of the American Medical Association* served during World War I for many years on the staff of the Garfield Park Hospital died February 7, aged 80 of coronary occlusion

**Allen Hart Miller,** Millville, Fla, Georgia College of Eclectic Medicine and Surgery Atlanta, 1895, member of the American Medical Association died in Gulfport January 20 aged 77 of chronic nephritis

**Alanson Filer Bort Morris** ⊕ Pittsburgh, Western Pennsylvania Medical College, Pittsburgh, 1896, served during World War I lieutenant colonel, medical reserve corps, U S Army not on active duty died in the St Stephens School February 6 aged 77, of coronary occlusion

**Harry Thomas Morton,** Kansas City, Mo, University Medical College of Kansas City 1909 served during World War I, died in the Veterans Administration Facility, Wadsworth Kan, February 1, aged 67, of carcinoma of the prostate

**Epaphroditus J Porter,** Grand Island Neb Rush Medical College Chicago 1878 died February 4 aged 91, as the result of fractured hip received in a fall and heart disease.

**Walter Clemens Raymond** ⊕ Johnstown Pa Jefferson Medical College of Philadelphia 1906 specialist certified by the American Board of Obstetrics and Gynecology in 1935 president of the Cambria County Medical Society charter member of the Pittsburgh Obstetrical Society, for many years staff obstetrician at the Mercy Hospital were he died February 6 aged 68, of liposarcoma of the pancreas

**Robert Lemuel Sellers,** Westville, Okla Memphis (Tenn) Hospital Medical College, 1892, Hospital College of Medicine Louisville Ky, 1897, also a druggist died January 29 aged 80 of cerebral hemorrhage

**John Holt Sewell** ⊕ Fort Worth Texas, Johns Hopkins University School of Medicine Baltimore 1914, associated with the W I Cook Memorial Hospital died January 9, aged 60 of coronary occlusion

**Stanley Edwin Sitko,** Detroit Indiana University School of Medicine Indianapolis 1925 died in the Highland Park (Mich) General Hospital February 7 aged 54, of cerebral hemorrhage hypertension and cerebral sclerosis

**George B Swenson,** Baldwin Wis University of Minnesota College of Medicine and Surgery Minneapolis 1900 member of the American Medical Association died in Madison January 30, aged 67 of perforated duodenal ulcer

**Walter L Vercoe,** Hot Springs, S D, Chicago Physio-Medical College 1891 Harvey Medical College, Chicago, 1898 specialist certified by the American Board of Ophthalmology fellow of the American College of Surgeons, died in Deadwood January 30 aged 84 of lobar pneumonia

**Frank Peter Jacob Was** Chicago Rush Medical College, Chicago 1905 member of the American Medical Association on the associate staff of the Roseland Community Hospital where he died April 18 aged 67 of coronary thrombosis

**J Warren Whisenant,** Duncan Okla, Kentucky School of Medicine, Louisville 1891, died January 24 aged 76 of coronary occlusion

**Scudder Johnson Woolley** ⊕ New York, University of Pennsylvania Department of Medicine Philadelphia 1895, also a graduate in pharmacy on the consulting staff of the *Monmouth* Memorial Hospital Long Branch, N J and Fitkin Hospital Asbury Park, N J, died January 19, aged 75 of heart disease

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

May 11 1946

### Improved Medical Services for Industry

Important recommendations for the better training of medical officers nurses and others concerned with matters of health in industry are contained in a report of the education committee of the Association of Industrial Medical Officers The present facilities for the training of medical students are described as extremely scanty In the future all students should be trained to recognize that the daily occupation of a patient, the economic effect of illness and the necessity for the restoration of earning capacity are all important aspects of everyday practice. Students should also receive special training as regards accident surgery, attend lectures on occupational medicine and spend at least three days in a factory where they can learn about the normal work of the industrial medical officer All teaching hospitals should have on the staff or available to them an industrial medical officer to undertake undergraduate instruction

For postgraduates who intend to devote themselves more especially to industrial medicine a broad basic training in general medicine followed by special training of three types is recommended for the consultant and specialist in industrial medicine, for the whole time industrial medical officer or for certain special appointments, such as examining surgeons or factory medical inspectors The committee also recommends the institution of a Diploma in Industrial Health

Training of nonmedical personnel is also advocated Nurses should receive special instruction whole time or part time to fit them for the important part they play in any industrial health plan The almoner should have a wider training in industrial subjects since she is the most important link between hospital and industry General education in health matters for the staff and workers in industry—the works manager technicians, foremen workers themselves and especially the personnel manager —is also advocated so that all can play an intelligent part in preventing accidents and disease.

### Britain Reduces Food Supply

Further cuts in the food allowance of the British people and further darkening of their bread in order to increase the food supply of the starving peoples were announced by the minister of food The allocations of sugar and fats for flour and confectionery and cakes will be reduced by 25 per cent in order to secure a reduction in the consumption of flour for cakes The extraction rate of flour which was on March 10 increased to 85 per cent, compared with 73 per cent prewar is to be raised as a temporary measure to 90 per cent This will involve a darkening of the loaf unknown since the period of stone ground flour before the introduction of the steel mill It will also involve a considerable reduction in feed for animals which was available in the production of white flour It is hoped that these drastic steps will enable the most stringent period between now and the gathering of the next harvest of the world to be bridged over It is estimated that the saving in fats and sugar will amount to about 40 000 tons a year The increased extraction rate will continue for a period depending on the wheat supply of the country and will mean a loss of 300 000 tons of feed Another step taken by the government is the reduction in the weight of the 2 pound loaf by 4 ounces which will be sold at the same price as the ordinary loaf was The object is to make people more economical in the use of bread.

### Australian Scientists in England and America

Brigadier N H Fairley, specialist in tropical diseases and director of medicine in the Australian army, is leaving by air for England on an Australian army mission When his task is completed he will accept two important appointments—director of tropical research at the Wellcome Research Foundation and professor at the School of Hygiene and Tropical Medicine

Another scientist lost to Australia is Dr H C Corben, who has been appointed associate professor of theoretical physics at the Carnegie Institute, Pittsburgh

## TURKEY

*(From Our Regular Correspondent)*

ANKARA, April 29, 1946

### Obligatory Government Service

In 1923, when Turkey became a republic there were at the disposal of the Ministry of Health and Social Assistance 554 physicians, 61 pharmacists, 563 sanitary inspectors, 136 midwives and 4 hospital nurses Because most departments were insufficiently staffed and especially the eastern provinces were then practically without such elements, it has been the first concern of the Ministry of Health to increase the number of physicians and require several years of service of every new graduate The country's unfavorable condition accounted for the reluctance of desirable students to enter the medical profession, which required six years' training To remedy the situation the Ministry of Health opened a dormitory in 1924 in Istanbul for 300 students, who were supplied with free board and maintenance, every article of clothing and other necessities, all textbooks and a monthly allowance On graduation these students were required to give to the Ministry of Health four years of service the locality of which the graduates determined by drawing lots for vacancies New dormitories were added each year and at present 985 students are living in fourteen buildings

Graduates who studied at their own expense were required to give one to two years' service but since 1933 the latter have no longer been called on for compulsory service

The government is considering new plans to supply an adequate number of physicians The time of compulsory service of graduates who studied at government expense may be lengthened to six years or more. The number of dormitory students releasing themselves from compulsory service by refunding to the government expenses incurred during their training has recently increased thus defeating the purpose of providing a free medical education It is expected that the 200 student dormitory at the Ankara Medical School to which accommodations for 800 more students are to be added within the next three years, will take care of the vacancies the Ministry of Health has to fill

### Increased Budget for Ministry of Health

In 1923 the first year of the republican government, the health and social assistance budget was 920 000 Turkish pounds In successive years the budget was gradually increased until in 1946 it reached 32 723 400 pounds or 3 3 per cent of the whole government budget. Most of the expenditures of the Ministry of Health are allocated for preventive medicine, mainly control of malaria syphilis and trachoma and the work at the Central Institute of Hygiene The salaries of the more than 2,000 physicians, pharmacists, chemists and more than 3,000 sanitary inspectors, midwives and hospital nurses in various government hospitals take up a considerable amount of the budget For twenty-two years the fiscal year began in June but a new law has changed this to January The chief reason for this change was that allocations and projects, contracts for new construction equipment, repair work and the draining of swamps had to be considerably increased and to be drawn up during the first three months of the year, so that the work could go into

full operation in spring and summer. In recent years the government has concentrated on education and health. The allocation to the Ministry of National Education is 10.2 per cent of the general budget.

## PUERTO RICO

*(From Our Regular Correspondent)*

SAN JUAN, May 1, 1946

### Health Program in Puerto Rico

Dr. Antonio Fernos Isern, commissioner of health of Puerto Rico, has outlined the public health program that is being carried out in this island, in a statement issued by him March 30 indicating that the general mortality rate has decreased as follows. The average mortality rate from 1931 to 1941 inclusive for each thousand inhabitants was 19.8. In 1942 it decreased to 16.6, in 1943 to 14.7, in 1944 to 14.8 and in 1945 to 14.1. The infant mortality rate in Puerto Rico from 1931 to 1941 inclusive (death of children of 1 year of age for each thousand births) was 123.5. It was 103.4 in 1942, 95.3 in 1943, 99.5 in 1944 and 88.3 in 1945.

The Department of Health carries out a malaria control program for which the following appropriations will be available during the fiscal year 1946-1947: general budget appropriations $382,000, special legislation $100,000 and emergency program activities $200,000, making a total of $682,000 for this program. The mortality rate for malaria cases during 1931 to 1941 inclusive was 140.7 per hundred thousand inhabitants. In 1942 it was reduced to 99.4, in 1943 to 58.9, in 1944 to 49.9 and in 1945 to the lowest figure of 42.5. A tuberculosis bureau is maintained by this department with modern equipment and under the direction of competent specialists. A diagnostic clinic is maintained in each town, there are eighteen ambulatory treatment centers, the bureau has 1,500 beds available for tuberculous patients. As a result the average mortality rate for tuberculosis during the years 1931 to 1941 inclusive was 286.5 per hundred thousand inhabitants but this dropped to 244.5 in 1942, to 231.1 in 1943, to 215.4 in 1944 and to 200.4 in 1945, the lowest rate ever registered. Plans are now under way to increase in one year 50 per cent of the available hospital facilities for treatment of the tuberculous according to legislation passed by the insular legislature.

The mortality rate for other contagious diseases has dropped considerably as a result of the intensification of health measures and sanitation.

### Discharge of Army Physicians Who Accept Contracts in Puerto Rico

At the request of Dr. Antonio Fernos Isern, health commissioner of Puerto Rico, the military authorities are willing to discharge from the armed forces physicians who may accept contracts to work in the Department of Health of Puerto Rico. This was revealed in a letter sent by Dr. Fernós Isern to the Public Service Commission asking authorization to make appointments of qualified physicians under a provisional plan, without the necessary requisite of 'specialization and experience." The Public Service Commission immediately authorized the commissioner of health to extend the necessary appointments during the period of emergency for lack of physicians in Puerto Rico to cover vacancies now existing in the Department of Health of the island without the requisites of "specialization and experience." This authorization, however, will automatically cease as soon as the commission verifies that a certain number of eligible physicians are available in the list of the commission who meet the necessary qualifications of experience and specializations, according to the rules and regulations of the commission.

A recent law approved by the governor authorizes the commissioner of health to contract for the services of American and foreign physicians to work in Puerto Rico. This law is now effective and will be in force until the year 1950.

### Blue Cross Plan in Puerto Rico

Governor Tugwell has approved an act passed by the insular legislature to provide medical and hospitalization services to the officials and employees of the insular government of Puerto Rico through the so-called Blue Cross Plan. The sum of $200,000 is appropriated by this act to cover 50 per cent of the cost of the service. The law authorizes the heads of departments and dependencies of the government to deduct from vouchers of salaries of officials and employees availing themselves of the services 50 per cent of the cost of the project.

## BRAZIL

*(From Our Regular Correspondent)*

RIO DE JANEIRO, May 5, 1946

### Uterine and Vaginal Changes in Vitamin E Deficiency

Dr. J. Lopes de Faria of the Department of Pathology of the University of São Paulo has just published the report of an investigation planned to detect possible alterations in the uterus and the vagina of animals with E avitaminosis. The investigation over a period of seventeen months included 26 rats, 17 deficient in vitamin E and 9 as controls. The former were placed on a deficient diet at the age of 6 months. Macroscopic and microscopic examinations of a large number of specimens disclosed that the uterine pigmentation of vitamin E deficient rats is due mainly to lipofuscin deposited in the cytoplasm of the muscular fibers. This increases as the deficiency continues and is more abundant in the circular layer of fibers than in the longitudinal one. This deposit does not occur in the fibers of local blood vessels. When the deposit is abundant there is alteration of the fibers up to complete disintegration (necrobiosis) and the appearance of free pigment masses and phagocytosis of the pigment by the macrophages. Simultaneously proliferation of the tissue occurs, leading to fibrosis of the myometrium, also more evident in the circular layer of muscles. In 2 cases of recent pregnancy (soon after implantation) the muscular fibers adjacent to the decidua basalis showed scanty pigment, probably due to removal by the activity of the cellular metabolism in contrast to other parts where it was abundant. In 1 of the animals, which was deficient for less than eight months, there was intense fibrosis of the uterine mucosa in all the space between the deep layer of the endometrium (close to the myometrium) and the mucosa adjacent to the mesometrium. This intense fibrosis explains the irreversible sterility, which cannot be altered by the vitamin E when the deficiency has been present for more than ten months.

### Brief Item

Dr. E. N. Harry of Princeton University has given a lecture at the University of Rio de Janeiro on the mechanism of aeroembolism in the accidents of decompression (caisson disease).

## Marriages

DOMINIC R. PITARO, Troy, N. Y., to Miss Christine Farmer of Chattanooga, Tenn., in Louisville, Ky., February 26.

EDWARD A. STAPLETON JR., Albany, N. Y. to Miss Teresa Jean Bartemeier of Washington, D. C. April 12.

WILLIAM RUSSELL SMITH, Wilmington, Calif. to Miss Virginia Jean Hunter of Los Angeles, April 20.

ARCHIE CARLISLE MILLER, Hazlehurst, Miss., to Miss Mary Kathleen Reed of New Iberia, La., April 7.

MALCOLM J. TINNEY, Placerville, Calif., to Miss Alice Solbakken of Everett, Wash., March 24.

GEORGE CARRAWAY ROGERS, Graham, N. C., to Miss Louise Stephens of Burlington, March 20.

LUTHER VON HOFGAARDEN, Los Angeles, to Miss Lydia Dana at Santa Barbara, February 2.

# Correspondence

## TEACHERS IN THE PRECLINICAL SCIENCES

*To the Editor* —I am writing regarding a subject which I believe should be called to the attention of the profession The subject is familiar to the deans of medical schools and is of considerable concern to teachers and investigators in the preclinical sciences. The subject pertains to the existing shortage of able young men well trained for teaching and investigation in the preclinical sciences and the medical research laboratories of the armed services

The causes of the shortage are quite evident to those who have been concerned with training medical teachers and investigators One cause is the inadequate salary offered to young and able graduates and another is the failure to train medical scientists during the war

The first requirement for a good teacher and investigator, of course, is a zeal to push back the frontiers of ignorance and to inspire students with a desire to know But during the past fifteen years there has been in my experience no great decline in the number of students with the requisite zeal and ability to teach and investigate Nevertheless graduates with zeal and ability did not stay in teaching The reason why is simple. Those graduates with the Ph D, M D degrees were offered positions in physiology pharmacology or biochemistry paying $1 800 to $2 800 a year whereas some physician offered them $6,000 to $10,000 to assist them in their practice The students with only the Ph.D degree had to take the lower salary, which during the last fifteen years has simply not been an adequate living wage for a young man with a wife and one or two children, who has to belong to scientific societies and to travel, at least to some extent.

If medical school administrators want young men with the Ph D M D training they will have to pay better salaries or wait for that rare individual whose zeal cannot be destroyed by a comfortable income.

Another fact which must be considered is that young men interested in a career in science are attracted by the higher salary paid to chemists than to biologists. While visiting a large university recently I was informed that the administration had to pay the members of the department of chemistry such high salaries to retain them that the budgets of the biologic departments had to be cut. The law of supply and demand and income operates in science as well as in other occupations.

A C Ivy, Ph D, M D., Chicago

*To the Editor* —According to my experience and observation in our medical schools for fifty years there have not been enough first class teachers either in the preclinical or in the clinical branches to go around. The war and the growing inflation make this situation worse. Raising salaries, particularly in the preclinical branches, is not going to be a cure all, for first class teachers are not created by cash alone. But better salaries will help a little. The superior teacher is a person of superior ability and application, challenged by the great importance of teaching and training successive generations of students and by the opportunity of research, of pushing back ever so little the immense frontiers of ignorance in biology and medicine. These drives determine such men's career But living salaries are of assistance in the sense that the great teachers and investigators can devote their whole attention to the two great tasks

A. J Carlson, M.D, Chicago

*To the Editor* —The increasing difficulty of attracting able young men and women into the field of preclinical science teaching and research has become a matter of grave concern to many medical educators Several factors have contributed to producing this state of affairs The interruption of graduate training by the war, which will quite possibly be continued by some form of compulsory military service during the postwar years, is one cause of the present shortage of potential preclinical teachers, but it is not the most important one. To an even greater extent the reluctance of outstanding young people to enter this field is due to the inadequate salaries which are paid basic science teachers in the majority of our medical schools

There is no lack of able young men and women who are, or who could be, interested in preclinical teaching and research as a career It is a rare medical class which does not contain at least one student who has the aptitude and interest which would make him an effective teacher or investigator in one or another of these fundamental sciences Indeed, such students not infrequently interrupt their medical training in order to devote a year to further study and investigative work in anatomy, physiology or biochemistry before continuing their regular course. A rather high percentage of them show promise of becoming first rate teachers and investigators, but only a few of them eventually take up that work as a career The loss of such men and women to the more lucrative field of clinical practice is a source of sincere regret to all who are interested in the advancement of the preclinical sciences and in the progress of fundamental teaching and research.

The potential workers who are thus lost by the basic medical sciences are not necessarily those who are more interested in financial gain than in contributing to the advancement of those disciplines They merely recognize that there are limits beyond which they ought not indulge their own interests and preferences at the expense of the comfort and financial security of their families and themselves

The problem, then, is largely one of the inadequacy of the existing salary scale for preclinical teachers It can be solved only by increasing those salaries sufficiently so that there no longer will be so great a difference between them and the amount which men of equal competence can earn in clinical or other fields If the inadequacies of the present salary scale are not corrected, they will result inevitably in a lowering of the quality of both preclinical teaching and research

It has been said that the earnings of full time teachers in the basic sciences compare favorably with the average net income of physicians throughout the country The accuracy of this statement can be questioned, but even if it should be true, it cannot be urged logically as justification for maintaining teaching salaries at their present low levels For it is not the average—the mediocre—to whom the teaching of medical students or the conduct and direction of fundamental research should be entrusted. Both deserve the best brains and abilities that can be mustered, and the young people who possess those qualifications are not likely to remain indifferent to their own economic well-being

This problem and its suggested solution deserve the serious consideration of physicians, university administrators and all others who are interested in maintaining the present high standards of medical education and research in this country If these standards are to remain high, it is essential that medical schools obtain and hold the ablest available teachers and investigators This cannot be accomplished if their work is to remain to such a large degree a labor of love.

William Walter Greulich, Ph.D
Department of Anatomy,
Stanford University School of Medicine,
Stanford University, Calif

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Drunkenness Admissibility of Evidence of Chemical Tests of Blood**—The plaintiff, a police officer, was dismissed from the force by the defendant, manager of safety and excise of the city of Denver, on the charge of having been drunk on duty, and the dismissal was sustained by the city civil service commission On appeal to the district court an order was entered reinstating the plaintiff, so the manager of safety appealed to the Supreme Court of Colorado

The evidence showed that the plaintiff, while in full uniform and at a time when he was on duty, was found by other police officers in an unconscious condition. He was lying face downward, had a large bruise on one cheek, there was a skin abrasion on his chin, and the pupils of his eyes were widely dilated. He was picked up and taken to the police station and later to the Denver General Hospital, where a blood alcohol test was made pursuant to the police captain's direction The result of the test disclosed 'Alcohol 39 mg per cc of Blood,' which, according to the evidence, is considered sufficient in most humans to induce a high state of intoxication The police officers who had either discovered the plaintiff in an unconscious condition or had participated in taking him to the police station, and subsequently to the hospital testified on hearing before the manager of safety that they did not believe he had an 'alcoholic breath ' The police captain's testimony was I found an odor of some foreign substance wasn t liquor" The head nurse in the hospital's emergency room testified 'There was an odor, but I couldn't tell what it was," and Dr Crum who withdrew the blood for the alcohol test, testified that he did not smell the odor of alcohol on the plaintiff's breath, but that he believed he was drunk Concerning the safeguards taken in making the test in the instant case, in addition to the testimony of the doctor who withdrew the blood there is the testimony of his assistant who held the test tube into which the plaintiff's blood was poured and who then made a record on the hospital's printed form on which she filled in the date, time of withdrawal, name and who requested the examination, the doctor s name who drew the blood and the laboratory technician's name She then marked the test tube containing the plaintiff's blood and put it in an icebox which was padlocked and to which she and the laboratory technician at the hospital had the only keys The laboratory technician testified that she made an examination of the plaintiff s blood and that the result of this test showed the presence of '39 mg per cc of blood" The plaintiff s counsel although cross examining the laboratory technician as to her qualifications as a witness did not cross examine in respect to the nature of the blood alcohol test which she conducted or how she identified the fact that it was the plaintiff s blood she analyzed No objection was made to introduction of the testimony involving the blood alcohol test in the hearing before the commissioner or before the civil service commission

The plaintiff's defense was that about the midnight that ushered in March 2, 1944 he was suffering from an epileptic seizure of the grand mal type, that he had become unconscious once before just after going off duty the morning of Dec. 16 1943 There was evidence to show that he had been ordered not to drive a car, and that other police officers always took the driver s seat when they started out in police cars

We have been unable to find any case, said the Supreme Court, where the blood test to determine intoxication has been excluded because of its unreliable value as proof The test in the instant case is a purely chemical one with all of the controls directly under the supervision of the three witnesses who testified as to having participated in the test. The plaintiff s counsel assert that if the blood alcohol test be disregarded every other bit of evidence is consistent with the theory that the plaintiff was not under the influence of alcohol The testimony of Dr Crum somewhat weakens counsel's assertion. He stated that the pupils of the plaintiff's eyes at the time of the examination were widely dilated, that his pulse and his breathing were rapid He then testified on redirect examination that such a condition of the eyes and pulse was more indicative of intoxication from alcohol than of an epileptic seizure. The greatest emphasis is made by the plaintiff's counsel on the fact that there was no testimony indicating that the plaintiff, at the time he was picked up unconscious or at the time of the examination for blood alcohol in the hospital, had an odor of alcohol on his breath There appear to be obvious conditions, said the court, where with a high degree of intoxication existing, the odor of alcohol on the breath is not present, such as (1) where it has been disguised by the separate use of deodorants, (2) where the person imbibing has developed a condition of acidosis, in which case the breath takes on the peculiar odor of a person suffering from acidosis (3) where the alcoholic drink has in it a flavor that tends to blot out or modify the typical alcoholic breath. Nor does the testimony that plaintiff's breath had a distinctive odor, but not alcoholic, support the diagnosis of epilepsy Nowhere can we find any indication or reference to the fact that a distinctive odor of the breath either precedes, accompanies or follows a seizure of the grand mal or petit mal type. The testimony concerning the odor of the plaintiff's breath, therefore, would appear to be negative in its nature It does not conclusively prove that he was not intoxicated At the same time it does not support the theory that he had suffered from an epileptic seizure.

As to the final disposition of this case, the Supreme Court concluded, we are of the opinion that the testimony concerning the alcohol test made of plaintiff's blood was part of the evidence that both the manager of safety and excise and the Denver civil service commission could properly consider, that there was sufficient competent evidence to support their respective findings, and that they did not abuse their discretion in so finding Accordingly the judgment reinstating the plaintiff policeman was reversed—*Kirschwing v Farrar, 166 P (2d) 154 (Colo., 1946)*

**Medical Practice Acts Conviction for Prescribing Narcotics to Addicts as Basis for Civil Action to Revoke Professional License**—The state filed a civil action to revoke the defendant's license to practice medicine. From an order denying its motion for a summary judgment it appealed to the Supreme Court of Wisconsin.

After a plea of guilty the defendant, a physician licensed to practice medicine in Wisconsin, was convicted in the federal court on counts charging, in substance, that he prescribed morphine sulfate hypodermic tablets to persons not in the course of his professional practice and not for legitimate and medical purposes but to satisfy the addiction of the purchasers On the basis of such conviction the state commenced this action to revoke his professional license. In his answer the defendant admitted the prior conviction but contended that he had entered his plea without advice of counsel, that the prescribing was in fact, in the course of his professional practice and medically necessary for the benefit of the persons prescribed for and that a plea of guilty should not in fact have been entered That the prescription or sale of narcotics to an addict to satisfy an addiction is an act involving moral turpitude was not contested but the defendant urged that on a civil action being brought to revoke his license he had the right to explain and qualify the facts and circumstances surrounding conviction for the purpose of showing that he was in fact not guilty of conduct actually involving moral turpitude

Section 147.20 of the Wisconsin Statutes provides that

> Upon verified complaint in writing to the district attorney charging the holder of a license or certificate of registration from the state board of medical examiners with having been guilty of immoral or unprofessional conduct the district attorney shall bring civil action in the circuit court against the holder and in the name of the state as plaintiff to revoke the license or certificate If the court or the jury finds for the plaintiff judgment shall be rendered revoking the license or certificate and the clerk of the court shall file a certified copy of the judgment with the board of medical examiners

It is clear to us, said the court, that conviction for a crime involving moral turpitude is a separate, distinct and independent ground for revoking a license and that facts and circumstances claimed to qualify or render innocuous the acts resulting in conviction may not be set up in the civil action. The statute specifically makes the conviction, and not the facts on which it is grounded, the cause for revoking the license. Since in this case, the court continued, defendant admits conviction of an

offense involving moral turpitude he is left without defense Accordingly the order denying the state's motion for a summary judgment was reversed with directions to enter judgment against the defendant physician—*State v Willstead M D 21 N W (2d) 271 (Wis, 1946)*

**Basic Science Acts License to Practice Chiropractic by Reciprocity**—The plaintiff, Arkansas Medical Society, sued for an injunction to restrain the defendant, state board of chiropractic examiners, from granting licenses to practice chiropractic without requiring applicants to present a certificate of ability issued by the state board of examiners in the basic sciences In that case (*Stroud v Crow*, 199 Ark 814 136 S W (2d) 1025, 61 S Ct. 17, J A M A **115** 2111 [Dec 14] 1940) an order was entered in favor of the plaintiff granting "the relief prayed" The present suit arose on the plaintiff's motion asking enforcement of the prior order From a ruling in favor of the defendant, the plaintiff appealed to the Supreme Court of Arkansas

The plaintiff's motion stated that subsequent to the entry of the previous judgment, the defendant has been issuing licenses to practice chiropractic by reciprocity to applicants licensed in other states, without first requiring the presentation of a certificate from the Arkansas basic sciences board It asked that such action be prohibited.

In the motion said the Supreme Court, we are asked to make an order by which the Arkansas state board of chiropractic examiners and their successors in office would be enjoined from issuing licenses to practice chiropractic, by reciprocity or otherwise until a certificate from the state board of examiners in the basic sciences of this state has been issued to the applicant in accordance with the basic sciences act. An examination of the pleadings briefs and opinion of this court in the original proceeding discloses that the question of the right of the state board of chiropractic examiners to grant licenses by reciprocity without the certificate from the basic sciences board was not therein presented, argued or decided. The sole issue in the original proceeding, continued the court, was whether the law required an applicant desiring to take the examination for license to practice chiropractic to present a certificate of ability from the basic sciences board We are now asked after lapse of the term at which our former judgment was rendered to make a substantial change in this judgment by disposing of a question not presented or decided It is our conclusion that this question is not properly brought before us in the instant proceeding Nothing in this opinion, however concluded the court should be construed as deciding the question as to whether the chiropractic board of examiners in issuing licenses by reciprocity, may dispense with the requirement of the certificate from the basic sciences board The plaintiff's motion was denied—*Stroud v Crow State Board of Chiropractic Examiners 192 S W (2d) 548 (Ark, 1946)*

**Drunkenness Drunk-o-Meter, Waiver of Constitutional Protection Against Self Incrimination.**—The defendant was convicted of operating a motor vehicle on a public highway while under the influence of intoxicating liquor From such conviction he appealed to the Supreme Court of Indiana

After the defendant's arrest he was taken to police headquarters, where he was asked to submit to a drunk-o-meter test. He was advised that he had a constitutional right to refuse to take the test and that he would not be required to take it The defendant testified that the police did not abuse him in any way that he took the test voluntarily and that he was glad to do so because he was not drunk. In spite of this state of affairs, the defendant contended on appeal that the admission in evidence of the results of such test had the effect of requiring him to testify against himself and therefore constituted an encroachment on his constitutional protection He did not argue that the drunk-o-meter test had no probative value or that the instrument was not scientifically reliable in the hands of competent persons On this state of the record concluded the Supreme Court, there can be no valid claim of forced self incrimination. The provisions of the constitution on which the defendant relied afford no protection that may not be waived by him Accordingly the conviction was sustained—*Spitler v State 46 N E (2d) 591 (Ind 1943)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL June 8 Page 552

### BOARDS OF MEDICAL EXAMINERS

ALABAMA Montgomery Jan 21 23 Sec Dr B F Austin 519 Dexter Ave Montgomery 4

ARIZONA * Phoenix 1st week in July Sec Dr J H Patterson 826 Security Bldg Phoenix

ARKANSAS * *Medical* Little Rock June 6-7 Sec Medical Board of the Arkansas Medical Society Dr L J Kosminsky, Texarkana *Eclectic* Little Rock June 6 Sec Dr C H Young 1415 Main St Little Rock

CALIFORNIA *Examination* San Francisco June 11 13 Sec. Dr Frederick N Scatena 1020 N St Sacramento 14

COLORADO * *Endorsement* Denver July 2 Final date for filing application is June 17 Sec Dr J B Davis 831 Republic Bldg Denver 2

CONNECTICUT * *Medical* Hartford July 9 10 Sec to the Board Dr Creighton Barker, P O Box 1438 New Haven *Homeopathic* Derby July 9 10 Sec. Dr Joseph H Evans 1488 Chapel St. New Haven

DELAWARE *Examination* Dover July 9 11 *Reciprocity* Dover July 16 Sec Medical Council of Delaware Dr J S McDaniel 229 S State St Dover

DISTRICT OF COLUMBIA * *Reciprocity* Washington June 10 Sec Commission on Licensure Dr G C. Ruhland 6150 E Municipal Bldg Washington

FLORIDA * Jacksonville June 24-25 Sec. Dr Harold D Van Schaick 2736 S W Seventh Ave. Miami 36

GEORGIA Atlanta Oct 8 10 Sec State Examining Boards Mr R C Coleman 111 State Capitol Atlanta 3

HAWAII Honolulu July 8-11 Sec Dr S E Doolittle 881 S Hotel St Honolulu 53

IDAHO Boise July 9 Dir Bureau of Occupational Licenses Miss Agnes Barnhart 355 State Capitol Bldg Boise

ILLINOIS Chicago June 25 27 Sec. Department of Registration & Education Mr Philip Harman Springfield

INDIANA *Examination* Indianapolis June 1947 Exec. Sec Board of Medical Registration & Examination Miss Ruth V Kirk 627 K. of P Bldg Indianapolis 4

KANSAS *Reciprocity* Topeka, June 6 Sec. Board of Medical Registration & Examination Dr J F Hassig 905 N Seventh St Kansas City 10

KENTUCKY *Examination* Louisville, Dec. 16-18 Sec State Board of Health Dr P E Blackerby 620 S Third St. Louisville 2

MAINE Augusta, July 2-3 Sec Board of Registration of Medicine Dr Adam P Leighton 192 State St. Portland

MARYLAND *Homeopathic* Baltimore June 18 19 Sec Dr J A. Evans 612 W 40th St. Baltimore *Medical* Baltimore Dec. 10-13 Sec Dr J T O Mara 1215 Cathedral St Baltimore.

MASSACHUSETTS Boston July 9 12 Sec. Board of Registration in Medicine Dr H Q Gallupe 413 F State House Boston 33

MICHIGAN * Lansing Oct 9 11 Sec Board of Registration in Medicine Dr J E McIntyre 100 W Allegan St Lansing 8

MINNESOTA * Minneapolis June 18-20 Sec Dr J F Du Bois 230 Lowry Medical Arts Bldg St Paul 2

MISSISSIPPI* June Asst. Sec State Board of Health Dr R. N Whitfield Jackson 113

NEW JERSEY Trenton June 18-19 Sec Dr E S Hallinger 28 W State St. Trenton.

NEW MEXICO * Santa Fe Oct. 7 8 Sec. Dr LeGrand Ward 141 Palace Ave Santa Fe

NEW YORK Albany Buffalo New York and Syracuse June 24-27 Sec. Dr Jacob L. Lochner Education Bldg Albany

NORTH CAROLINA *Endorsement* Morehead City July 5 Act Sec Mrs L McNeill 226 Hillsboro St Raleigh.

NORTH DAKOTA Grand Forks July 2 5 Sec Dr G M Williamson 4½ S Third St. Grand Forks

OREGON * *Examination* Portland July 24-26 Exec Sec Miss Lorienne M Conlee 608 Failing Bldg Portland 4

RHODE ISLAND * *Examination* Providence June 27 28 Sec Division of Examiners Mr Thomas B Casey 366 State Office Bldg Providence

SOUTH CAROLINA Columbia June 24-26 Sec. Dr N B Heyward 1329 Blanding St. Columbia.

SOUTH DAKOTA * Pierre July 16-17 Sec. Medical Licensure State Board of Health Dr Gilbert Cottam Capitol Bldg Pierre

TENNESSEE * *Examination* Memphis and Nashville June 26 27 Sec. Dr H W Qualls 130 Madison Ave Memphis 3

WASHINGTON * Seattle July 11 12 Sec Department of Licenses Miss Nell Adams Olympia

WEST VIRGINIA Charleston July 15 17 Sec. Public Health Council Dr John E Offner State Capitol Charleston 5

WISCONSIN * June 25 27 Sec. Dr C A. Dawson River Falls

* Basic Science Certificate required.

### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

DISTRICT OF COLUMBIA *Examination* Washington Oct. 21 22 Sec. Commission on Licensure Dr G C Ruhland 6150 E Municipal Bldg Washington

IOWA *Examination* Des Moines July 9 Sec Division of Licensure & Registration Mr H W Grefe Capitol Bldg Des Moines 19

OREGON Portland, July 6 Sec. Mr C D Byrne Univ of Oregon Eugene

RHODE ISLAND *Examination* Providence Aug 14 Sec Division of Examiners Mr Thomas B Casey 366 State Office Bldg Providence.

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

### American Heart Journal, St. Louis

**31** 253-386 (March) 1946

Study of Subjective Sensations Associated with Extrasystoles. E. M. Kline and T. G. Bidder.—p. 254

*Treatment of Coronary Disease with Angina by Pericoronary Neurectomy Combined with Ligation of Great Cardiac Vein: Case Report. M. Fauteux.—p. 260

Paroxysmal Pulmonary Edema Consequent to Stimulation of Cardiovascular Receptors. I. Effect of Intra-Arterial and Intravenous Infusions. A. A. Luisada and S. J. Sarnoff.—p. 270

Id. II. Mechanical and Neurogenic Elements. A. A. Luisada and S. J. Sarnoff.—p. 282

Id. III. Pharmacologic Experiments. A. A. Luisada and S. J. Sarnoff.—p. 293

*Coincidence of Auricular Fibrillation and Bacterial Endocarditis. R. K. McDonald.—p. 308

Pathologic Study of 31 Cases of Scrub Typhus Fever, with Especial Reference to Cardiovascular System. H. D. Levine.—p. 314

Analysis of Time Relationships Within Cardiac Cycle in Electrocardiograms of Normal Men. I. Duration of QT Interval and Its Relationship to Cycle Length (RR Interval). I. Schlamowitz.—p. 329

Peripheral Blood Flow Under Basal Conditions in Older Male Subjects with Normal and Elevated Blood Pressures. H. J. Stewart, W. F. Evans and Helen S. Haskell.—p. 343

Interatrial and Sinoatrial Block with Illustrative Case. G. M. Decherd Jr., A. Ruskin and P. Brindley.—p. 352

**Pericoronary Neurectomy and Ligation of Great Cardiac Vein.**—Fauteux says that although coronary venous ligation could do no more than hasten the development of the coronary anastomotic system the experimental results were so encouraging that it was decided to attempt the method in a carefully selected group of patients. The first patient was operated on in 1939. Since then 9 other patients have received the same treatment. One patient died one hour after operation as the result of a tension pneumothorax resulting from a tear in the pleura which occurred while the heart was being exposed. Of the remaining 9 patients 7 are still alive and have resumed their former work. The effects of venous ligation on the vascularity of the heart could be studied in the patient who lived over two and one-half years after operation. The histologic sections demonstrated that venous ligation in the heart opens and dilates coronary anastomoses, but the coronary nervous system is not modified by this operation. Experimental studies on groups of dogs suggested that pericoronary neurectomy with ligation of the great cardiac vein would be of greater value in the treatment of coronary disease than venous ligation alone. On Sept. 11, 1944 the first complete denervation of the left coronary artery in man was performed at the Peter Bent Brigham Hospital. Since the operation the patient has shown much improvement, has had no pain and has been able to work.

**Auricular Fibrillation and Bacterial Endocarditis.**—McDonald studied 286 cases of bacterial endocarditis, all of which came to necropsy. Of the 196 cases in which the character of the fibrillation was analyzed 3 were of the paroxysmal type and 21 were of the persistent variety. Of the 21 cases of persistent fibrillation, in 5 there had been an antecedent bacterial endocarditis, in 6 the auricular fibrillation was present before the onset of bacterial endocarditis, and in 10 both processes were present when observations began. The incidence of auricular fibrillation was approximately the same irrespective of the type of valvular involvement. The reason the incidence of auricular fibrillation is significantly lower in bacterial endocarditis than in rheumatic heart disease seems to be that in most cases of bacterial endocarditis fatal sepsis intervenes while the patients are relatively young and before the disturbance of the myocardial integrity becomes severe. The study suggests that the coexistence of auricular fibrillation and bacterial endocarditis is not so rare as was previously supposed and that one should therefore be cautious in using this point as a diagnostic aid.

### American Journal of Clinical Pathology, Baltimore

**16** 63-138 (Feb.) 1946

Penicillin Resistance. I. Of Bacteria: Strain Variations in Penicillin Sensitivity Among Bacterial Species Encountered in War Wounds and Infections. R. S. Fleming and F. B. Queen.—p. 63

Penicillin Resistance. II. Of Fungi. R. S. Fleming and F. B. Queen.—p. 66

Cardiolipin Antigen in Microscopic Slide Precipitation Test for Syphilis. B. S. Kline.—p. 68

Fatal Chagas Disease. B. H. Kean.—p. 81

Klebsiella (Friedlander's Bacillus) Infections in Army Hospital. E. P. Swartz and P. A. Rohde.—p. 88

*Serum Agglutination Reaction in Diagnosis of Bacillary Dysentery. A. R. Thomas Jr. and M. Levine.—p. 98

Gangrene of Lower Extremity Following Carbon Monoxide Asphyxia. N. Enzer and S. Spilberg.—p. 111

Distribution of Nerves to Adult Human Uterus. Ann Freeman.—p. 117

Pathology of Morton's Metatarsalgia. L. S. King.—p. 124

Mycetoma Pedis: Case Report. A. Van Der Sar and P. H. Hartz.—p. 129

**Serum Agglutination Reaction in Bacillary Dysentery.**—Thomas and Levine observed that the agglutination reaction of several patients' serums against bacillary dysentery bacilli disclosed titers of 1:160 against the Shiga and 1:320 for the Y strain of the Flexner (or paradysentery) bacillus. The question arose as to whether these serologic findings indicate (1) that the patient was suffering from both Shiga and Flexner dysentery, (2) that the antigens employed are not suitable for determination of agglutination titers or (3) that the agglutination test was not a reliable and dependable index of bacillary dysentery infection. The clinical pictures were not sufficiently distinct to warrant a specific diagnosis. Repeated bacteriologic examination of the stools and rectal swabs failed to disclose members of the Shigella group. These failures served further to raise doubt as to the significance of the serologic findings. Meanwhile 10 serums submitted for routine Kahn tests were examined for agglutinins against the Shiga and Flexner Y strains. Of these serums 6 showed titers of 1:80 to 1:160 with the Shiga and 8 gave titers of 1:160 to 1:320 against the Flexner Y strain. Among these serums were 6 from prenatal cases. None of these serum specimens were from persons with dysentery or other symptoms of intestinal disease. A study was therefore undertaken to ascertain whether the strains supplied by the Army Medical School were suitable for determination of Shigella agglutination titers. The authors present the agglutination titers of serums from 534 service and civilian men and women (submitted for routine Kahn tests at a southern army camp) against Shigella dysenteriae, Shigella ambigua, Shigella sonnei, Shigella newcastle and five races of S. paradysenteriae (V, W, X, Y, Z). It became evident that agglutination titers considered indicative of infection are far too frequent in serums of persons without gastroenteritis to warrant their employment as criteria of acute bacillary dysentery. This is particularly the case for S. dysenteriae, S. ambigua and S. paradysenteriae Y and W.

### American Journal of Pathology, Ann Arbor, Mich.

**22** 235-432 (March) 1946

Gynecomastia. H. T. Karsner.—p. 235

Studies on Early Changes in Livers of Rats Treated with Various Toxic Agents with Especial Reference to Vascular Lesions. II. Histology of Rat's Liver in Allyl Formate Poisoning. A. Rosin and L. Doljanski.—p. 317

Primary Tumor of Heart Containing Epithelium-like Elements. W. A. D. Anderson and E. T. Dmytryk.—p. 337

Gross Vascularity of Mitral Valve as Stigma of Rheumatic Heart Disease. S. Koletsky.—p. 351

Observations on Pathologic Changes Produced by Toxic Substance Present in Blue-Green Algae (Microcystis Aeruginosa). C. T. Ashworth and M. F. Mason.—p. 369

Nephrotoxic Action of dl-Serine as Related to Certain Dietary Factors. R. P. Morehead, W. H. Fishman and C. Artom.—p. 385

Ceroid Pigment in Human Tissues. A. M. Pappenheimer and J. Victor.—p. 395

Studies on Chancroid. I. Observations on Histology with Evaluation of Biopsy as Diagnostic Procedure. W. H. Sheldon and A. Heyman.—p. 415

Problem of Human Toxoplasma Carriers. A. Plaut.—p. 427

## American Journal of Public Health, New York

**36** 209-320 (March) 1946

Place of Fertility Control in Public Health R K. Stix —p 209
Comparison of Observed and Expected Deaths in Selective Service Registrants with Negative and Positive Serologic Tests for Syphilis. M C Brown —p 219
Development of Community Rheumatic Fever Program Bernice G Wedum —p 229
Experiences with Rheumatic Fever in Army Air Forces. C A R Connor —p 236
Institutions Accredited by American Public Health Association to Give Degree of Master of Public Health (Diploma of Public Health in Canada) for Academic Year 1946 1947 W P Shepard and others. —p 244
Public Health Aspects of Dehydrated Foods H W von Loesecke and others —p 248
Teamwork for Industrial Health J J Bloomfield —p 261
State Participation in Evaluation of Local Health Services L. P Walter —p 269
Observations Concerning Growth of Three Species of Shigella on Bismuth Sulfite Agar Mildred M Galton and Nancy J Collins —p 273

## Am J Roentgenol Rad Therapy, Springfield, Ill.

**55** 251-376 (March) 1946

Correlation of Gastroscopic, Roentgenologic and Pathologic Findings in Diseases of the Stomach Analysis of 245 Proved Cases E B Benedict —p 251
*Spondylolisthesis Criteria for More Accurate Diagnosis of True Anterior Slip of Involved Vertebral Segment. L. H Garland and S F Thomas —p 275
Lumbosacral Roentgenograms of 100 Soldiers Control Study M M Friedman F J Fischer and R E VanDemark —p 292
Osteomyelitis in Infants R A J Einstein and C G Thomas Jr —p 299
Occasional Appearance of Both Inner and Outer Suture Lines in Roentgenograms of Skull Simulating Fissure Fracture G Danelius —p 315
*Duplication of Entire Large Intestine (Colon Duplex) Report of Case. H M Weber and C F Dixon —p 319
Clubbed Fingers R Charr and P C Swenson —p 325
Congenital Dislocation of Hip Case. B W Trask —p 331
Giant Jugular Fossa with Brief Notes on Anatomic Variations of Jugular Fossa F Y Khoo —p 333
Present Status of Roentgen Therapy of Hyperthyroidism and Related Endocrine Disturbances G Schwarz.—p 337

**Spondylolisthesis Diagnosis of True Anterior Slip**—Garland and Thomas reviewed 170 consecutive lumbosacral spine roentgen examinations and found that 25 persons or 14.7 per cent had more or less foreshortened last lumbar segments In 15 of these no neural arch defects were present but the posterior edge of the last lumbar body lay from 1 to 3 mm ventral to the plane of that of the first sacral In the other 9 there were arch defects, but in only 4 was the anterior margin of the fifth lumbar body ventral to the test line (that is, only 4 of the 9 showed true spondylolisthesis) There were an additional 4 cases of true slip with bodies of normal' shape and length In the remainder of the 170 cases or 85 3 per cent the last lumbar bodies were either normal in shape and length or a little elongated so that their posterior margins lay on a plane slightly behind that of the first sacral In general, if the fifth lumbar body is normally 'rectangular' and proportionate in size to its adjacent segments there is a slip (olisthesis) only when its anterior margin reaches or passes the perpendicular test line drawn from the first sacral If the fifth lumbar body is foreshortened and its shape in lateral projection is hatchet-like the relation of its posterior margin to that of the first sacral cannot be relied on for the detection of slip In extreme cases of foreshortening its anterior margin might be equally unreliable Neither the anterior nor the posterior margin measurements are criteria in all cases but in the vast majority the anterior margin measurements are the more reliable

**Duplication of Large Intestine**—A woman aged 27 with a history of recurrent attacks of lower abdominal pain and severe obstipation had been operated on for acute intestinal obstruction at 3 years of age and for acute appendicitis at 19 Two appendixes were removed one of which was gangrenous Three years later the abdomen was explored because of symptoms of partial intestinal obstruction and an unsuccessful attempt was made to remove what was thought to be a mesenteric cyst. A cutaneous fistula developed in the abdominal scar At operation a double uterus and double cervix were noted and there was a history of two miscarriages In the course of a surgical exploration by Dixon duplication of the entire colon with a common mesentery was found Because of severe inflammatory reaction, the descending and sigmoid portions of both colons were freed from the abdominal wall and about 10 inches of each was resected after exteriorization and application of clamps There was no evidence of a kidney on the right side. The left kidney seemed to be about one and one-half times normal size. Exploration of the pelvis revealed two infantile uteri At the second operation the continuity of the exteriorized loops of the two colons was accomplished by end to end anastomosis, producing what is essentially a colocolostomy in the midsigmoid Reports of duplication of the small intestine are relatively frequent, but Weber and Dixon found no instance of a duplication of the large intestine in which the supernumerary intestine had no communication with the small intestine above it or with the outside via the rectum

## American Journal of Surgery, New York

**71** 303 438 (March) 1946

Vesicovaginal Fistula Improvement in Chaffin Method of Post-operative Treatment Using Chaffin Suction Drainage R C Chaffin —p 305
Effect of Parenteral Saline Solution on Wound Healing W McDougal —p 312
Early Ambulation Following Surgery A J Spang and J S Spang —p 316
Obscure Causes of Intra Abdominal Hemorrhage D L Reimann and R Adams Cowley —p 328
Arthrotomy Approaches in Lower Extremity R Sutherland and M J Rowe Jr —p 335
Localized Back Pain Separation of Fibers of Posterior Layer of Lumbodorsal Fascia with Herniation of Sacrospinalis Muscle as Cause. M Sargent —p 338
Deaths From Surgical Diseases of Biliary Tract C A Bachhuber —p 340
Subtotal Gastrectomy in Treatment of Ulcer M K. King —p 350
March Fractures of Foot Care and Management of 692 Patients A Bernstein M A. Childers K. W Fox M C Archer and J R Stone.—p. 355
Use of Double Roll as Bandage A D Jonas —p 365
Psychosomatic Symptoms and Borderline Hyperthyroidism B J Ficarra —p 363
Fracture of Clavicle Simple Method by Means of Which Patient Holds His Own Shoulders Backward and Upward P Lewin —p 368
*Multiple Parathyroid Adenomas Three Operative Explorations with Removal of Two Tumors. R C Moehlig and H W Ulch —p 381
*Granuloma Inguinale (Venereum) of Uterus S H. Polayes and H W Wikle —p 406

**Multiple Parathyroid Adenomas**—A man aged 62 whose history included pulmonary tuberculosis twenty-five years before and a left nephrotomy for the removal of multiple renal calculi twenty-one years before subsequently developed a bladder calculus with signs and symptoms of hyperparathyroidism The first operation at which only the right side of the neck was explored resulted in the removal of a parathyroid adenoma The symptoms persisted as did the hypercalcemia and the elevated serum phosphatase A second operation seven weeks later failed to reveal a parathyroid adenoma At a third operation a large parathyroid tumor containing remnants of thymus tissue was found on the left side The patient died shortly afterward with evidence of cardiac failure Moehlig and Ulch raise the question whether the treatment for pulmonary tuberculosis with its high caloric diet and increased milk intake and subsequent load on the parathyroids may have played a part in the development of the parathyroid adenomas Remarkable is the long interval between the appearance of the renal calculi twenty-one years before and the subsequent development of the typical signs and symptoms of hyperparathyroidism They stress that an exhaustive exploration must be done on both sides even though a large tumor may be readily found on one side

**Granuloma Venereum of Uterus**—The first 4 cases of venereal granuloma of the uterus were described by Pund and his associates Polayes and Wikle report a fifth case A Negro woman aged 50 on whom supracervical hysterectomy and right salpingo-oophorectomy were performed proved to have venereal lymphogranuloma of the uterus, fibromyomas of the uterus and fibrosis and follicular cysts of the ovary As Donovan bodies were found in the endometrium, the cervical ulcer was reexamined as a possible primary source for the uterine infection Microscopic examination of tissue from the cervix revealed many of the pathognomonic cells of Pund which contained Donovan bodies in abundance. Ever since the authors were able

develop between the base of the lung and the upper surface of the diaphragm If effusion develops along with the pleural involvement, plastic changes occur at the costophrenic and cardiophrenic angles in definite widening of these acute angles The severity of the symptoms is variable Treatment has been primarily symptomatic Sedatives and physical therapy have been employed At times opiates had to be administered to keep the patient comfortable The disease itself is self limited but has a tendency to recur The attacks often follow a cold that comes on with atmospheric changes

## Gastroenterology, Baltimore

6 1-82 (Jan ) 1946

Roentgenologic and Gastroscopic Study of Gastric Disease W E Ricketts and H M Pollard —p 1
Gastric Endoscopic and Secretory Findings During Salicylism C M Caravati —p 7
Tuberculous Ulcerative Colitis or Ulcerative Colitis with Superimposed Tuberculous Infection Case Report P M Glenn and H S Read. —p 9
Chronic Dyspepsia in Mediterranean Theater Gastroscopic Roentgenologic and Psychiatric Study R Schwartz and M Perlmutter—p 21
Scleroderma with Esophageal Symptoms Report of 2 Cases. H A Rafsky and W Herzig —p 35
Reticulum Cell Sarcoma of Stomach I J Cash and A E Rappoport —p 40
*Effect of Alumina Gel on Absorption of Amino Acids Ascorbic Acid, Glucose and Neutral Fat from Intestinal Tract. W S Hoffman and H A. Dyniewicz.—p 50

**Alumina Gel and Intestinal Absorption.**—Hoffman and Dyniewicz studied the influence of alumina gel on the tolerance curves of amino acids, ascorbic acid, glucose and neutral fats With neutral fat there was obviously no flattening of the tolerance curves by alumina gel With amino acids ascorbic acid and especially glucose there was a slight lowering of the average maximal rise in each group with alumina gel, but these were statistically insignificant However, 27 of 39 individual experiments showed lower maximal rises with alumina gel than in the control experiments When 1 ounce of aluminum phosphate gel was used with glucose in additional experiments, the depression of the tolerance curve was even less than with alumina gel *The results obtained indicate that from a nutritional point of view therapeutic doses of alumina gel (or aluminum phosphate gel) have no demonstrable effect on the absorption of the nutrient substances studied.*

## Illinois Medical Journal, Chicago

89 49-100 (Feb ) 1946

Hematology A Round Table H Alt S O Schwartz and L Limarzi —p 62
Functional Nervous Disorders S N Clark —p 68
Perianal Urticaria C J Drueck —p 72
Treatment of Convulsive State at Illinois Security Hospital A J Arieff —p 74
Surface Defects of Skin Treatment by Controlled Exfoliation I C

rhea, epigastric fulness, polyuria and polydipsia. The signs of toxicity are low specific gravity of the urine, traces of albumin in the urine, inability to concentrate urine, increased serum calcium, renal failure, retention of nonprotein nitrogen, deposition of calcium in soft tissues, deposition of calcium in arteries and arterioles and, eventually, death Massive doses of vitamin D do not alter the ultimate course of arthritis Whenever massive doses of vitamin D are prescribed, the urine should be examined frequently and serum calcium levels should be obtained

**Epidemic Ringworm of Scalp in Children.**—Nomland says that ringworm of the scalp assumed epidemic proportions in the United States in 1942, when it increased many fold in New York City From this focus the epidemic spread widely, at first to the large metropolitan centers throughout the country and later to the smaller cities and villages The epidemic became of concern to Iowa about two years ago The first case at the University Hospitals was seen in September 1944 Since then about 20 patients, who came chiefly from the larger communities in eastern Iowa, have been seen

## Journal of Aviation Medicine, St. Paul

17 1-112 (Feb ) 1946

Oculogyral Illusion Form of Apparent Motion Which May Be Observed Following Stimulation of Semicircular Canals A Graybiel and Dorothy I Hupp —p 3
Altitude Pain Study of Individual Differences in Susceptibility to Bends Chokes and Related Symptoms. T M Henry —p 28
Effects of Cold and Rate of Ascent on Aeroembolism D R Griffin, S Robinson H S Belding, R C Darling and E. S Turrell —p. 56
Incidence of Bends Pain on Short Exposure to Simulated Altitudes of 26 000 28 000 and 30 000 Feet H A Smedal E B Brown Jr and C E Hoffman —p 67
Study of Brain After Intermittent Exposure to Simulated Altitude of 23 000 Feet. W F Windle and A V Jensen —p. 70
Relationship of Air Sickness to Other Types of Motion Sickness. A Hemingway —p 80
Environmental Temperature and Swing Sickness. A Hemingway —p 86.
Occurrence of Decompression Sickness on Descent from High Altitudes. S Rodbard —p 89
Safety and Aircraft Design R H Follis Jr —p 92
Physical Fitness and Age of Army Air Forces Personnel P V Karpovich and E L. Green —p 96
Human Factors in Visual Examination of Aviators B J Wolpaw —p 100
Scientific Medicine in Aviation T H Sutherland —p 104

## Journal of Experimental Medicine, New York

83 163-258 (March) 1946

Western Equine Encephalomyelitis Virus in Blood of Experimentally Inoculated Chickens W McD Hammon and W C Reeves, with technical assistance of Ann Thorpe Rosemary Burroughs and Angela Laurent —p 163
*St Louis Encephalitis Virus in Blood of Experimentally Inoculated Fowls and Mammals W McD Hammon, W C Reeves and E. M Izumi —p 175
*Laboratory Transmission of Japanese B Encephalitis Virus by Seven

## Bulletin of Johns Hopkins Hospital, Baltimore

78 57-112 (Feb) 1946

Sphingomyelins Their Action on Blood Cells Particularly Lymphocytes Their Share in Nucleinate like Action of Ether in Soluble Fraction of Brain Lipoids Edna H Tompkins —p 57

*Asthma as Observed Overseas in General Hospital in Southwest Pacific Area with Special Reference to Relationship of Tropical Service to Onset and Recurrence W L. Winkenwerder —p 78

Clinical Teaching of Social Medicine J H Means —p 96

78 113-160 (March) 1946

Protective Cabinet for Investigators Studying Coccidioides Immitis and Other Infectious Fungi E L Keeney —p 113

Enzymatic Oxidations in Tissue Fractions of Ciliary Processes H Herrmann J S Friedenwald and Mary B Boss —p 119

Early Filariasis T McP Brown, W C Stifler and W R Bethea. —p 126

**Asthma in the Southwest Pacific Area**—Winkenwerder says that 352 patients with asthma, representing 1 2 per cent of total admissions, were observed at a general hospital in the Southwest Pacific area. Of 209 who were studied in detail, 107 developed asthma prior to service and 102 after entering military service Development of asthma, either recurrence, aggravation or primary attack, was perennial, seasonal factors apparently exerted no influence thereon Atmospheric pollen can be found throughout the year in the areas concerned A positive family or personal history of hay fever and/or asthma and of skin sensitivity to pollen and other inhalant antigens was found singly or in combination in the majority of patients. Conditions which aggravated or induced attacks in susceptible persons were, in addition to pollen and other environmental dusts damp humid weather, diurnal temperature variations (from warm to cold) and physical and emotional strain. In 115, or 55 per cent, pollen and inhalant dusts were responsible, in 29, or 14 per cent, infection, and in 65 the probable causes could not be defined, but in these environmental conditions probably played an important part The disability rate per patient represented by hospital days was rather high minimum was 5, the maximum 225 and the average 58.98. hundred and seventy two patients, or 82 per cent, evacuated to the United States Desensitization to pollen other environmental dusts was instituted and in a small such treatment appeared to be beneficial. It is suggested soldiers with a history of or manifesting mild asthma not undertake tropical service Even the presence of should be seriously considered as a disqualifying c general service overseas

## Bull of the U S Army Med. Dept., Washington

5 367-488 (April) 1946

Colon Injuries in Amphibious Warfare. R. S. Spark
Arthroplasty of Elbow H A Swart.—p. 401.
Pellagra In Americans in Japanese Prison. M. M. M
Battle Neurosis M W Brody.—p. 415.
Topical Penicillin Treatment of Wound Infections fractures J Weinberg —p. 419
Ocular Changes in Scrub Typhus. Study of 481 Pat —p 423
Neuropsychiatric Examination of Military Person Japanese Prison Camps. H O. Brill.—p. 439
Early Management of Penetrating Wounds of Thompson W C Castleberry and C. F. Kuntz
Pain in Men Wounded in Battle. H. K. Beecher.
Otolaryngology Clinic in Cbi-Kiangsi. T —p 455
Oral and Rectal Temperatures in and S M Horvath.—p. 459.
Milk Control Program of U S.
Isolation of Coccidioides Immitis
Gastrointestinal Studies on

## Canadian Journal

Present Status of
Seeing is
and D A
Study of N
Leeson, R.
Phenothiazine
—p 103.

## Canadian Medical Association Journal

54 213 332 (March)

Evaluation of Diagnostic Methods in
Reference to Electrocardiogra
Is There Any Advantage in Co
a Compound Cough Mixture?
Pearson. p. 216.
Medical Treatment Among Bush
rigan.—p.
*Medical Survey of Nutrition Among
P E. H D Kruse
—p.
Clinical Aspects of Bowel Obstruction
—p.
Nutritional and Environmental
with Special assistance of H F
Intestinal Parasites in Canada
Wounds. A. B Walter—p.
Traumatic Perforations of Ty
Eardrum.—p. 256.
Peripheral Vascular Injuries. F
Labyrinthitis (Pruthial) Myxedem
Ear.—p. 260
Malignant Tumours of Brai
Dermoid Cyst Arising

**Nutrition Among**
**made a s**
**clinical status of m**
**dietary intake fa**
**for most nutrie**
**greatly defici**
**were vitam**
**(ascorbic**
**practica**
**being**
**acie**
**p**

## rmatology, Baltimore

1946

sult of Mesothorium Radiation
naplasia or Regeneration?) E

om Patients with Skin Diseases
erpetiformis, Lupus Erythematosis
phigus A L Welsh —p 7
Tinea Tonsurans (Microsporon
M MacKee F Hermann and

l and Statistical Findings M B
53
ic Findings. M B Sulzberger and

## t, Minneapolis

March) 1946

rrhea to Sulfathiazole and Penicillin
Jauss —p 65
W E. Olson —p 68
Therapy S A Waksman and A L

79
Obstruction L Pelner —p 81

**to Sulfathiazole and Penicillin.**
its with gonorrhea Seventy-five
nen, were given a total of 22 Gm
day period The first two doses
at an interval of two hours Thereafter four hours during the day until
red Fifty-one patients of this group
red negative after a single five day
Eight required two or more courses,
its (77 per cent) were cured Sixteen
3 men) remained positive in spite of
y-nine patients (55 women and 14 men)
illin Sixty-six (96 per cent) of them
with a single course of penicillin
), and on retreatment with 300 000 units
cent) were rendered negative so that
ed Thirty-three of these patients had
tant, and all of them were cured after a
lin The follow-up control of the patients
azole showed that patients given sulfon-
bserved for a minimum of three months
red cured. Many failures in this series
issed if observations had been terminated
er of initial penicillin failures in this series
provide any valid idea as to how long post-
tion should be continued routinely before
lered cured

## Illinois Medical Journal

89 49 109 (

## he Mount Sinai Hospital, New York

1021-1072 (March-April) 1946

ahiel Janeway Lectures II Role of Fats and Certain Components in Vitamin E Deficiency H Dam

2 Cases of Human Filariasis (Wucheria Bancrofti and Rizzardi) I Snapper and R Merliss —p 1032
alized Granulomatous Ulcer of Jejunum. G D Oppen 1039
ema Associated with Osteomyelitis of Spine and Ribs ses —p 1042
of Pulmonary Sarcoidosis S S Bernstein —p. 1045
is Aureus Empyema in Infant Aged 6 Weeks: Streptococ ns Empyema in Infant aged 21 Months E E. Arnheim

Biology of Disease XII Periarteritis Nodosa. E Moschco 1054

**Pulmonary Sarcoidosis**—Bernstein reports 2
ith miliary lesions of the lung A Negro
a seven months history of cough,
sented a diffuse cutaneous eruption
The roentgenogram of the chest
h submiliary nodules which
ated miliary tubercu-
ic tissue demonstrated
15, who had fever and
s found to have diffuse
lc revealed sarcoidosis.

to corroborate Pund and Greenblatt's contention that the Donovan bodies can be readily observed in routine tissue sections stained with Delafield's hematoxylin and eosin, they have been able to diagnose granuloma inguinale with much greater ease than before They suspect that in the past they overlooked instances of venereal granuloma, mistaking them for nonspecific granuloma Search for the Donovan bodies in smears from the vaginal discharge is recommended in suspected cases of venereal granuloma as an adjuvant method of identification of the organism

## American Review of Tuberculosis, New York

**53** 195-290 (March) 1946

*Spirometric and Bronchospirometric Studies in Thoracoplasty G C Leiner —p 195
Spread of Tuberculosis in Families of Tuberculous Patients P K Telford and Ruth Garten White —p 215
Community Organization for Mass Chest X Ray Surveys Plan in Operation in Delaware County Pa J W Cutler A M Sharpe J W Wood and R W Bernhardt —p 224
St Louis County Tuberculosis Survey R Davies G A Hedberg and M Fischer —p 240
Combined Action of p p Diaminodiphenylsulfone and Immunization in Experimental Tuberculosis B C Sher and J M Kloeck —p 250
Derivatives of p p' Diaminodiphenylsulfone and Sulfanilamide in Experimental Tuberculosis H C Sweany B C Sher and J M Kloeck —p 254
Tubercle Bacilli in Metabolic Apparatus M G Stemmermann and A Stern —p 264

**Spirometric Study in Thoracoplasty**—Leiner studied the pulmonary function by means of spirometry and broncho spirometry in 26 patients before and after four to eight rib thoracoplasties There was usually a slight, insignificant decrease of oxygen intake and basal metabolic rate There was a slight increase of the minute volume of respiration and of the respiratory rate and a slight decrease of the tidal air The ventilation equivalent increased slightly Vital capacity, reserve air, complementary air, maximum breathing capacity and $\frac{\text{Maximum breathing capacity}}{\text{Minute volume}}$ showed a definite decrease In the collapsed lung bronchospirometry revealed a decrease of oxygen intake minute volume and tidal air and a slight decrease of the ventilation equivalent, showing a more efficient use of the ventilated air Vital capacity, reserve air and complementary air dropped considerably In the contralateral lung there was a compensatory increase of the oxygen intake a slight increase of the minute volume tidal air and ventilation equivalent showed no significant change, vital capacity, reserve air and complementary air dropped slightly On the thoracoplasty side the tidal air presented a larger part of the vital capacity after thoracoplasty than before On the contralateral side the relation of vital capacity to its subdivisions remained unchanged The impairment of pulmonary functions under thoracoplasty treatment is less severe than under pneumothorax treatment

## Archives of Pathology, Chicago

**41** 121-222 (Feb) 1946

Distribution of Lipase in Tissues Under Normal and Under Pathologic Conditions G Gomori —p 121
Experimental Studies in Cardiovascular Pathology XII Atheromatosis in Dogs Following Repeated Intravenous Injections of Solutions of Hydroxyethylcellulose W C Hueper —p 130
Id XIII Vibratory Lability of Plasma Colloids in Rabbits and in Dogs Following Ingestion of Cholesterol W C Hueper —p 139
*Structural Changes in Thyroid Glands of Patients Treated with Thiouracil B Halpert, J W Cavanaugh and B F Keltz —p 155
Sclerema Adiposum Neonatorum of Both Internal and External Adipose Tissue P Zeek and Ethel Mae Madden —p 166
Alveolar Cell Tumor of Lung Further Evidence of Its Bronchiolar Origin P A Herbut —p 175
Experimental Nephropathies VI Problem of Experimental Glomerulonephritis J P Simonds H J Linn and J Lange —p 185
Pituitary Lesions Accompanying Obesity J W Goldzieher —p 203

**Structural Changes in Thyroids After Treatment with Thiouracil**—Halpert and his associates present observations on 7 patients with hyperthyroidism in whom a bilateral subtotal thyroidectomy was performed in one or two stages Two patients had received preoperative therapy consisting of thiouracil only, 3 were treated with strong solution of iodine U S P followed by thiouracil and 2 were treated with thiouracil followed by strong solution of iodine. Preparations were stained with hematoxylin and eosin Sections stained with Heidenhain's azocarmine and by Van Gieson's method were also studied In the glands removed following the administration of thiouracil only, the acinous content stained lightly and was decreased or absent, and the cells lining the acini were low or tall columnar These changes were similar to those seen in thyroid glands of untreated patients in an active state of hyperthyroidism In the patients treated with strong solution of iodine U S P followed by thiouracil, subtotal thyroidectomy was performed in two stages In preparation for the first stage only strong solution of iodine was given In preparation for the second stage thiouracil was given Thus the effects of iodine and thiouracil could be compared and contrasted in the same patient Following the administration of thiouracil, the cells of the acini changed from cuboidal to columnar, and the colloid disappeared or lessened in density and became vacuolated and scalloped In the glands removed after the administration of thiouracil followed by strong solution of iodine a refilling of the acini with colloid could be observed, together with a change of the lining cells from columnar to low columnar or cuboidal According to these observations the acinous colloid diminishes in quantity and density or disappears under the influence of thiouracil The variance between structure and function of the thyroid gland following the administration of thiouracil supports the assertion that thiouracil inhibits the production of new colloid and does not interfere with the use of the available colloid

## Archives of Surgery, Chicago

**52** 113-246 (Feb) 1946

Abdominopelvic Sympathectomy for Relief of Pain of Cancer of Cervix A de Sousa Pereira —p 113
Preoperative Diagnosis of Recent Wounds of Abdomen L M Michels. —p 135
Cetylpyridinium Chloride as Cutaneous Germicide in Major Surgery Comparative Study H H Hagan C H Maguire and W H Miller —p 149
*Synthetic Adhesives in Treatment of Wounds of Liver and Other Surgical Conditions Preliminary Report M L Lowry —p 160
Gunshot Wound of Thoracic Esophagus Report of Case J E Fish —p 172
Toxemia Syndrome After Burns Biochemical and Pathologic Observations and Studies J Walker Jr H Saltonstall J E Rhoads and W E Lee —p 177
Progress in Orthopedic Surgery for 1944 XV The Knee Joint R K Ghormley —p 187
Id XVI Conditions Involving Elbow Forearm Wrist and Hand. W P Blount —p 197
Id XVII Amputations, Apparatus and Technic J Warren White and C J Frankel —p 209
Review of Urologic Surgery A J Scholl F Hinman, A B Hepler and others —p 225

**Synthetic Adhesives in Treatment of Wounds of Liver**—Lowry used commercial Scotch tape to control hemorrhage in abdominal viscera and elsewhere Ordinary Scotch tape is made of three layers (1) a backing, usually cellophane, (2) a filler or a binder, of rope stock, and (3) an adhesive face of crude rubber or some synthetic substitute. At Lowry's suggestion the makers of Scotch tape developed new and experimental synthetic combinations for further investigation on animals To date eleven different synthetic combinations of Scotch tape have been manufactured for these experiments The backings for these combinations consist either of cellophane or of polyvinyl alcohol All but one experimental sample contain rope stock paper filler Various adhesives, such as crude rubber, polyisobutylene Buna S and synthetic resin adhesives, have been incorporated into the facing surface of the tape Seventeen rabbits had sections of their livers removed and the gap covered above and below by an envelop of Scotch tape. Sixteen of the animals made complete recoveries In mice, small pieces of tape made of polyvinyl alcohol and synthetic resins, polyvinyl alcohol and polyisobutylene and polyvinyl alcohol and crude rubber inserted intraperitoneally were completely absorbed at the end of one month No tissue reaction was noted, even though rope stock was part of the tape Some substance in the synthetic resins apparently exerts a pronounced hemostatic action, as this adhesive controlled bleeding the most readily Further animal experimentation and sterilization studies are indicated before a tape can be recommended for clinical use

## Bulletin of Johns Hopkins Hospital, Baltimore

78 57-112 (Feb) 1946

Sphingomyelins Their Action on Blood Cells Particularly Lymphocytes Their Share in Nucleinate like Action of Ether in Soluble Fraction of Brain Lipoids Edna H Tompkins —p 57
*Asthma as Observed Overseas in General Hospital in Southwest Pacific Area with Special Reference to Relationship of Tropical Service to Onset and Recurrence W L Winkenwerder —p 78
Clinical Teaching of Social Medicine J H Means —p 96

78 113-160 (March) 1946

Protective Cabinet for Investigators Studying Coccidioides Immitis and Other Infectious Fungi E L Keeney —p 113
Enzymatic Oxidations in Tissue Fractions of Ciliary Processes H Herrmann J S Friedenwald and Mary B Boss —p 119
Early Filariasis T McP Brown W C Stifler and W R Bethea —p 126

**Asthma in the Southwest Pacific Area** —Winkenwerder says that 352 patients with asthma, representing 1 2 per cent of total admissions, were observed at a general hospital in the Southwest Pacific area Of 209 who were studied in detail, 107 developed asthma prior to service and 102 after entering military service Development of asthma either recurrence, aggravation or primary attack, was perennial, seasonal factors apparently exerted no influence thereon Atmospheric pollen can be found throughout the year in the areas concerned A positive family or personal history of hay fever and/or asthma and of skin sensitivity to pollen and other inhalant antigens was found singly or in combination in the majority of patients Conditions which aggravated or induced attacks in susceptible persons were in addition to pollen and other environmental dusts damp humid weather diurnal temperature variations (from warm to cold) and physical and emotional strain In 115 or 55 per cent, pollen and inhalant dusts were responsible, in 29 or 14 per cent infection, and in 65 the probable causes could not be defined, but in these environmental conditions probably played an important part The disability rate per patient represented by hospital days was rather high the minimum was 5, the maximum 225 and the average 58.98 One hundred and seventy-two patients, or 82 per cent were evacuated to the United States Desensitization to pollens and other environmental dusts was instituted and in a small number such treatment appeared to be beneficial It is suggested that soldiers with a history of or manifesting mild asthma should not undertake tropical service Even the presence of hay fever should be seriously considered as a disqualifying condition for general service overseas

## Bull of the U S Army Med Dept, Washington, D C

5 367-488 (April) 1946

Colon Injuries in Amphibious Warfare R S Sparkman —p 395
Arthroplasty of Elbow H A Swart —p 401
Pellagra In Americans in Japanese Prison M M Musselman —p 403
Battle Neurosis M W Brody —p 412
Topical Penicillin Treatment of Wound Infections in Compound Fractures J Weinberg —p 419
Ocular Changes in Scrub Typhus Study of 451 Patients H G Scheie —p 423
Neuropsychiatric Examination of Military Personnel Recovered from Japanese Prison Camps N Q Brill —p 429
Early Management of Penetrating Wounds of Knee Joint J E Thompson W C Cassebaum and C F Stewart —p 439
Pain in Men Wounded in Battle. H K Beecher —p 445
Otolaryngology Clinic in China Burma India Theater J C Peele —p 455
Oral and Rectal Temperatures in Hot Environments W B Shelley and S M Horvath —p 459
Milk Control Program of U S Forces in Iceland. F A Todd —p 461
Isolation of Coccidioides Immitis from Sputum S Wilhelm —p 468
Gastrointestinal Studies on Field X Ray Machine T F Leigh —p 474

## Canadian Journal of Public Health, Toronto

37 83 126 (March) 1946

Present Status of Vaccination Against Influenza R Hare —p 83
Seeing is Believing in Sanitary Control M C Jamieson H K Chen and D A Willigan —p 90
Study of Nutritional Conditions in Group of Urban Children. H J Leeson R Virtue Crawford J F Webb F Swan and others —p 97
Phenothiazine in Treatment of Enterobiasis (II) E Kuitunen Ekbaum —p 103

## Canadian Medical Association Journal, Montreal

54 213 332 (March) 1946

Evaluation of Diagnostic Methods in Cardiac Disease with Special Reference to Electrocardiography F A Willius —p 213
Is There Any Advantage in Combining Several Expectorant Drugs in a Compound Cough Mixture? L M Boyd Betty Palmer and G Pearson —p 216
Medical Practice Among Bush Indians of Northern Manitoba C Corrigan —p 220
*Medical Survey of Nutrition Among the Northern Manitoba Indians P E Moore H D Kruse I F Tisdall and R S C Corrigan —p 223
Clinical Aspects of Bowel Obstruction Problem O H Wangensteen —p 234
Nutritional and Environmental Studies in Southeast Asia R Kark with technical assistance of H F Alton and E D Pease —p 242
Intestinal Parasites in Canadian Armed Forces T H Williams —p 249
Weak Back A B Walter —p 252
Traumatic Perforations of Tympanic Membrane Due to Blast Injury P E Ireland —p 256
Peripheral Vascular Injuries F W Schroeder —p 258
Localized (Pretibial) Myxedema Associated with Graves Disease E M Watson —p 260
Metastatic Tumours of Brain Mary I Tom —p 265
Echinococcal Cyst Arising From the Prostate J A Davies —p 268

**Nutrition Among Manitoba Indians** —Moore and his associates made a survey of the dietary habits and the nutritional status of more than 400 Canadian Bush Indians The dietary intake failed to meet the recommended daily allowances for most nutrients For a number of the nutrients the diet was greatly deficient The most pronounced vitamin deficiencies were vitamin A, vitamin $B_2$ (riboflavin) and vitamin C (ascorbic acid) Multiple tissue changes were encountered in practically every Indian examined the most severe changes being in the conjunctivas, the blood vessels at the corneal scleral junction and the gums The parallel between the prevalence and the severity of these signs and the degree of the deficiencies in the food supply is striking The Indian infant mortality rate the crude mortality rate and the death rate from tuberculosis are many times higher than in the white population It is not unlikely that many characteristics, such as shiftlessness indolence improvidence and inertia, so long regarded as inherent or hereditary traits in the Indian race, may be really the manifestations of malnutrition Furthermore, it is probable that the great susceptibility of Indians to many diseases paramount among which is tuberculosis may be attributable among other causes to their high degree of malnutrition

## Cincinnati Journal of Medicine

27 151-222 (March) 1946

Clinical Applications of Electroencephalography G L Engel —p 151
Streptomycin Quality and Standards A J Leibmann —p 182

27 223-278 (April) 1946

Present Status of Penicillin in Therapy of Syphilis G X Schwemlein —p 223
Digitalis Review J H Kotte —p 232

## Diseases of Chest, Chicago

12 89-184 (March-April) 1946

*Acute Primary Diaphragmitis (Hedblom's Syndrome) M Joannides —p 89
Unexpandable Lung S Jacobs —p 111
Artificial Pneumothorax and Its Effect on Pulmonary Tissues of Normal Rabbits. R Charr H Lorge and N H Heiligman —p 117
Induced Pneumoperitoneum in Treatment of Advanced Pulmonary Tuberculosis in Children E Morris —p 121
Laryngeal Tuberculosis M K. Humphries Jr —p 129
Separation Center Chest Survey L Schneider —p 147
Chest Specialist His Training and Services M S Lloyd —p 153

**Acute Primary Diaphragmitis** —Joannides reports 5 cases of acute primary diaphragmitis (Hedblom's syndrome) in 3 men and 2 women between the ages of 38 and 66 The clinical manifestations of this syndrome are inspiratory pain (ponopnea) on the affected side limitation of mobility of the lower chest wall and a tendency to a flaring out of the costal margin with each inspiration There may also be pain in the upper quadrant of the abdomen with a tendency to muscle spasm The patient may complain of pain in the homolateral shoulder and the trapezoid ridge. Roentgenologically there is a tendency of the involved diaphragmatic leaf to rise mobility may be limited or even absent. If there is pleural involvement, adhesions may

develop between the base of the lung and the upper surface of the diaphragm If effusion develops along with the pleural involvement, plastic changes occur at the costophrenic and cardiophrenic angles in definite widening of these acute angles The severity of the symptoms is variable Treatment has been primarily symptomatic Sedatives and physical therapy have been employed At times opiates had to be administered to keep the patient comfortable The disease itself is self limited but has a tendency to recur The attacks often follow a cold that comes on with atmospheric changes

## Gastroenterology, Baltimore

**6** 1-82 (Jan) 1946

Roentgenologic and Gastroscopic Study of Gastric Disease W E Ricketts and H M Pollard—p 1
Gastric Endoscopic and Secretory Findings During Salicylism C M Caravati—p 7
Tuberculous Ulcerative Colitis or Ulcerative Colitis with Superimposed Tuberculous Infection Case Report P M Glenn and H S Read—p 9
Chronic Dyspepsia in Mediterranean Theater Gastroscopic Roentgenologic and Psychiatric Study R Schwartz and M Perlmutter—p 21
Scleroderma with Esophageal Symptoms Report of 2 Cases H A Rafsky and W Herzig—p 35
Reticulum Cell Sarcoma of Stomach I J Cash and A. E Rappoport—p 40
*Effect of Alumina Gel on Absorption of Amino Acids Ascorbic Acid Glucose and Neutral Fat from Intestinal Tract. W S Hoffman and H A Dymewicz—p 50

**Alumina Gel and Intestinal Absorption.**—Hoffman and Dymewicz studied the influence of alumina gel on the tolerance curves of amino acids, ascorbic acid, glucose and neutral fats With neutral fat there was obviously no flattening of the tolerance curves by alumina gel. With amino acids ascorbic acid and especially glucose there was a slight lowering of the average maximal rise in each group with alumina gel but these were statistically insignificant However, 27 of 39 individual experiments showed lower maximal rises with alumina gel than in the control experiments When 1 ounce of aluminum phosphate gel was used with glucose in additional experiments, the depression of the tolerance curve was even less than with alumina gel The results obtained indicate that from a nutritional point of view therapeutic doses of alumina gel (or aluminum phosphate gel) have no demonstrable effect on the absorption of the nutrient substances studied.

## Illinois Medical Journal, Chicago

**89** 49-100 (Feb) 1946

Hematology A Round Table H Alt, S O Schwartz and L Limarzi—p 62
Functional Nervous Disorders S N Clark—p 68
Perianal Urticaria C J Drueck—p 72
Treatment of Convulsive State at Illinois Security Hospital A J Arieff—p 74
Surface Defects of Skin Treatment by Controlled Exfoliation J C Urkov—p 75
Tuberculosis Peritonitis Case Reports with Pathologic Findings P K Anthony—p 82

## Iowa State Medical Society Journal, Des Moines

**36** 85-132 (March) 1946

Chinese Native Ophthalmology O S Lee Jr—p 91
Tropical Diseases in Returning Military Personnel M J Rotkow—p 98
Sudden Death During the Clinically Convalescent State of Anterior Poliomyelitis J E Flynn—p 103
Subacute Bacterial Endocarditis Treated with Penicillin L. E January—p 105

**36** 133-186 (April) 1946

Reformed Gallbladder Review of 42 Cases F R Peterson—p 134
Present Trends in Psychiatry W R Miller—p 138
*Toxic Manifestations of Large Doses of Vitamin D as Used in Treatment of Arthritis W D Paul—p. 141
Analgesia and Analgesic Agents E G Gross—p 147
Significance of Vaginal Bleeding J H Randall—p 152
*Epidemic Ringworm of Scalp in Children R Nomland—p 155

**Toxic Effects of Large Doses of Vitamin D**—Paul presents 5 cases to illustrate the clinical signs of vitamin D poisoning He stresses that large doses of vitamin D may cause severe hypervitaminosis particularly if combined with a high calcium intake in the form of milk The dose of vitamin D should be based on body weight rather than age, and whether or not it is given in milk. The usual toxic symptoms of vitamin D administration are headache nausea vomiting, diarrhea, epigastric fulness, polyuria and polydipsia The signs of toxicity are low specific gravity of the urine, traces of albumin in the urine, inability to concentrate urine, increased serum calcium, renal failure, retention of nonprotein nitrogen, deposition of calcium in soft tissues, deposition of calcium in arteries and arterioles and, eventually death Massive doses of vitamin D do not alter the ultimate course of arthritis Whenever massive doses of vitamin D are prescribed, the urine should be examined frequently and serum calcium levels should be obtained

**Epidemic Ringworm of Scalp in Children.**—Nomland says that ringworm of the scalp assumed epidemic proportions in the United States in 1942, when it increased many fold in New York City From this focus the epidemic spread widely, at first to the large metropolitan centers throughout the country and later to the smaller cities and villages The epidemic became of concern to Iowa about two years ago The first case at the University Hospitals was seen in September 1944 Since then about 20 patients, who came chiefly from the larger communities in eastern Iowa, have been seen

## Journal of Aviation Medicine, St. Paul

**17** 1-112 (Feb) 1946

Oculogyral Illusion Form of Apparent Motion Which May Be Observed Following Stimulation of Semicircular Canals A Graybiel and Dorothy I Hupp—p 3
Altitude Pain Study of Individual Differences in Susceptibility to Bends Chokes and Related Symptoms F M Henry—p 28
Effects of Cold and Rate of Ascent on Aeroembolism D R Griffin S Robinson H S Belding R C Darling and E. S Turrell—p 56
Incidence of Bends Pain on Short Exposure to Simulated Altitudes of 26 000 28 000 and 30 000 Feet H A Smedal E B Brown Jr and C E Hoffman—p 67
Study of Brain After Intermittent Exposure to Simulated Altitude of 23 000 Feet W F Windle and A V Jensen—p 70
Relationship of Air Sickness to Other Types of Motion Sickness. A Hemingway—p 80
Environmental Temperature and Swing Sickness A Hemingway—p 86.
Occurrence of Decompression Sickness on Descent from High Altitudes. S Rodbard—p 89
Safety and Aircraft Design R H Follis Jr—p 92
Physical Fitness and Age of Army Air Forces Personnel P V Karpovich and E L Green—p 96
Human Factors in Visual Examination of Aviators B J Wolpaw—p 100
Scientific Medicine in Aviation T H Sutherland—p 104

## Journal of Experimental Medicine, New York

**83** 163-258 (March) 1946

Western Equine Encephalomyelitis Virus in Blood of Experimentally Inoculated Chickens W McD Hammon and W C Reeves with technical assistance of Ann Thorpe Rosemary Burroughs and Angela Laurent—p 163
*St Louis Encephalitis Virus in Blood of Experimentally Inoculated Fowls and Mammals. W McD Hammon W C Reeves and E. M Izumi—p 175
*Laboratory Transmission of Japanese B Encephalitis Virus by Seven Species (Three Genera) of North American Mosquitoes W C Reeves and W McD Hammon with technical assistance of Giselda G Wolf and C Espana—p 185
Interference Between Viruses in Tissue Culture E H Lennette and H Koprowski—p 195
Effect of Photo-Oxidation on Isohemagglutinating Antibodies W C Boyd—p 221
Suppression of Growth of Brown Pearce Tumor Cells by Specific Antibody with Consideration of the Nature of Reacting Cell Constituent. J G Kidd—p 227
Period of Infectivity of Patients with Experimentally Induced Infectious Hepatitis W P Havens Jr—p 251

**St Louis Encephalitis Virus**—Hammon and his collaborators state that of three species of mammals tested by peripheral inoculation (guinea pig cat and horse) none showed viremia under conditions which suggested that any of these species would serve as a frequent source of mosquito infection Of the birds tested (chicken duck and dove) all developed viremia and might readily serve as natural sources of mosquito infection. Chickens were shown to be highly susceptible to infection by minute amounts of virus inoculated subcutaneously Virus may appear in the blood of chickens within sixteen hours after inoculation and it has persisted till at least the 120th hour No fowl showed signs of illness as a result of the infection

**Japanese B Encephalitis Virus**—Reeves and Hammon tested ten common species of Western North American mosquitoes for their ability to act as vectors of Japanese B encephalitis virus Of the ten species of mosquitoes tested

seven were demonstrated to be laboratory vectors These seven species represent three genera (Culex, Aedes and Culiseta) Transmission was made to mice twenty-one times and to a chicken once These data, in addition to the published accounts by Japanese and Russian workers of the natural epidemiology of this disease, lead the authors to believe that this virus might well establish itself in North America especially if introduced in areas where native encephalitides are now endemic These studies also indicate that species of mosquitoes (Culex tarsalis, Culex pipiens, Aedes dorsalis and Culiseta inornata) now known to be fully incriminated vectors of the western equine or St Louis encephalitis viruses can also serve as laboratory vectors of the Japanese B virus

## Journal of Infectious Diseases, Chicago

**78** 1-78 (Jan.-Feb.) 1946

Distribution of Various Agglutinative Types of Hemolytic Streptococci of Group A Alice C Evans—p 1
Types of Streptococci Associated with Bovine Mastitis Followed by Outbreaks of Human Disease Alice C Evans—p 18
*Experimental Basis of Sulfonamide Therapy in Bacillary Dysentery* F J Moore J F Kessel D G Simonsen and Jessie Marmorston—p 25
Study of Chemotherapy in Experimental Bacillary Dysentery of Macaca Mulatta with Emphasis on Clearing of Carrier State Dorothy Hoskins and G M Dack—p 32
Shigella Types from Eastern France R P Elrod and E R Wormus—p 39
Studies on Leukocytic Picture in Brucellosis. M R. Castaneda and G Guerrero I—p 43
Comparative Cutaneous Tests for Filariasis with Antigens of Different Dilutions D R A Wharton and T Stelma—p 49
Nutritional Deficiency and Resistance to Infection Effect of Biotin Deficiency on Susceptibility of Rats and Mice to Infection with Salmonella Typhi Murium I J Kligler K Guggenheim and H Herrnheiser—p 60
Rocky Mountain Spotted Fever Study of Complement Fixation in Serum of Certain Dogs C C Shepard and N H Topping—p 63
*Production of Potent Inactivated Vaccines with Ultraviolet Irradiation IV Vaccination Against Bacillary Dysentery H J Shaughnessy, A Mulzer J Neal and S O Levinson—p 69

**Inactivated Dysentery Vaccines**—According to Shaughnessy and his colleagues several lots of irradiated monovalent and mixed dysentery vaccines showed no significant loss in potency after storage for three to seven months at 3 to 5 C Irradiated mixed dysentery vaccine induced a higher degree of active immunity in mice than heated and formaldehydized vaccines prepared from the same suspension. Volunteers immunized with the five-strain irradiated mixed dysentery vaccine (Flexner V W Z Boyd 88 and sonnei) responded with significant increases in mouse protective antibodies The vaccine caused only moderate local and no systemic reactions The mouse protective antibody titer fell materially after an interval of six months a recall injection of vaccine produced some increase in the titer but not to the original levels

## Journal of International College of Surgeons, Chicago

**9** 1-172 (Jan.-Feb.) 1946

Pseudoarthrosis of Tibia and Fibula in Children J R Moore—p 7
Fusion of Spine After Removal of Ruptured Disk E L Compere—p 14
Osteotomy for Treatment of Ununited Fracture of Femoral Neck C L Hall and C Berg—p 20
Bone Grafts for Ununited Fracture of Neck of Femur Report of 90 Cases M S Henderson and E D Henderson—p 26
Late Complications in Fracture of Neck of Femur Treated by Nailing, Bone Grafting or Both. A Inclan—p 36
Arthroplasty for Congenital Dislocation of Hip P C Colonna—p 51
Replacement of Lower End of Femur or Upper End of Tibia R Nissen—p 56
Malignant Tumors of Bone J F Brailsford—p 62
Appeal for More Radical Attitude in Treatment of Bone Cysts and Giant Cell Tumors F Mandl and J Dwek—p 79
Principles of Cineplastic Operations E Bergmann—p 99
Operations on Bodies of Vertebrae L Mayer—p 104
Osteoid Osteoma of Cervical Spurious Process Report of Case O P Campos—p 112
Orthopedic Measures for Use in Irreparable Nerve Injury T C. Thompson—p 116
Pseudoarthrosis of Neck of Femur A Rodo—p 130
Enabling Useless Thigh Stumps to Move a Prothesis. J. F. S Esser—p. 141.
Screw Fixation of Fractures O A Engh—p 144
*Congenital Dislocation of Hip Fifty Year Survey J Hass—p 152*
Patella Fracture—Method of Treatment C G Bain—p 159

## Journal of Investigative Dermatology, Baltimore

**7** 1-68 (Feb.) 1946

Cancer like Epithelial Structure as Result of Mesothorium Radiation of Sebaceous Glands of Rabbit (Anaplasia or Regeneration?) E Kuznitzky—p 1
Specificity of Streptococci Isolated From Patients with Skin Diseases Studies on Pemphigus Dermatitis Herpetiformis Lupus Erythematosis and Erythema Multiforme I Pemphigus A L Welsh—p 7
New Treatment for Anthropophilic Tinea Tonsurans (Microsporon Audouini) Preliminary Report G M Mackee F Hermann and T L Karp—p 43
Studies on Prickly Heat I Clinical and Statistical Findings M B Sulzberger and L Otis Emik—p 53
Id II Experimental and Histologic Findings M B Sulzberger and H M Zimmerman—p 61

## Journal-Lancet, Minneapolis

**66** 65-94 (March) 1946

*Comparison of Response of Gonorrhea to Sulfathiazole and Penicillin Analysis of 144 Cases I H Mauss—p 65
Electroshock Convulsion Therapy W E Olson—p 68
Present Status of Streptomycin Therapy S A Waksman and A. I Schatz.—p 77
Sprue Syndrome L Pelner—p 79
Aids in Diagnosis of Intestinal Obstruction L Pelner—p 81

**Response of Gonorrhea to Sulfathiazole and Penicillin.**—Mauss treated 144 patients with gonorrhea Seventy-five patients, 66 women and 9 men, were given a total of 22 Gm of sulfathiazole over a five day period The first two doses were of 2 Gm. each given at an interval of two hours Thereafter 1 Gm was given every four hours during the day until 22 Gm had been administered Fifty-one patients of this group (68 per cent) were rendered negative after a single five day course of this therapy Eight required two or more courses, so that a total of 59 patients (77 per cent) were cured Sixteen patients (13 women and 3 men) remained positive in spite of repeated treatment Sixty-nine patients (55 women and 14 men) were treated with penicillin. Sixty-six (96 per cent) of them were rendered negative with a single course of penicillin (150 000 to 200 000 units), and on retreatment with 300 000 units the remaining 3 (4 per cent) were rendered negative so that 100 per cent were cured Thirty-three of these patients had been sulfonamide resistant and all of them were cured after a single course of penicillin The follow-up control of the patients treated with sulfathiazole showed that patients given sulfonamides should be observed for a minimum of three months before being considered cured Many failures in this series would have been missed if observations had been terminated earlier The number of initial penicillin failures in this series was too small to provide any valid idea as to how long post-treatment observation should be continued routinely before patients are considered cured

## Journal of the Mount Sinai Hospital, New York

**12** 1021-1072 (March-April) 1946

The Edward Camaliel Janeway Lectures II Role of Fats and Certain Other Dietary Components in Vitamin E Deficiency H Dam—p 1021
Observations on 2 Cases of Human Filariasis (Wucheria Bancrofti and Mansonella Ozzardi) I Snapper and R. Merliss—p 1032
Nonspecific Localized Granulomatous Ulcer of Jejunum. G D Oppenheimer—p 1039
Chronic Empyema Associated with Osteomyelitis of Spine and Ribs A H Aufses—p 1042
*Miliary Form of Pulmonary Sarcoidosis S S Bernstein—p. 1045
Staphylococcus Aureus Empyema in Infant Aged 6 Weeks; Streptococcus Viridans Empyema in Infant aged 21 Months E E. Arnheim.—p 1050
Essays on Biology of Disease XII Periarteritis Nodosa. E Moschcowitz.—p 1054

**Miliary Pulmonary Sarcoidosis**—Bernstein reports 2 cases of sarcoidosis with miliary lesions of the lung A Negro woman aged 21, with a seven months history of cough expectoration and fever presented a diffuse cutaneous eruption and generalized adenopathy The roentgenogram of the chest revealed diffuse infiltration with submiliary nodules which could not be distinguished from disseminated miliary tuberculosis Biopsy of both skin and lymphatic tissue demonstrated sarcoidosis A Puerto Rican boy aged 15, who had fever and costovertebral pain for one month, was found to have diffuse adenopathy, biopsy of a lymph node revealed sarcoidosis

## Radiology, Syracuse, N. Y.

46 107-212 (Feb.) 1946

Roentgen Anatomy of Skull in Newborn Infant. S. G. Henderson and Louis S. Sherman.—p. 107

Midline Anomalies of Brain: Their Diagnosis by Pneumoencephalography. A. P. Echternacht and J. A. Campbell.—p. 119

Lesions of Aqueduct of Sylvius. H. M. Wilson and W. G. Lutz.—p. 132

Observations on Presence of Subdural Gas After Pneumoencephalography. L. W. Paul and T. C. Erickson.—p. 139

Treatment of Late Postirradiation Ulcers with Radon Ointment. B. V. A. Low-Beer and R. S. Stone.—p. 149

Treatment of Hemangioma. G. E. Pfahler.—p. 159

Value of Stereoscopy in Mass Radiography of Chest. I. Lewis and R. H. Morgan.—p. 171

Comparison of Two Levels of Roentgen and Neutron Irradiation of Normal and Lymphomatous Mice, Using Radiophosphorus as Indicator of Cellular Activity. K. G. Scott.—p. 173

Some Observations on X-Ray Treatment Cones. C. E. Eddy and D. J. Stevens.—p. 176

## Southern Medical Journal, Birmingham, Ala.

39 191-276 (March) 1946

Saddle Block Anesthesia with "Nupercaine" for Obstetrics. R. T. Parmley and J. Adriani.—p. 191

[illegible] Venereal Disease Control in Urban Area: Report of Demonstra[illegible]. G. A. Denison and W. H. Y. Smith.—p. 195

[illegible]ating Carcinoma of Urinary Bladder: Diagnosis and Clinical Evaluation of Curability. H. J. Jewett and G. H. Strong.—p. 203

[illegible] Approach to Lumbar Ureter and Kidney Through the Superior [illegible]mbar Triangle. J. E. Dees.—p. 208

[illegible] Rehabilitation of Severely Handicapped Persons. E. C. Elkins.—p. [illegible]

[illegible] Perforation of Uterus with Foreign Body in Abdomen. E. M. [illegible].—p. 221

[illegible] Congenita (Oppenheim's Disease): Report of Case with [illegible]. J. A. Cunningham.—p. 232

[illegible]cillin in Treatment of Syphilis: Results and Complications. E. E. [illegible].—p. 239

[illegible] Requirements Necessary for Effective Penicillin Therapy: [illegible] of In Vitro and In Vivo Response to Penicillin in Acute [illegible] Infections of Varied Etiology. E. Yow, J. Avera, G. T. [illegible], G. Palmer and R. W. Taylor, Jr.—p. 236

[illegible] Dermatophytosis. G. M. Lewis and Mary E. Hopper.—p. [illegible]

[illegible] Psychotherapy of Obsessive Schizophrenic Personalities.—p. 249

[illegible] Incompatibility Explain All Cases of Hemolytic Anemia. [illegible] H. Kennedy, Jr.—p. 257

[illegible] Concerning the Salzer Method of Treatment of Lye [illegible]. R. W. Hanckel, Jr.—p. 263

[illegible] in General Practice. W. H. Sebrell.—p. 265

[illegible] Thymine for Folic Acid in Treatment of Macrocytic [illegible]. T. D. Spies, C. F. Vilter, J. K. Cline and W. B. [illegible].—p. 280

**Congenita**—A boy who seemed normal at [illegible] later showed flaccid extremities and who [illegible] as though he was having difficulty in [illegible] able to sit up or hold his head erect when [illegible] months old and his arms and legs were [illegible] with neostigmine hydrochloride and amino- [illegible], but the infant died several weeks later [illegible] and postmortem examination, Cun- [illegible] this case of clinically diagnosed amyo- [illegible] (Oppenheim) the important changes were [illegible] the voluntary muscles and the central [illegible] cause of death was bronchopneumonia [illegible] resulting from an impaired swallowing [illegible] healing Ghon tubercle [illegible] an [illegible] The [illegible] also [illegible] muscles showed vari[illegible] [illegible] [illegible] [

troscopy revealed the presence of the tumor At surgery a leiomyosarcoma was found growing expansively into the omentum and pancreas Total gastrectomy with extirpation of the spleen and the tail of the pancreas led to a cure The third patient presented the picture of pernicious anemia X ray examination and gastroscopy revealed a circumscribed tumor of the upper third of the stomach without gastritis In the gross resected specimen this tumor was found to be a pedunculated one but only at microscopic examination was the diagnosis of leiomyosarcoma made The tumor was removed by extensive resection and the patient survived The fourth patient had had severe attacks of hematemesis and melena for over a year Surgery revealed an intramural leiomyosarcoma Total gastrectomy with splenectomy and partial pancreatectomy was performed but the patient died from massive pulmonary atelectasis The authors conclude that the x-ray diagnosis would have been possible in 3 cases and that correct gastroscopic diagnosis should have been made in 3 The preoperative diagnosis of leiomyosarcoma of the stomach is possible X-ray treatment of gastric leiomyosarcoma is ineffective Surgery proved to be satisfactory

**Composite Free Grafts of Skin and Cartilage from the Ear**—Brown and Cannon say that sections of the border of the ear containing two surfaces of skin with cartilage in between have been successfully transplanted as free grafts and defects of the nostril border tip and columella have been repaired satisfactorily in a single operation. This procedure results in a better appearance than any other method and there is minimal deformity of the donor site and the use of bulk flaps is avoided The ear can be repaired with a local flap or by burying the open ear under a direct scalp flap from behind and freeing it and grafting the defect two to three weeks later The procedure is useful for tissue losses from burns gunshot and shell fragment wounds as well as other traumatic or operative losses

**Subcutaneous Heparin in Frostbite**—Lange and Loewe state that animal experimentation substantiated the fact that the timely use of heparin prevents gangrene whereas control untreated animals uniformly develop gangrene. The subcutaneous heparin preparation in the Pitkin menstruum seemed uniquely applicable and the authors used it on human volunteers This method of depositing heparin achieves a consistent, retarded and equal release of the anticoagulant. The Pitkin menstruum which was designed to regulate the rate of release of water soluble drugs is composed of gelatin dextrose glacial acetic acid and water The contents of the ampules are liquefied in hot tap water, drawn up through a 2 to 2½ inch, 18 gage needle into a 5 or 10 cc syringe and injected subcutaneously preferably into the anterior or lateral aspect of the thigh The injections are given every day or every other

## Union Medicale du Canada, Montreal

**75** 243-362 (March) 1946 Partial Index

Postural Hypotension R Wallis—p 246
Aspiration Biopsy of Liver Observations J LeSage.—p 258

Symposium on Penicillin

Will Penicillin be Surpassed? M Panisset and A Frappier—p 272
Penicillin in Pleuropulmonary and Bronchial Infections P Letendre. —p 282
Penicillin in Contagious Diseases J H Charbonneau—p 288
Treatment of Acute Meningitis with Penicillin R. Amyot.—p 291
Employment of Penicillin for Surgery G St Onge—p 295
Penicillin in Syphilis A Marin and A Lambert.—p 300

## West Virginia Medical Journal, Charleston

**42** 49-76 (March) 1946

*Colloid (Paraphysial) Cysts of Third Ventricle Report of Case with Removal and Recovery A. A Wilson—p 49
Hydronephrosis Due to Aberrant Vessels. C A Hoffman—p 53
Psychophysical Examination of Problem School Children W L. Oliver and Elizabeth M Stalnaker—p 57
Subpectoral Abscess Case Report J M Donald and P A. Tuckwiller —p 61

**Colloid Cyst of Third Ventricle**—According to Wilson the rare lesions of the third ventricle, variously known as colloid, paraphysial or neuroepithelial cysts, arise from the velum transversum of the anterior part of the roof of the third ventricle from an embryonic anlage of the paraphysis A man aged 24, admitted to the neurosurgical service of the Charleston General Hospital Aug 12 1940, had been subject to bouts of generalized headache for the past three years Often when stooping over to pick up an object he would become blind and dizzy for a few moments Headaches had become much more frequent during the past nine months Ventriculography revealed dilated lateral ventricles without shift indicating a midline tumor completely obstructing the left foramen of Monro and almost completely obstructing the right. The tumor appeared, therefore to be in the anterior portion of the third ventricle A right frontal craniotomy was performed As soon as the right foramen of Monro was exposed a smooth, grayish glistening mass was seen presenting through the foramen. This was grasped with tissue forceps and a small piece the size of a tear drop, came off without bleeding The margins of the foramen were incised the foramen was enlarged, and the complete tumor the size of a cherry stone, was delivered without hemorrhage The postoperative course while somewhat stormy, was satisfactory The patient was able to return to his work and in 1943 was ordered for induction

## Wisconsin Medical Journal, Madison

**45** 281-372 (March) 1946

Diffuse bilateral submiliary infiltrations were demonstrated on roentgenographic examination of the chest Relevant symptoms were minimal, and the roentgenologic findings did not change during several months of observation The resemblance between the pulmonary roentgenogram of miliary sarcoidosis and miliary tuberculosis was striking in both cases

## Journal of Nat. Cancer Inst., Washington, D C

**6** 197-238 (Feb) 1946

Degradation of Cystine Peptides by Tissues IV Dehydropeptidase Activity in Normal and Neoplastic Tissue J P Greenstein and Florence M Leuthardt —p 197
Enzymatic Hydrolysis of Benzoylarginineamide in Normal and Neoplastic Tissues J P Greenstein and Florence M Leuthardt.—p 203
Note on Some Aspects of Effect of Nucleates in Primary and Transplanted Rat Hepatomas J P Greenstein and H W Chalkley —p 207
Enzymatic Activity in Primary and Transplanted Rat Hepatomas. J P Greenstein and Florence M Leuthardt.—p 211
Protective Effect of Thymus Nucleate on Heat Coagulation of Proteins. C E Carter and J P Greenstein —p 219
Quantitative Studies on Latent Period of Tumors Induced with Subcutaneous Injections of Agent of Chicken Tumor I I Curve Relating Dosage of Agent and Chicken Response W R Bryan —p 225

## Journal of Nervous and Mental Disease, New York

**103** 213-318 (March) 1946

Aphasia Apraxia and Agnosia New Classification S E Trent —p 213
Psychogenic Vomiting J H Masserman —p 224
Paramyoclonus Multiplex of Friedreich. E Γ Walker and W E. Chaney —p 234
Organic Thinking Difficulty Report of Case I S Freiman and P V Lemkau.—p 239
Present Status of Narcodiagnosis and Therapy P H Hoch.—p 248
Therapeutic Relaxation E Schmidhofer —p 260
Psychopathy in Scheme of Human Typology B Karpman.—p 276
Value of Formal Psychiatric Examinations in Criminal Court. S H Kaufman and C Bok.—p 289
Traumatic Intracerebral Hematoma. J F Grunnagle —p 298
Simple Practical Test for Anxiety Neurosis Clinical Note. S A. Robins —p 301

## Journal of Neurophysiology, Springfield, Ill.

**9** 63-136 (March) 1946

Effect of Electroencephalogram of Localized Pressure on Brain M A Glaser and H Sjaardema with technical assistance of Margaret Woelfel —p 63
Eye Movements Following Strychninization of Superior Colliculus of Cats Julia T Apter —p 73
Synaptic Potentials of Motoneurons. J C Eccles —p 87
Pyramidal Tract Effect of Maximal Injury on Acid Phosphatase Content in Neurons of Cats. W L Hard and A M Lassek.—p 121
Corticobulboreticular Pathway from Area 4 s W S McCullock C Graf and H W Magoun —p 127
Pyruvic Acid Exchange of Brain Williamina A. Himwich and H E Himwich —p 133

## Journal of Nutrition, Philadelphia

**31** 261-386 (March) 1946

Nutritive Value of Protein in Tobacco-Seed Oilmeal K E. Rapp, J T Skinner and J S McHargue.—p 261
Nutritive Value of Tobacco-Seed Oil K. E Rapp J T Skinner and J S McHargue —p 273
Mental Response to Added Thiamine Ruth F Harrell —p 283
Studies on Carotenoid Metabolism VI Relative Provitamin A Activity of Carotene When Introduced Orally and Parenterally in Rat. E L Sexton J W Mehl and H J Deuel Jr —p 299
Growth and Food Preference of Rats Fed a Lactose Dried Milk Ration Containing Butter Fat or Corn Oil D B Parrish E Roberta Shimer and J S Hughes —p 321
Influence of Choline and of Trypan Blue on Utilization of Carotene and Vitamin A for Liver Storage of Vitamin A Lillian S Bentley and Agnes Fay Morgan.—p 333
Nutritive Value of Canned Foods XVII Pyridoxine Biotin and Folic Acid Margaret Ives Ann E Pollard C A. Elvehjem and F M Strong —p 347
Nutritional Status of Rats on Milk Diets Containing Succinylsulfathiazole. H G Day K. G Wakim W H Zimmerman and L. S McClung —p 355
*Apparent Prolongation of Life Span of Rats by Intermittent Fasting A J Carlson and F Hoelzel —p 363
Effect of Different Grades of Cocoa on Retention of Dietary Calcium by Growing Rats. H H Mitchell and T S Hamilton.—p 377

**Prolongation of Life Span of Rats by Intermittent Fasting**—Carlson and Hoelzel have observed that when a sufficient amount of choice food is available laboratory rats, like many human beings, eat enough to become more or less obese. Observations previously made showed that rats which were fasted every other day and fed a diet low in protein between fasts developed peptic ulcers in the forestomach within about two weeks However, rats fed a diet adequate in protein between single-day fasts usually remained free from peptic ulcers In the studies described here 137 rats (60 males and 77 females), raised in the laboratory from rats obtained from the Wistar Institute, were used These were all of the rats in seventeen litters with two or more of one sex or both sexes raised. Tests in which a group of 33 rats were allowed the same food ad libitum and groups of 37, 37 and 30 rats were fasted one day in four, three and two, respectively, after the age of 42 days, showed that the apparent life span was increased by the intermittent fasting The optimum amount of fasting appeared to be fasting one day in three, and this increased the life span of littermate males about 20 per cent and littermate females about 15 per cent. However, the preexperimental condition of the individual rats was also found to be an important factor determining the life spans No drastic retardation of growth was produced by the intermittent fasting, but the development of mammary tumors was retarded in proportion to the amount of fasting

## Journal of Pediatrics, St. Louis

**28** 249-400 (March) 1946

Movement in Medical Economics N Sinai —p 253
Facts and Figures in Pediatric Medicine. Marguerite F Hall —p 258.
*Streptomycin Summary of Clinical and Experimental Observations. H C Hinshaw and W H Feldman —p 269
*Histoplasmosis Report of 4 Cases 2 in Siblings Histoplasmin Test and Other Diagnostic Procedures J H McLeod C W Emmons, S Ross and F G Burke —p 275
Rheumatic Recrudescences Diagnosis and Prevention A. E. Hansen. —p 296
Pediatrician s Responsibilities in Diagnosis and Treatment of Early Poliomyelitis P M Stimson —p 309
Relationship of Infantile Paralysis Epidemics to Community Resources in Treatment of Patients. R. P Schwartz.—p 313
Role of Physical Medicine in Poliomyelitis. R. L. Bennett.—p 316
Psychologic and Psychiatric Implication of Poliomyelitis B Crothers and Edith Meyer —p 324
Child Welfare Work in Brazil E H Christopherson.—p 327

**Streptomycin.**—Hinshaw and Feldman state that the range of efficacy of streptomycin extends the possibility of antibiotic therapy to treatment of several diseases which are not amenable to treatment with other chemotherapeutic agents Experimental tuberculosis of guinea pigs may be arrested by prolonged treatment with streptomycin even though the disease has been permitted to become well developed prior to institution of therapy A total of 54 patients with different types of clinical tuberculosis have been treated with streptomycin Present evidence clearly indicates that streptomycin does not exert a rapidly curative effect on clinical tuberculosis, although it does appear to modify the course of the disease in a favorable manner and exert a suppressive effect on previously progressive tuberculosis. At the present time it must not be considered to be a substitute for any other form of treatment

**Histoplasmosis.**—McLeod and his associates report that 4 cases of histoplasmosis (2 new and 2 previously reported) occurred in children living in a rural area in Loudoun County, Va., within a radius of 10 miles of one another The 2 new patients were brothers, constituting the first reported instance of histoplasmosis in siblings Histoplasma capsulatum was isolated in culture antemortem from both although neither reacted to histoplasmin The possibility of transmission from one brother to the other is considered A search for an animal reservoir in this area was not successful Histoplasmin reactions in guinea pigs with experimental moniliasis are reported. The skin reactions induced in other mycoses indicate that histoplasmin is not a suitable diagnostic agent. The disease may have an acute onset and terminate rapidly, while, on the other hand, it may appear in a chronic form with irregular exacerbations and long remissions Of the 4 patients 1 pursued a rapid fulminating course and died seven weeks after the onset of the illness His brother followed a considerably more chronic course, the disease process lasting one year The duration of the disease in the other 2 was seven months and eighteen months respectively Several types of therapy have been attempted in cases of histoplasmosis, including sulfonamide drugs quinine, ammonium and potassium tartrate, arsenicals, pentnucleotide

and iodides There have been no noticeable therapeutic effects from any of these drugs Neostam (stibium glucoside), an antimony compound, has been used in several cases with equivocal results The effect of roentgen therapy was also only palliative and did not seem to alter the course of the disease

## Journal Pharmacology & Exper Therap, Baltimore

**86** 101-204 (Feb) 1946 Partial Index

Determination of Minimal Lethal Dose and Average Rate of Uptake of G Strophanthin and Digitoxin in Heart Lung Preparation of Dog A Farah.—p 101
Effects of Thiouracil on Hemopoietic System of Albino Rat Mildred Vogel and T H McGavack —p 120
Anesthesia XIX Anesthetic Action of n-propyl Methyl Ether J C Krantz Jr W E Evans Jr C J Carr and Dorothy V Kibler —p 138
Toxicologic and Pharmacologic Properties of Streptomycin H Molitor O E Graessle S Kuna C W Mushett and R H Silber —p 151
Electrocardiographic Correlations with Digitalis Bioassay J C Scott and N C Wheeler —p 177
Study on Development of Tolerance and Cross Tolerance to Barbiturates in Experimental Animals C M Gruber and G F Keyser —p 186
Preliminary Studies of Anesthetic Activity of Fluorinated Hydrocarbons B H Robbins —p 197

## Journal of Urology, Baltimore

**55** 213 308 (March) 1946

*Present Status of Unilateral Renal Hypertension W E Kittredge and H G Brown —p 213
Nephroptosis with Coexisting Lesions C E Burford —p 220
Improvements in Technic of Ureterocystostomy A I Dodson —p 225
Giant Hydronephrosis in Duplicated Kidney P M Cornwell —p 238
Wilms Tumor in 75 Year Old Male Report of Case F P Twinem —p 246
Crossed Renal Ectopia with Fusion. F A Beneventi —p 252
Congenital Solitary Pelvic Kidney M O Zucker —p 256
Malacoplakia of Bladder Report of 2 Cases D S Cristol and A C Broders —p 260
Open X Ray Therapy in Carcinoma of Bladder D K Rose —p 267
Diverticular or Cavitary Chronic Prostatitis A de La Pena and E. de La Pena —p 273
Fistula of Penile Urethra Method of Repair Utilizing Stainless Steel Pull-Out Sutures J J Cordonnier —p 278
Circumcision for Adults A D Vogelsang —p 287
Urinary Extravasation Report of Case Treated by Penicillin and Operation R M Lewis —p 289
Unilateral Scrotal Swelling Following Blast Injury Syndrome A K Swersie —p 292
Primary Sarcoma of Prostate Gland in Soldier H R Newman —p 295
Clinicopathologic Study of 100 Female Urethras C Lintgen and P A Herbut —p 298
Penicillin Therapy for Sulfonamide Resistant Gonorrhea G W Irmisch —p 306

**Unilateral Renal Hypertension**—Kittredge and Brown report observations on 4 patients with unilateral renal hypertension treated by them at the Ochsner Clinic Of patients who require nephrectomy for well established unilateral renal disease, only a small percentage can expect relief from coexisting hypertension The possibility of cure is influenced by the duration of the hypertension, as in chronic hypertension irreversible vascular changes may have occurred in the opposite kidney which will prevent a return of the blood pressure to normal Unilateral atrophic pyelonephritis apparently offers the most promise of cure by nephrectomy Patients with tuberculosis, renal neoplasm and renal calculi with infection also may be benefited by this operation. Evaluation of changes in blood pressure following nephrectomy is essential No patient should be considered cured until followed for at least a year, since postoperative bed rest and the removal of toxic irritants contained within such diseased kidneys can cause a temporary fall in blood pressure

## Kansas Medical Society Journal, Topeka

**47** 93 144 (March) 1946

*Kartagener s Triad Situs Inversus Absent Frontal Sinuses with Maxillary Ethmoid and Sphenoid Infection and Bronchiectasis M H Delp —p 93
Use of Curare as Adjuvant for Improvement of Muscular Relaxation P H Lorhan —p 96

**Kartagener s Triad**—The patient observed by Delp was a man aged 22 who was hospitalized for a compound fracture of the femur Situs inversus of the heart had been discovered at the age of 6 and later it had been suggested that complete transposition of all viscera existed The frontal sinuses were absent, there was infection of the maxillary, ethmoid and sphenoid sinuses and there was bronchiectasis Review of the literature revealed 46 similar cases of this triad The high incidence of bronchiectasis associated with situs inversus and abnormalities of the paranasal sinuses increases the importance of congenital maldevelopment as an etiologic factor

## Maine Medical Association Journal, Portland

**37** 45-88 (March) 1946

Malaria in United States Historical Review M Bacon —p 45
Aspects of Tropical Medicine B Newman —p 69

**37** 89 116 (April) 1946

Use of Radiation in Malignancy F B Ames —p 89
Rat Bite Fever J E Porter and T A Foster —p 93
New Guinea Lichen Planus A H Scolten —p 96
Allergy and Your Water Supply G H Coombs —p 98

## New England Journal of Medicine, Boston

**234** 169-206 (Feb 7) 1946

Silent and Masquerading Intrathoracic Lesions Importance of Proper Identification of Lesions Discovered During X Ray Surveys R H Overholt and N J Wilson —p 169
*Homologous Serum Jaundice Following Administration of Commercial Pooled Plasma Report of 8 Cases Including One Fatality C M Grossman and E W Saward —p 181
Typhoid Bacillus Infection of Surgical Wound Treatment with Urethane Sulfanilamide Mixture Report of Case L Weinstein —p 184
Medical Practice and Its Future L S McKittrick —p 188
Neurinoma of Stomach —p 194
Dissecting Aneurysm of Aorta with Rupture into Pericardium —p 196

**234** 207-240 (Feb 14) 1946

Rehabilitation of Patients Totally Paralyzed Below the Waist with Special Reference to Making Them Ambulatory and Capable of Earning II Control of Urination D Munro —p 207
Intravenous Glucose Tolerance Test in Liver Disease. J A Campbell and H T Tagnon —p 216
Treatment of Fracture of Clavicle by Internal Nail Fixation Report of Case H G Lee —p 222
Point of View of Organized Medicine Toward Distribution of Medical Care L H Bauer —p 225
Coronary Sclerosis with Thrombosis —p 231
Cerebral Hemangioma Right Frontal Lobe —p 234

**Homologous Serum Jaundice Following Administration of Pooled Plasma**—Grossman and Saward present 8 cases of hepatitis with jaundice which developed following the use of commercial pooled plasma The patients had incubation periods ranging from fifty-four to one hundred and thirty-nine days, which conforms with the incubation period of the experimentally induced disease None of the patients were seriously ill except 1, who died The necropsy findings in this patient differed in no way from those in cases ending in death following hepatitis due to the administration of yellow fever vaccine nor are the findings different from those in deaths from infectious hepatitis During the two year period during which these cases were observed, five hundred and one transfusions of commercial pooled plasma were administered The occurrence of 8 cases gives an incidence of 2 per cent but this represents a minimal rather than a true incidence, since many patients received more than one transfusion and since patients who developed hepatitis were treated as outpatients or by physicians elsewhere and did not come to the attention of the authors Furthermore, patients who did not develop clinical jaundice but nevertheless had the clinical features of acute hepatitis, such as nausea vomiting anorexia and malaise, were not included The authors think that the hazard of hepatitis and even fatality from pooled plasma is greater than that of a whole blood transfusion from a single donor

## Oklahoma State Medical Assn. Jour, Oklahoma City

**39** 101-146 (March) 1946

Remarks on Treatment of Essential Hypertension S M White —p 101
Weil s Disease C E Bates and W G Hartnett —p 105

**39** 147-196 (April) 1946

Management of Common Skin Diseases L. A Brunsting —p 147
Herpes Simplex J Lamb —p 150
Poliomyelitis Failure of Intrauterine Fetal Transmission E M Stokes —p 153
Caffeine. V H Musick H C Hopps H T Avery and A A. Hell —p 154

## Radiology, Syracuse, N Y

**46** 107-212 (Feb) 1946

Roentgen Anatomy of Skull in Newborn Infant S G Henderson and Louise S Sherman—p 107
Midline Anomalies of Brain Their Diagnosis by Pneumoencephalography A P Echternacht and J A Campbell—p 119
Lesions of Aqueduct of Sylvius. H M Wilson and W G Lutz.—p 132
Observations on Presence of Subdural Gas After Pneumoencephalography L W Paul and T C Erickson—p 139
Treatment of Late Postirradiation Ulcers with Radon Ointment B V A Low Beer and R S Stone—p 149
Treatment of *Hemangioma* G E Pfahler—p 159
Value of Stereoscopy in Mass Radiography of Chest. I Lewis and R H Morgan—p 171
Comparison of Two Levels of Roentgen and Neutron Irradiation of Normal and Lymphomatous Mice Using Radiophosphorus as Indicator of Cellular Activity K G Scott—p 173
Some Observations on X Ray Treatment Cones C. E. Eddy and D J Stevens—p 176

## Southern Medical Journal, Birmingham, Ala

**39** 191-276 (March) 1946

Saddle Block Anesthesia with 'Nupercaine' for Obstetrics. R. T Parmley and J Adriani—p 191
Mass Venereal Disease Control in Urban Area Report of Demonstration G A Denison and W H Y Smith.—p 195
*Infiltrating Carcinoma of Urinary Bladder Diagnosis and Clinical* Evaluation of Curability H J Jewett and G H Strong—p 203
Surgical Approach to Lumbar Ureter and Kidney Through the Superior Lumbar Triangle. J E. Dees—p 208
Physical Rehabilitation of Severely Handicapped Persons E C Elkins—p 214
Postabortal Perforation of Uterus with Foreign Body in Abdomen E M Stokes—p 221
*Amyotonia Congenita (Oppenheim's Disease) Report of Case with Necropsy J A Cunningham—p 222
Penicillin in Treatment of Syphilis Results and Complications. E E Barksdale—p 229
Prediction of Requirements Necessary for Effective Penicillin Therapy Comparison of In Vitro and In Vivo Response to Penicillin in Acute and Chronic Infections of Varied Etiology E Yow J Avera, G T Harrell J G Palmer and R W Taylor Jr—p 236
Management of Dermatophytosis G M Lewis and Mary E. Hopper—p 246
Experiences in Psychotherapy of Obsessive Schizophrenic Personalities, Barbara J Betz—p 249
*Does Rh Factor Incompatibility Explain All Cases of Hemolytic Anemia* of Newborn? H Kennedy Jr—p 257
Some Observations Concerning the Salzer Method of Treatment of Lye Burns of Esophagus. R W Hanckel Jr—p 263
Deficiency Diseases in General Practice. W H Sebrell—p 265
*Substitution of Thymine for Folic Acid in Treatment of Macrocytic Anemias in Relapse. T D Spies C F Vilter J K Cline and W B Frommeyer—p 269

**Amyotonia Congenita**—A boy who seemed normal at birth but who later showed flaccid extremities and who coughed and gurgled as though he was having difficulty in swallowing was unable to sit up or hold his head erect when he was nearly 6 months old, and his arms and legs were flaccid Treatment with neostigmine hydrochloride and aminoacetic acid was begun, but the infant died several weeks later On the basis of the history and postmortem examination, Cunningham stresses that in this case of clinically diagnosed amyotonia congenita (Oppenheim) the important changes were confined largely to the voluntary muscles and the central nervous system The cause of death was bronchopneumonia and possibly asphyxia resulting from an impaired swallowing reflex. There was also a healing Ghon tubercle and an enlarged thymus The muscles showed varying percentages of small embryonal muscle spindles with preserved cross striations and easily demonstrated Krause's and Hensen's membranes, together with some entirely normal muscle The central nervous system showed depletion in the number of motor ganglion cells in the anterior horns of the cord and diminution in size and distortion of the remaining ganglion cells The anterior roots were diminished in size and had faulty or absent myelinization There was no demyelinization of the tracts in the spinal cord and no evidence of involvement of pyramidal tracts of the cerebral cortex

**Substitution of Thymine for Folic Acid**—Spies and his workers point out that thymine (2, 4-dihydroxy-5-methylpyridine) has long been recognized as an integral portion of the biologic cell occurring as part of nucleic acid but early attempts to find its place in human nutrition by the administration of small quantities were without positive results Snell and others demonstrated that thymine could replace folic acid as a growth factor for lactic acid bacteria provided other known essential substances, including adenine, guanine or xanthine, were present. Stokes later suggested that folic acid acts as an enzyme or coenzyme in the synthesis of thymine or a thymine-like compound which is used by the bacteria to form nucleic acid and that offering of large amounts of thymine alone enables this material to be used "directly as a building block," folic acid no longer being needed for growth It appeared to the authors that Stokes's hypothesis might be a basic biochemical concept. One patient with macrocytic hyperchromic anemia in relapse, who had a persistent histamine refractory achylia and achlorhydria, was selected for trial with large doses The patient was given 500 mg of thymine orally twice daily for six days There was no change in her condition after this period, and the dose was increased to 2 Gm. thrice daily for a period of fourteen days A peak reticulocytosis of 14.2 per cent was reached on the eleventh day of treatment with the large dose Concomitant with this response there was general subjective improvement and appreciable decrease in symptoms The bone marrow reverted from that of megaloblastic arrest to normal The authors suggest that these observations although they were made in only 1 case, are of sufficient interest to warrant this preliminary report The results suggest that a concept basic in bacterial physiology may be widely applicable as a fundamental biochemical principle.

## Surgery, Gynecology and Obstetrics, Chicago

**82** 239-366 (March) 1946

*Leiomyosarcoma of Stomach Its Roentgenologic and Gastroscopic Diagnosis and Its Possible Relation to Pernicious Anemia R. Schindler, O A. Blonquist H L Thompson and A M Pettler—p 239
*Composite Free Grafts of Skin and Cartilage from Ear J B Brown and B Cannon—p 253
*Subcutaneous Heparin in Pitkin Menstruum for Treatment of Experimental Human Frostbite K. Lange and L. Loewe—p 256
Military Surgery—United States Army—European Theater of Operations 1944 1945 E C Cutler—p 261
Origin Frequency and Significance of Microscopic Calculi in Kidney L Anderson and J R McDonald.—p 275
Resection of Rectum with Reconstruction of Canal Through Perineal Approach G Murray—p 283
Studies on Exophthalmos Produced by Thyrotropic Hormone I Study of Exophthalmos Produced by Various Thyrotropic Hormones and Influence of Testes on Exophthalmos B M Dobyns.—p 290
Massive Islet Cell Tumor of Pancreas Without Hypoglycemia S Sailer and M M Zinninger—p 301
Surgical Repair of Deep Branch of Radial Nerve F F Allbritten Jr—p 305
Treatment of Burns Report of 155 Cases. W C Bornemeier and L. Parsons—p 311
*Electrolytic Absorption of Bone Due to Use of Stainless Steels of Different Composition for Internal Fixation J A Key—p 319
Study of Value of Local Sulfathiazole in Operative Wounds in Prophylaxis of Infection. C. H O Donnell J L. Posch and J W Hirshfeld—p 323
Vasoepididymal Anastomosis by Production of Permanent Fistula with Use of Stainless Steel Wire. L Michelson—p 327
Treatment of Varicose Veins. D Lyall—p 332.
Adenocarcinoma Cylindroma Type of Parotid Gland Clinical and Pathologic Study of 21 Cases. F W Quattlebaum, M B Dockerty and C W Mayo—p 342
Clinical Study of Early Postoperative Ambulation in Gynecology P F Steinhart—p 348

**Leiomyosarcoma of Stomach**—Schindler and his associates observed gastroscopically 4 cases of leiomyosarcoma of the stomach They also collected 94 cases of gastric leiomyosarcoma from the literature The three cardinal findings in leiomyosarcoma are (1) gastrointestinal hemorrhage leading to anemia, (2) epigastric or left upper quadrant pain and (3) an upper abdominal mass Each occurred in about 50 per cent of the collected cases. The first of the 4 patients had been treated for pernicious anemia but x-ray examination revealed large tumor masses and polyposis was suggested. The same diagnosis was made at gastroscopy The possibility of malignant tumor was considered and a biopsy specimen taken at an exploratory laparotomy revealed leiomyosarcoma. In the second patient acute hemorrhage led to hospitalization At the first x-ray examination the tumor was overlooked Gas

troscopy revealed the presence of the tumor At surgery a leiomyosarcoma was found growing expansively into the omentum and pancreas Total gastrectomy with extirpation of the spleen and the tail of the pancreas led to a cure. The third patient presented the picture of pernicious anemia X-ray examination and gastroscopy revealed a circumscribed tumor of the upper third of the stomach without gastritis In the gross resected specimen this tumor was found to be a pedunculated one but only at microscopic examination was the diagnosis of leiomyosarcoma made The tumor was removed by extensive resection and the patient survived The fourth patient had had severe attacks of hematemesis and melena for over a year Surgery revealed an intramural leiomyosarcoma Total gastrectomy with splenectomy and partial pancreatectomy was performed but the patient died from massive pulmonary atelectasis The authors conclude that the x-ray diagnosis would have been possible in 3 cases and that correct gastroscopic diagnosis should have been made in 3 The preoperative diagnosis of leiomyosarcoma of the stomach is possible X-ray treatment of gastric leiomyosarcoma is ineffective. Surgery proved to be satisfactory

**Composite Free Grafts of Skin and Cartilage from the Ear**—Brown and Cannon say that sections of the border of the ear containing two surfaces of skin with cartilage in between have been successfully transplanted as free grafts and defects of the nostril border tip and columella have been repaired satisfactorily in a single operation This procedure results in a better appearance than any other method and there is minimal deformity of the donor site and the use of bulk flaps is avoided. The ear can be repaired with a local flap or by burying the open ear under a direct scalp flap from behind and freeing it and grafting the defect two to three weeks later The procedure is useful for tissue losses from burns, gunshot and shell fragment wounds as well as other traumatic or operative losses

**Subcutaneous Heparin in Frostbite**—Lange and Loewe state that animal experimentation substantiated the fact that the timely use of heparin prevents gangrene whereas control untreated animals uniformly develop gangrene. The subcutaneous heparin preparation in the Pitkin menstruum seemed uniquely applicable and the authors used it on human volunteers. This method of depositing heparin achieves a consistent, retarded and equal release of the anticoagulant. The Pitkin menstruum which was designed to regulate the rate of release of water soluble drugs is composed of gelatin dextrose, glacial acetic acid and water The contents of the ampules are liquefied in hot tap water, drawn up through a 2 to 2½ inch, 18 gage needle into a 5 or 10 cc. syringe and injected subcutaneously preferably into the anterior or lateral aspect of the thigh The injections are given every day or every other day, and the average dose is 300 mg of heparin Occasionally 400 mg is required Eight volunteers were exposed to small areas of frostbite with the use of solidified carbon dioxide. None of them developed tissue loss when treated with subcutaneous heparin while the control lesions showed central necrosis.

**Electrolytic Absorption of Bone Due to Stainless Steels**—The cases reviewed by Key indicate that there is danger of electrolysis when different types of stainless steels are used He reproduces roentgenograms of the hips of patients in whom there was so much resorption of bone around the screws and under the plate that full weight bearing was not permitted until the Neufeld nails and screws had been removed, the cavities in the bones had partially filled in and the bone increased in density to a point where it was believed that unrestricted weight bearing could be undertaken with safety Under present conditions it is necessary for the surgeon himself to be responsible for the quality of the prostheses which he uses for the internal fixation of bone In the light of what is known about the deleterious effect on bone of electrolysis caused by the use of metals of different composition for internal fixation it is suggested that only stainless steel of a uniform composition be chosen for all prostheses which are to be used for the internal or external skeletal fixation of bone.

## Union Médicale du Canada, Montreal

**75** 243-362 (March) 1946 Partial Index

Postural Hypotension R Wallis—p 246
Aspiration Biopsy of Liver Observations J LeSage—p 258

Symposium on Penicillin

Will Penicillin be Surpassed? M Panisset and A Frappier—p. 272
Penicillin in Pleuropulmonary and Bronchial Infections. P Letendre.—p 282
Penicillin in Contagious Diseases J H Charbonneau—p 288
Treatment of Acute Meningitis with Penicillin R. Amyot.—p 291
Employment of Penicillin for Surgery G St Onge.—p 295
Penicillin in Syphilis A Marin and A Lambert.—p 300

## West Virginia Medical Journal, Charleston

**42** 49-76 (March) 1946

*Colloid (Paraphysial) Cysts of Third Ventricle Report of Case with Removal and Recovery A. A Wilson—p 49
Hydronephrosis Due to Aberrant Vessels. C A Hoffman—p 53
Psychophysical Examination of Problem School Children W L. Oliver and Elizabeth M Stalnaker—p 57
Subpectoral Abscess Case Report. J M Donald and P A Tuckwiller—p 61

**Colloid Cyst of Third Ventricle**—According to Wilson, the rare lesions of the third ventricle, variously known as colloid, paraphysial or neuroepithelial cysts, arise from the velum transversum of the anterior part of the roof of the third ventricle from an embryonic anlage of the paraphysis A man aged 24, admitted to the neurosurgical service of the Charleston General Hospital Aug 12, 1940, had been subject to bouts of generalized headache for the past three years Often when stooping over to pick up an object he would become blind and dizzy for a few moments Headaches had become much more frequent during the past nine months Ventriculography revealed dilated lateral ventricles without shift, indicating a midline tumor completely obstructing the left foramen of Monro and almost completely obstructing the right The tumor appeared, therefore, to be in the anterior portion of the third ventricle A right frontal craniotomy was performed. As soon as the right foramen of Monro was exposed, a smooth, grayish glistening mass was seen presenting through the foramen This was grasped with tissue forceps, and a small piece, the size of a tear drop, came off without bleeding The margins of the foramen were incised, the foramen was enlarged, and the complete tumor, the size of a cherry stone, was delivered without hemorrhage. The postoperative course, while somewhat stormy, was satisfactory The patient was able to return to his work and in 1943 was ordered for induction

## Wisconsin Medical Journal, Madison

**45** 281-372 (March) 1946

Clinical Examination of Cerebrospinal Fluid Outline. H H. Merritt and C Brenner—p 303

**45** 373-464 (April) 1946

Treatment of Schizophrenia with Intensive Electric Convulsive Therapy Report of Case. J S L. Jacobs and W E Gilson—p 395
Newer Contributions to Surgery of Inguinal Hernia. L M Zimmerman—p 397
Penicillin Therapy W E Herrell—p 401

## Yale Journal of Biology and Medicine, New Haven

**18** 227-318 (March) 1946

Charles Edouard Brown Séquard (1817 1894) T C Ruch—p 227
Microscope or Guinea Pig? H S N Greene—p 239
Gastroenteritis Outbreak Probably Due to Bovine Strain of Vibrio. A J Levy—p 243
Mycotic Endocarditis and Meningitis Report of Case Due to Monilia Albicans A. J Geiger H A Wenner H D Axilrod and S H Durlacher—p 259
Electrical Potentials from Eye Movements F C Redlich A. Callahan and J F Schmeidler.—p 269
Effect of Liver Extract and Methyl Acetamide with Parachloroxylenol on Artificially Induced Leukopenia in Rats W R. Platt, S G. Bluestein and R G Sisson—p 275
Poliomyelitis in Alabama Epidemiologic Considerations H A Wenner—p 281
Portable Millivoltmeter M G Schorr and H Lamport—p 307

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

### British Journal of Dermatology and Syphilis, London

58 1-44 (Jan.-Feb.) 1946

Future of British Pharmacopeia Ointments. A. R. G. Chamings.—p. 1

### British Medical Journal, London

1 343-380 (March 9) 1946

Health of India. J. Megaw.—p. 343
Causes of Delayed Menstruation and Its Treatment. Investigation in the Women's Auxiliary Air Force. N. Sher.—p. 347
*Penicillin Sprays and Upper Respiratory Tract Infection. F. A. Knott and J. B. Blaikley.—p. 349
*Dosage of Ephedrine in Bronchial Asthma and Emphysema. H. Herxheimer.—p. 350
Transient Nonspecific Wassermann and Kahn Reactions in Case of Infective Hepatitis. J. H. Waelsch.—p. 353
Successful Surgical Treatment of Enteric Group Carrier. K. Fraser and J. S. Faulds.—p. 354
Recurrent Dislocation of Shoulder. The Johannesburg Staple Driver. H. Ogilvie.—p. 362

**Penicillin Sprays and Upper Respiratory Tract Infection.**—Knott and Blaikley made cultures from the nose, throat and skin of all patients and members of the staff in the maternity department with a view of minimizing the entry of streptococcic and staphylococcic infections and excluding carriers. Having first observed the course of bacteriologic events for about a year, they put into operation a preventive routine, continuous cultural control being maintained as before. The incidence of sepsis was reduced but at the expense of exclusions, particularly among nurses and students. In the hope of getting infected persons back to duty more quickly nose and throat spraying with penicillin was started. During the two years of routine spraying the persistence of micrococcus carrier infections has been reduced by about 50 per cent.

**Dosage of Ephedrine in Asthma and Emphysema.**—Herxheimer found that, while some asthma patients are highly sensitive to the customary ¼ to 1 grain (16 to 65 mg.) of ephedrine, many patients with bronchial asthma and emphysema are insensitive to them, especially the severely affected ones in a chronic asthmatic state. These patients often react well to high doses of 2 to 3 grains (0.13 to 0.2 Gm.) and without any toxic symptoms or signs. This is shown by the immediate increase of the vital capacity, the frequent disappearance or diminution of the rhonchi and the subjective relief. Ephedrine tolerance is acquired quickly. If it is given three or more times daily it loses its effect soon—often after three to four days. If the dose is increased then, the higher dose will have the same effect as the former small one. If a patient has become tolerant to a certain dosage and the drug is omitted, he will regain his former response to this dosage usually after three to four days. An intermittent treatment with the primary effective dose is therefore suggested. It may play an essential part in the rehabilitation of these patients, who usually are regarded as invalids.

1 381-422 (March 16) 1946

*Penicillin in Subacute Bacterial Endocarditis. Report to Medical Research Council on 147 Patients Treated in Fourteen Centers Appointed by Penicillin Clinical Trials Committee. R. V. Christie.—p. 381
Treatment of Subacute Bacterial Endocarditis by Penicillin. Preliminary Report on 18 Cases. G. E. S. Ward, R. I. Meanock, F. R. Selbie and R. D. Simon.—p. 383
Sympathectomy in Peripheral Arteriosclerosis. E. D. Telford and H. T. Simmons.—p. 386
*Primary Lung Cancer in Childhood. Report of Unusual Case. A. Dick and H. Miller.—p. 387
Survival of Cortical Bone After Bone Grafting. D. Brown.—p. 389
Argentaffin (Carcinoid) Tumors of Small Intestine. A. A. Bonar.—p. 391
Social Medicine in Old Age. T. H. Howell.—p. 399

**Penicillin in Subacute Bacterial Endocarditis.**—The 147 patients with subacute bacterial endocarditis who are the subject of Christie's report were treated with penicillin in fourteen research centers appointed by the clinical trials committee. The penicillin was given either by three hourly injection or by continuous intramuscular infusion. Both methods should be available if the treatment of subacute bacterial endocarditis is to be undertaken. Of the 147 patients, 50 have died and 81 have been apparently cured, but the systems of dosage used at first were inadequate. If the administration of penicillin is continued for ten days or more almost any system of dosage will occasionally produce excellent results. In previously untreated patients a 0.5 mega (million) unit daily for twenty-eight days has given better results than any other system of dosage employed, 11 of 18 patients receiving this treatment remained cured. From the evidence available it is safer to assume that inadequate treatment is prejudicial to later success. Relapse is more likely to occur if treatment is not both prolonged and intensive. Increased dosage is no substitute for prolonged treatment. Short courses of treatment, of ten days or less, are usually followed by relapse within a few days. Even after long courses most relapses occur within thirty days of cessation of treatment, a 0.5 mega unit daily for six or eight weeks is the system of dosage recommended for patients who have relapsed. The resistance of the infecting organism (146 patients were infected with streptococci and 1 with a strain of Hemophilus influenzae) as measured by ordinary titration methods appeared to be of no clinical importance within a wide range. Only when the organism was more than ten times as resistant as the standard Oxford staphylococcus did this measurement appear to be of therapeutic and prognostic significance.

**Primary Cancer of Lung in Childhood.**—Dick and Miller report a case of primary cancer of the lung in a girl aged 9 years. A single metastasis in the left femur caused symptoms eight months before the pulmonary lesion was recognized. Roentgenologic examination of the left femur revealed destruction of the upper end of the femur extending toward the shaft. The cells of the removed necrotic bone material could not be identified with certainty on microscopic examination, but the lesion appeared to be neoplastic. A roentgenogram of the chest did not reveal any evidence of a bronchial neoplasm. High voltage roentgen treatment was applied to the femur and the process seemed arrested. Eight months after the patient was first seen she was readmitted complaining of cough, headache and vomiting. The first impression was that she had secondary deposits in her right lung causing massive effusion. Aspiration of the chest revealed a small quantity of blood stained fluid which contained a few lymphocytes and some endothelial cells, there was no evidence of neoplastic cells. Roentgen therapy to the chest was carried out for ten days, but the patient died within twelve days of the treatment. The postmortem revealed that the primary lesion which had remained unrecognized for eight months, was a bronchial carcinoma and the lesion of the right femur was secondary.

### Lancet, London

1 333-368 (March 9) 1946

Psychiatry and Public Health Service. L. Brock.—p. 333
Tissue Damage Due to Cold. L. Kreyberg.—p. 338
Sprain Fracture of the Carpal Scaphoid in Children. K. I. Macrosson.—p. 341
*Acute Thyrotoxic Myopathy. Recovery After Partial Thyroidectomy. J. H. Sheldon and R. M. Walker.—p. 342
*Possible Role of Anterior Pituitary in Human Diabetes. C. H. Gray and W. G. Oakley.—p. 343
Automatic Device for Ascertaining Ventricular Enlargement. A. Orley.—p. 345
Cavernous Sinus Thrombosis Treated with Sulfonamides and Penicillin. D. H. Young.—p. 346

**Thyroidectomy in Acute Thyrotoxic Myopathy.**—Sheldon and Walker report that a woman aged 50, with acute hyperthyroidism, muscular weakness and bronchiectasis, was treated with iodine but did not improve. This was followed by a course of neostigmine, which greatly improved her muscular power, but her general condition continued to deteriorate. As a last resort partial thyroidectomy was performed and treatment with iodine and neostigmine was continued, with the result that the patient recovered rapidly and has remained in good health for fifteen months after gradual discontinuance of the neostigmine.

**Possible Role of Anterior Pituitary in Diabetes.**—Gray and Oakley made studies on 7 elderly obese patients with mild diabetes, 13 young persons with diabetes, 3 patients in whom diabetes proved resistant to insulin and 3 patients with pituitary disease. They have been unable to find evidence that the plasma of elderly obese patients with mild diabetes contains a pituitary

like substance which inhibits the hypoglycemic action of insulin The presence of such a substance cannot be demonstrated even when five times the volume of plasma used in the original experiments is injected Normal depression curves may follow the injection of plasma from insulin resistant diabetic patients and from patients with acromegaly and Cushing s syndrome. The incidence of definitely positive results in this series is so low (two in sixty curves) and so inconstant in any 1 case that no conclusions can be drawn about their significance

## Medical Journal of Australia, Sydney

**1** 205 240 (Feb 16) 1946

Ascorbic Acid in Milk of Melbourne Women Dora Winikoff —p 205
Chylangioma of Mesentery with Report of Case and Brief Discussion of Mesenteric Cysts G C V Thompson and C H Chamber —p 210
*Treatment of Hemophilus Influenzae Meningitis with Sulfonamides in Conjunction with Hemophilus Influenzae Type B Rabbit Antiserum E A North H Wilson and G Anderson —p 215
Report on 16 Cases of Supraglottic Edema H McLorinan —p 220
Study of Human Body After Death K Inglis —p 222

**Treatment of Hemophilus Influenzae Meningitis** —North and his associates discuss the treatment of children with Hemophilus influenzae meningitis at the Children s Hospital Melbourne and the Royal Alexandria Hospital for Children Sydney Of 157 children of all ages who did not receive specific treatment, 2 (1 2 per cent) recovered of 150 who were treated with sulfonamides, 32 (22 per cent) recovered of 81 who were treated with sulfonamides in conjunction with Hemophilus influenzae, type b rabbit antiserum 46 (56 8 per cent) recovered Recovery under treatment was more frequent with each year of age The worse prognosis in very young children was probably due to delay in the commencement of specific treatment resulting from late diagnosis, in consequence of the difficulty of recognizing meningitis early in very young children without resorting to lumbar puncture It was possibly due also to the absence of natural antibody from the blood of young children and to their relatively poor immune response to infection. One of the sulfonamides should be given. A bacteriologic diagnosis should be urgently sought and specific antibody contained in rabbit serum should be injected as soon as the diagnosis is reached.

**1** 241-276 (Feb 23) 1946

Acute Porphyria with Reports of 2 Fatal Cases E H Derrick —p 241
Note on Use of Penicillin in Laboratory Diagnosis of Whooping Cough Phyllis M Anderson —p 244
Epidemic Polyarthritis P G Dowling —p 245

**Acute Porphyria** —Derrick reports the occurrence of acute porphyria in 2 young women aged 27 and 24 Both patients exemplify the predominance of abdominal and nervous symptoms —severe abdominal pain limb pain suggestive of polyneuritis and symptoms referable to toxic action on the central nervous system. Both cases terminated in death

## Practitioner, London

**156** 81-152 (Feb ) 1946

Problem of Footwear N C Lake —p 81
Congenital Abnormalities of Foot. W Mercer —p 88
Minor Surgery of Foot. A Singer and A M A Moore —p 96
Skin Diseases of Foot G B Dowling —p 104
Indications for Chiropody J H Hanby —p 112
Defective Speech in Children P Henderson —p 119
Surgery in Old Age M Lee —p 130
Treatment of Penile Warts (Condylomata Acuminata) with Podophylline E Lipman Cohen —p 133
Early Recognition of Disease II Respiratory Disease J Maxwell. —p 135

## Proceedings of Royal Society of Medicine, London

**39** 149 212 (Feb ) 1946 Partial Index

Use of X Rays in Treatment of Indurations Due to Scars and Chronic Inflammation R D S Rhys-Lewis —p 150
Unusual Form of Epidemic Food Poisoning with Neurologic Symptoms D Brinton —p 173
Nutritional Disorders of Nervous System in Middle East J D Spillane —p 175
Central Nervous Deficiency Syndrome H G Garland —p 178
Sepsis and Asepsis in Spinal Analgesia. F T Evans —p 181
Consideration of Ureterocolic Union and Experiences in Operation. A W Adams —p 187
Treatment of Slipped Upper Femoral Epiphysis W B Foley —p 201

## Archives des Maladies Professionnelles, Paris

**6** 349-426 1944-1945 Partial Index

New Method of Exploring Aptitudes Biotypologic Investigation M Verdun —p 351
Exploration of Respiratory Function in Patients with Silicosis P Tulou —p 379
*Investigations on Chronic Carbon Monoxide Poisoning M Duvoir L Truffert and L Dérobert —p 380
Determination of Carbon Monoxide in Blood of Workers Exposed to Inhalation of Small Quantities of this Gas R Barthe J Paris and R Delsol —p 387
Asthma and Glass Wool S Tara —p 392
Velocity of Blood Circulation and Venous Tension in Pulmonary Silicosis L Roche and L Ode —p 393

**Chronic Carbon Monoxide Poisoning** —According to Duvoir and his associates drivers of motor vehicles are particularly exposed to carbon monoxide poisoning so that for them chronic carbon monoxide poisoning is really an occupational disease Garage employees also are exposed to this type of intoxication Repeated examinations of men with chronic carbon monoxide poisoning revealed that the carbon monoxide persists in the blood for a considerable period Hematologic examinations are of little value in the detection of chronic carbon monoxide poisoning, but the extraction and analysis of carbon monoxide in the blood are satisfactory The use of Truffert s apparatus for this purpose has the disadvantage of requiring the withdrawal of about 30 cc. of blood. A satisfactory apparatus for microextraction is now available and a micromethod has been devised which gives encouraging results

## Presse Médicale, Paris

**54** 49-72 (Jan 26) 1946

Effect of Penicillin on Anaerobic Microbes in Some Septicemias A. Lemierre J Reilly M Morin and M Rathery —p 49
Observations in 2 Cases of Lobectomy for Abscess of Lung P Santy and M Berard —p 50
*Hypophysis and Glaucoma Statistical Study of Characteristics of Arterial Tension in Course of Glaucoma G E. Jayle and M Schachter —p 51
Curable Forms of Surgical Renal or Urologic Hypertension (10 Personal Cases) F Van Goidsenhoven and J Vandenbrouck —p 52
Anthelmintic Action of Phenothiazine (Thiodiphenylamine) and of Its Derivatives R Deschiens —p 53

**Hypophysis and Glaucoma** —Jayle and Schachter studied the arterial tension in 45 cases of chronic glaucoma Three of the patients were less than 40 years of age, 22 patients were between 41 and 60 and 20 patients were over 60 There was 1 patient with hypertension in the first group and there were 15 in the second group and 18 in the third group Hypertension was present in 75 5 per cent of the patients There was 1 patient with hypotension and 1 patient with normal arterial tension in the first group, 7 patients with normal arterial tension none with hypotension in the second group, and 1 patient with normal arterial tension and 1 with hypotension in the last group Hypotension was present in 4 45 per cent of the patients with glaucoma and normal arterial tension in 20 per cent. As hyperfunction of the hypophysis is usually associated with pronounced hypertension, e. g in Cushing s syndrome the degree of hypertension in this syndrome was compared to that associated with glaucoma By using a biometric formula the degree of hypertension characteristic of glaucoma was determined to be $16 \pm 3\,03$ whereas that of Cushing's syndrome was $18 \pm 3\,15$

## Semaine des Hôpitaux de Paris

**22** 47-86 (Jan. 14) 1946

New Data on Pathogenesis and Treatment of Icterus Gravis in Newborn A Tzanck and M Bessis —p 47
*Regional Follicular Enteritis (Inflammation of Terminal Portion of Ileum) J Rachet A Busson and Jourde —p 52
Role of Laboratory in Course of Penicillin Treatment. L P Garrod and B Sureau.—p 57
Conjunctivitis Caused by Infection with Gram Negative Micrococci G Offret and A Lenoir —p 63
Euphoria Identical with Mania in Korsakoff's Psychosis. R Benon —p 65

**Regional Ileitis** —Rachet and his associates report a case of regional follicular ileitis in a man aged 32 Roentgenologic examination revealed a shrunken and threadlike terminal ileum. Excision of 60 cm of the ileum appeared justified post-

operatively, since examination of the removed portion revealed an isolated lesion of 2 cm. situated in a normal intestinal segment at a distance of more than 20 cm. above the terminal portion The anatomic changes consisted in hypertrophy of Payer's patches, some of which were ulcerated, there was considerable thickening of the submucosa with involvement of its lymphatic system and the corresponding mesentery Inflammation of the lymphatic system is to be considered as the starting point of the disease. Localization in the ileum presents only one variety of a disease which may involve the appendix, the cecum or a part of the ascending colon The disease is always associated with a mesenteric lymphadenitis It is therefore suggested that the follicular enteritis may invade from without the intestinal mucosa by a pathologic process which acts at a distance in the mesenteric area. Recovery resulted from the surgical treatment in the authors' case. No definite therapeutic recommendations can be given for acute cases of ileitis, since death may result if surgical treatment is omitted, but spontaneous recovery may likewise occur

## Monatsschrift f Geburtshilfe u. Gynäkologie, Basel

**120** 225-332 (Nov-Dec) 1945 Partial Index

Male Sterility Etiology Diagnosis and Therapeutic Prospects C A Joel —p 225
Antepartum Rupture of Umbilical Cord with Inflammation at Site of Rupture and Spontaneous Rupture of Umbilical Vein and of an Umbilical Artery Case H Schultheiss —p 251
Thromboses and Embolisms at Women's Hospital in Basel E. Hopf —p 261
*Delivery of Twins at Maternity Hospital of Geneva from 1934 to 1943 R de Siebenthal —p 288

**Twin Births**—A review of 142 twin pregnancies observed at the Maternity Hospital of the University of Geneva, Switzerland reveals that there was 1 twin birth for every 83 deliveries Dystocia was frequent, obstetric interventions being necessary in 52 per cent of the twin births This explains at least in part the greater fetal mortality and maternal morbidity, the latter being twice as frequent as in ordinary births Although cephalic presentations predominated the second twin was born only half the time in such presentation, there being a high percentage of breech and shoulder presentations in the second twin. The second twin appeared to be at a disadvantage It seems to de Siebenthal that the position of the second twin might become modified by the delivery of the first. The fetal prognosis depends particularly on the weight of the twins and on the interventions necessary during delivery Twins of low viability are especially sensitive to interventions The author advises systematic artificial rupture of the second bag of waters and immediate manual removal of the placenta, if it is not expelled normally If after spontaneous delivery of the first fetus the delivery of the second is delayed, intervention is advisable after one hour's waiting Should delivery of the first twin require intervention the second one should be delivered in twenty-five minutes Whenever delivery of the second twin requires intervention, manual removal of the placenta should follow at once. The author recommends Bracht's method for breech delivery

## Rev de la Soc. Argentina de Biol., Buenos Aires

**21** 243-402 (Sept.) 1945 Partial Index

*Thyroids and Sensitivity to Intravenously Administered Alloxan C Martinez —p 254
*Action of Alloxan on Islands of Langerhans in Rats A Di Pietro —p 259
Histophysiologic Variations in Pancreatic Islands of Rats Having Been Rendered Diabetic by Subtotal Pancreatectomy E. De Robertis. —p 273
Action of Alloxan on Adrenalectomized Rats C Martinez and O Orias —p 290
Photoelectrocolorimetric Microdetermination of Phosphatase Activity of Blood A. Martin —p 294
Action of Adrenal Insufficiency During Pregnancy on Mother and Offspring B A Houssay —p 316
Sexual Differences in Diabetes V G Foglia.—p 360

**Thyroid and Sensitivity to Intravenous Injection of Alloxan.**—Martinez administered alloxan intravenously to young white rats in which hyperthyroidism had been produced by the administration for twenty days of thyroid powder (20 mg per hundred grams of body weight) The animals were more sensitive to the intravenous administration of alloxan than were controls, whereas thyroidectomized animals were more resistant to intravenously administered alloxan than the controls The medium lethal dose ($LD_{50}$) was 25 mg for the rats with hyperthyroidism, 54 mg for the controls and 74 for the thyroidectomized animals

**Action of Alloxan on Islands of Langerhans in Rats**—Di Pietro inoculated rats intraperitoneally with different doses of alloxan and killed them at varying intervals Microscopic changes could be detected twenty-four hours after intraperitoneal injection, whereas after intravenous injection they were evident after one hour or less There was coagulation necrosis of the majority of beta cells but little change in the alpha cells and acinar tissue Proliferative changes were observed in the centroacinar cells and intracanalicular ducts seventy-two hours after injection There was a shrinking of the islets, the remaining beta cells were mostly degenerated and some of the remaining normal ones showed mitotic signs These destructive and proliferative changes were followed by a duct hyperplasia which gave rise to 'duct islets" Cell differentiation of these duct islets developed alpha and beta cells Overstimulation of beta cells brought about their exhaustion, followed by necrosis, the alpha cells remaining uninfluenced. This raises the question of whether the alpha cells represent an intermediary stage in the evolution of beta cells, as maintained by some authors, or whether they are specialized cells with a specific function, as maintained by Lane.

## Acta Chirurgica Scandinavica, Stockholm

**93** 1-98 (Jan 19) 1946

Treatment of Dupuytren's Contracture F Einarsson —p 1
Sacral Dermoid Cysts Especially with View to Their Treatment. H Frostad —p 23
Rupture in Aponeurosis of Shoulder Joint Particularly Referring to Its Treatment. H Frostad —p 33
Investigations of Postoperative Shock Hemoconcentration Plasma Protein and Blood Electrolytes After Gastrectomy K. H Köster and D Trolle.—p 51
*Liver Changes in Surgical Conditions L Efskind —p 81

**Liver Changes in Surgical Conditions**—Efskind reports changes in the liver cells of 120 patients with severe disorders of the intestinal tract. Microscopic alterations were pronounced in patients with disturbances of nutrition of long duration, in those with hypoproteinemia and anemia and in patients with disorders of the liver and the bile ducts These changes occur at places of predilection in the liver lobules and are accentuated after serious operations Normal livers may, after extensive surgical intervention, present the same changes but to a minor degree. Abnormal mobilization of the liver glycogen occurs first, mitochondrial changes of regressive nature next, interstitial lymphocytic infiltration sometimes with fibrosis follows and fat infiltration of the liver cells results The changes in the liver cells appear early and are most pronounced in the central portions of the lobules the fat infiltrated cells may often be well supplied with glycogen and frequently maintain their glycogen deposit after severe operative trauma, probably as the result of some kind of cellular blockade, whereas the intact liver cells may be entirely depleted of glycogen. A normal glycogen content has likewise repeatedly been seen in the author's cases of chronic icterus and of considerable degenerative changes in the liver cells

## Nordisk Medicin, Gothenburg

**27** 1601-1644 (Aug 17) 1945 Partial Index

Surgical Treatment of Angina Pectoris H Olivecrona and Inga Lindgren —p 1601

### Hospitalstidende

Ascorbic Acid Values in Serum in Danish Working Class 1940-1942. A H Andersen and H Normann —p 1609
Carbon Dioxide Determination with Krogh's Apparatus by Aid of New Device for Measuring Ventilation. A. T Hansen.—p 1612.

### Hygiea

Mechanism of Shock G Thorsén —p 1615
Treatment of Anemia and Other Deficiency Conditions in Gastric Achylia or Precipitate Emptying of Stomach E. Forsgren —p 1618.

**Surgical Treatment of Angina Pectoris**—Olivecrona and Lindgren state that the results obtained in the Neurosurgical Clinic in Stockholm in treatment by the division of the five upper thoracic sensory roots do not encourage further applica

tion. After cervicothoracal ganglionectomy with resection of the sympathetic ganglions from the third cervical to the fourth (in 1 case the fifth) thoracic there was a complete or almost complete disappearance of the anginal pain the postoperative discomforts due to trauma to the spinal nerves being transitory and subordinate compared with the anginal pain On exertion or during the hypoxemia test the patients experienced a warning in the form of a sense of oppression in the upper thorax and neck instead of pain The operative indications are fairly wide.

**27** 1733-1808 (Sept. 7) 1945 **Partial Index**

Intestinal Diverticula P Rudstrom —p 1733
Treatment of Luxation of Shoulder Joint. J Rø —p 1737

**Hospitalstidende**

Atropine Idiosyncrasy in Eye Patients E Damgaard Jensen —p 1739
Subcutaneous Fat Necrosis in Necrosis of Pancreas V Bering Nielsen —p 1741

**Norsk Magasin for Lægevidenskapen**

*Cardiac Infarct Clinical and Pathologic Anatomic Investigations. J Riis —p 1743
Acute Spontaneous Infectious Gangrene of Scrotum. A Tvedt —p 1750
Three Cases of Idiopathic Osteopsathyrosis (Lobstein) T Kahrs —p 1756
Roentgen Treatment of Scleritis T Lie Thomassen.—p 1761
Neostigmine in Treatment of Glaucoma T Lie Thomassen —p 1769
Symptomatic Zoster—Zoster—Varicella. P Gundersen —p 1771

**Hygiea**

Hyperfunction of Adrenal Cortex in Children Before Puberty R Luft. —p 1773
Poliomyelitis in Mothers and Newborn K Palmstierna —p 1778

**Cardiac Infarct**—Riis studied 100 cases of cardiac infarction. The disease as a rule affects older persons occurring somewhat less frequently in women than in men in whom it appears at an earlier age. It may occur in relatively young persons Hypertrophy of the heart is common Coronary sclerosis was present in over 80 per cent of the cases hypertension in 63 per cent The mortality was 55 per cent One third of the patients died during the first three days Pain as the most important symptom occurred in 50 per cent of the patients, cardiac decompensation in 25 per cent, abdominal symptoms, pulmonary symptoms and collapse in 25 per cent Mortality increases with age. Syphilitic aortitis gives an unfavorable prognosis the prognosis is also grave in diabetes Persisting albuminuria with circulatory failure aggravates the prognosis In 7 of the necropsy cases no anatomic explanation for the infarct was found, in 13 cases with arteriosclerosis the lumen in the coronary arteries was patent.

**27** 1809-1884 (Sept. 14) 1945 **Partial Index**

*Hypertensive Conditions and Retinopathy Hilding Berglund —p 1809
Treatment of Cardiac Insufficiency and Chronic Bronchitis with Milk Dry Diet. K. Schroeder —p 1814

**Hospitalstidende**

Renal Threshold and Hypertension A P Skouby —p 1815
*Regional Calmette Abscess E Rekling —p 1819

**Hygiea**

*Amino Acid Therapy K A J Wretlind —p 1827

**Svenska läkaresällskapets förhandlingar**

Physiologic Points of View on Circulation During Pregnancy G Liljestrand —p 1852
Heart Disease and Pregnancy G Nylin —p 1855
Studies on Virus in Influenza and Sequels G Lofstrom —p 1867

**Hypertensive Conditions and Retinopathy** — Berglund discusses types of retinopathy which are accompanied at least during a part of the course by severe hypertension The hypertensive disorder in which changes in the retina are especially important is essential hypertension Ophthalmoscopy is valuable in distinguishing malignant from benign hypertension. After sympathectomy the retinopathy at times regresses almost completely This improvement is contrasted with the equally complete but transient regression sometimes attained by prolonged rest in bed and sedatives

**Regional Calmette Abscess**—Rekling studied 24 cases of regional adenitis after Calmette vaccination Abscesses occurred in 20 These sequels may affect the axillary and the supraclavicular and infraclavicular lymph nodes, sometimes several groups simultaneously From one month to two years have elapsed between the local infection and appearance of the adenitis from six weeks to three years between vaccination and development of the abscess, from two and a half to thirty-eight weeks between vaccination and recovery, from one to eight months between appearance of the adenitis and recovery All the abscesses were cold abscesses The chronic course and indolent character pointed to a tuberculous infection. Tubercle bacilli of BCG type were cultivated from pus from 2 of 14 patients, no common bacteria were found In 2 cases the hilus was affected The occurrence of erythema nodosum in 2 sisters, 1 infected with BCG vaccine, the other with tubercle bacilli of human type, supports the view that erythema nodosum is independent of the type or virulence of the tuberculous infection The course was uneventful in all cases Treatment should be conservative as long as possible

**Amino Acid Therapy**—Wretlind describes a method of preparation of an amino acid for intravenous administration Amino acid therapy is indicated in all cases in which the body cannot obtain albumin in the usual way Nitrogen and protein balance can be thus maintained In the prematurely born and in infants the treatment brings about rapid increase in weight and improvement in the general condition It is valuable in the treatment of hypoproteinemia

**27** 1885-1952 (Sept 21) 1945 **Partial Index**

Physiologic Altitude Tests for Aviators E H Christensen.—p 1885
Method for Transfer of Blood in Early Infancy B Landtman —p 1887

**Hospitalstidende**

Humeroscapular Periarthritis in Medical Division K. A. Steffensen. —p 1889
*Antistreptolysin Titer in Glomerulonephritis K Lundbæk —p 1893
*Significance of Antistreptolysin Determinations in Acute Glomerulonephritis. G A Hansen and E. B Hansen —p 1894

**Finska läkaresällskapets handlingar**

Inoculation Against Epidemic Mumps O Leineberg —p 1901

**Norsk magasin for lægevidenskapen**

Treatment of Fractures of Nose of Long Standing R Moe —p 1907

**Hygiea**

Treatment of Diverticula of Bladder J Hellstrom —p 1921
Remarks on Significance of So-Called Pathologic T Waves O Ljung —p 1925

**Antistreptolysin Titer in Glomerulonephritis**—Weekly determinations of the antistreptolysin titer were made in 106 patients with acute and chronic glomerulonephritis The titer was increased in all but 6 of the 78 patients with acute glomerulonephritis, in 3 of the 6 there were hemolytic streptococci in the fauces, and 1 probably had a syphilitic nephritis Of the 28 patients with chronic glomerulonephritis only 4 had an increased antistreptolysin titer, 2 with values only up to 200 Lundbæk concludes that acute nephritis is almost always a sequel of an infection with hemolytic streptococci and that antistreptolysin determinations are an aid in differential diagnosis between acute and chronic nephritis

**Antistreptolysins in Acute Glomerulonephritis** — The antistreptolysin titer of the blood in the 36 cases of acute glomerulonephritis treated in 1944 repeatedly showed definitely increased values in 25 The Hansens discuss the importance of these tests in diagnosis, therapy and prognosis The antistreptolysin production should be followed by regular determinations of the titer, the variations in the antistreptolysin concentration indicate the course of the infection. In acute glomerulonephritis after an infection with hemolytic streptococci the prognosis is usually good, while nephritis without demonstrable preceding infection or after infections not due to hemolytic streptococci generally becomes chronic. In cases of repeated infection with hemolytic streptococci removal of the focus is advised.

# Book Notices

**War Neuroses** By Roy R Grinker Lt Col M C and John P Spiegel Major M C Army Air Forces Cloth Price $2 75 Pp 145 Philadelphia & Toronto Blakiston Company 1945

During the Tunisian campaign the authors experimented a great deal with sodium pentothal in acute war neuroses and found it a gratifying method of treatment The drug would quiet the patients and would allow the expression of many of the patients' fears and anxieties which they could not express otherwise This method of treatment—the principle of which was well known previously—was named by the authors narco synthesis, and the monograph describes their experiments with it Over 70 per cent of the men treated were returned to some form of useful function, even though most of them were not returned to combat

This monograph was the first major publication on war neuroses and their treatment and in the fall of 1943 the volume was distributed by the Army to its medical officers as well as to prominent psychiatrists in this country The subject is presented simply and lucidly The language is clear and concise, and the description of the clinical pictures of acute war neuroses, especially in the air forces are vivid and dramatic. The whole presentation is so 'smooth' that the whole problem of neurotic reactions in warfare appears easy, which unfortunately it isn't but since the book was really intended to be a sort of manual, a certain amount of dogmatism is permissible

There is a certain lack of discrimination in the descriptions of the vicissitudes of the ego, as if it were a concrete object, and the specific effects of sodium pentothal may also be questioned, since experimental data are lacking, but these are minor faults in an otherwise excellent presentation of a timely and important subject

**The Herbal of Rufinus** Edited from the Unique Manuscript by Lynn Thorndike Professor of History Columbia University New York assisted by Francis S Benjamin Jr Cloth Price $5 Pp 478 Chicago University of Chicago Press 1946

The publication of this volume has been aided by a grant from the American Council of Learned Societies from a fund provided by the Carnegie Corporation of New York and by a grant from the William A Dunning Fund of Columbia University ' Thus again the debt of Science Art and Letters to their generous patrons is increased

The book is composed of Thorndike's introduction of 33 pages, a transcription of De Virtutibus Herbarum of "Master" Rufinus, of 439 pages and 35 pages of indexes prepared by Professor Thorndike himself

In the introduction Thorndike gives, in his usual somewhat pedantic style, his reasons for performing this arduous labor only a single manuscript of Rufinus is known to be extant, and this of course, may be lost or destroyed at any time, to deprive the world of an important source of added knowledge of medieval botany and medieval medicine Again, the book of Rufinus introduces us to a hitherto unknown version of Dioscorides and affords also a corrective to future critical editions of other early medical literature Moreover the philologist will discover here a mine of material in late Latin and the early vernaculars —no mean consideration, by the way, as any student of the history of medicine knows

There follows a series of paragraphs concerning the life and work of Rufinus and his relations to his predecessors and contemporaries, and good reasons are given for the conclusion that Rufinus did not know the De Vegetabilibus et Plantis of Albertus Magnus Rufinus indeed gives his sources of his own accord, viz Dioscorides, the Circa Instans, Macer, Alexander, the Salernitans, Isaac and the Synonyms The text of De Virtutibus Herbarum follows and Professor Thorndike has had the great foresight to include the foliation with recto and verso indicated Unfortunately, Thorndike's own critical notes have been sprinkled into the body of text on the page instead of being placed properly at the bottom of the page beneath a horizontal line Since several fonts of type have been used in the transcribed original text, the addition of still another for editor's notes within the text itself adds considerably to the reader's vexation This, coupled with the barbarity of the language and with the crudity and usual inconsistency of the spelling of the scribes (which Thorndike has rightly preserved) renders the book extraordinarily difficult The Herbal of Rufinus is not for casual reading or for the library of the dilettante It was not intended to be. The vast quantity of sheer toil which the editor and his assistant have expended to produce this work is apparent on every page and in virtually every sentence. So also is the vast quantity of knowledge prerequisite.

The text has been reproduced entirely, even to Rufinus's own Tabula Rubricarum et Capitulorum, which attempts a semblance of alphabetical order This Tabula, however, is nearly useless to the purpose of the modern student, recognizing this Thorndike himself has prepared a series of indexes of great value one of herbs, simples and compound medicines, one of diseases and parts of the body affected, one of measures instruments and utensils, a fourth of the names of persons and titles of anonymous works and finally one of names of places The usefulness of the book to the student, the investigator, the historian, the critic, has been enhanced incalculably through this work

**Hipertensão arterial Patologia clinica e terapêutica** Pelo Professor Genival Londres Diretor do Instituto de cardiologia Com a colaboração dos doutôres J Pulcherio Filho Joaquim Brito Nelson Cotrim Roberto Segadas e Silvio Abreu Fialho Fabrikold Pp 572 with 116 illustrations Rio de Janerio Livraria Agir Editôra 1945

Dr Londres has written a large and impressive book chiefly concerned with the clinical aspects of arterial hypertension The first portion of the work describes the physiologic aspects of blood pressure and includes the usual data found in most good textbooks of physiology An excellent chapter follows using coarctation of the aorta to illustrate 'central" resistance to blood flow as opposed to peripheral resistance. A not too critical one by Segadas on the clinical forms of hypertension leaves the reader with the feeling that there is still much room for accurate bedside observation. The chapter by Fialho describing the *fundus examination* is distinctly above average, as are the chapters of Filho on radiography Cotrim's too short chapter on the electrocardiogram probably would not give the reader an adequate understanding of the subject The surgical treatment is written by Brito He takes those to task who do not credit this form of treatment to the Italian surgeon Pende. The 'Peet' operation of supradiaphragmatic resection becomes the Pende operation Like so many chapters on this controversial subject the analysis is not deeply penetrating The good and the careless statistics are given equal value. The final chapter is by Londres on medical treatment and seems excellent.

This book, along with the older book of Castex, serves a useful purpose in that it covers for South America somewhat the same material covered by Fishberg for North America though scarcely as effectively A defect in the book aside from lack of balance among the various chapters is the inadequate reference to the literature. Many references are included in the text but are either wrongly referred to in the bibliography or not referred to at all Both these defects could be easily remedied.

This seems a good book which should serve well the South American physician of more than usual industry and intelligence a book which may well grow in importance during succeeding editions

**The 1945 Year Book of Industrial and Orthopedic Surgery** Edited by Charles F Painter M D Orthopedic Surgeon to the Massachusetts Women's Hospital and Beth Israel Hospital Boston Fabrikold Price $3. Pp 432 with 220 illustrations Chicago Year Book Publishers 1946

This book, as heretofore, represents an excellent compilation of the year's orthopedic and industrial literature The abstracts are concise and give a good idea of what is contained in the original articles The book is profusely illustrated with clear reproductions of x rays and figures About sixty periodicals are represented in the abstracts, including a fair number of foreign publications It appears that a larger representation of articles from the *Journal of Bone and Joint Surgery* might have been possible The tremendous literature which resulted from experience in military installations might well fill a year book of itself, and yet relatively few articles have been abstracted from this source On the whole, however, this collection of abstracts represents a good ready reference for a variety of subjects of orthopedic and industrial interest.

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT HOWEVER REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## FREQUENCY OF CESAREAN SECTION

*To the Editor*—In a medium sized general hospital in which there are about 600 obstetric deliveries a year what should the percentage of cesarean sections be? We have about 4 5 per cent cesarean sections Our neonatal deaths including stillbirths are about 4 per cent Are these excessive?

A L Barbrow M D Homestead Pa

[This inquiry was referred to two authorities in the field whose respective replies follow—EDITOR ]

ANSWER—The incidence of cesarean section varies widely in different institutions somewhere between 2 and 5 per cent. A large teaching maternity hospital recently reported an incidence of 4.28 per cent during the last several years (Dieckmann William J *Am J Obst & Gynec* **50** 28 [July] 1945) The small maternity service which draws its patients from a local restricted community should have a low rate The small rural hospital serving a large area would admit necessarily more patients with complications resulting in a higher rate Likewise the large teaching hospital to which many patients with complications are referred for treatment and delivery would have a higher incidence of abdominal delivery If the hospital in question serves a wide area and the number of patients with complications is high a cesarean rate of 4 5 per cent can be justified

A neonatal and stillbirth rate of 4 per cent compares favorably with many institutions provided all babies weighing more than 1 500 Gm are included in the figures

ANSWER—At the Johns Hopkins Hospital for a period of twenty five years the incidence of cesarean section was reported as 1 7 per cent These figures included all patients admitted among whom were many colored women with the high ratio of contracted pelvis common to the Negro race

Stander has stated that the cesarean section rate for any maternity clinic should not exceed 4 per cent In private practice the incidence is about 1 per cent

The neonatal death rate at present in well conducted obstetric clinics should be expected not to exceed 3 per cent This figure includes all stillborn infants as well as those dying from any cause within the first two weeks after birth

## PLASMA AND AMINO ACIDS FOR BURNS

*To the Editor*—Would giving amino acids orally and intravenously take the place of giving plasma in burns? How much amino acids would be necessary to replace 250 cc. of plasma?

Edwin Epstein M D Birmingham Ala

ANSWER—The administration of plasma in burns is planned to fulfil two needs of the patient One of these needs would not be satisfied to any degree at all by amino acids the other need would actually be better met by amino acid administration than by plasma These needs are

1 Early (up to forty-eight hours) in the course of any serious burn there is an extensive loss of plasma from the blood stream into the burned tissues and to the outside in the form of weeping This loss is so extensive as to account in a large part at least, for the resultant oligemia and decrease in blood flow and cardiac output (Blalock) that accompanies the shock syndrome of burns This syndrome begins at the time of the burn and is the major cause of death during the first forty eight hours Since protein containing plasma is lost plasma or other quickly assimilable protein should be replaced as soon as possible in amounts commensurate with the loss Amino acids would require synthesis to protein to supply this lack and there just isn't time for this to be done soon enough for a therapeutic effect It is true however, that whole blood (Moyer Evans) which contains plasma and albumin which contains one of the two chief protein constituents of plasma can be substituted for the latter during this stage Furthermore if the sodium needs of the burned victim are adequately met (Rosenthal Fox), less plasma (or whole blood or albumin) is necessary but the fact remains that amino acids are not a substitute for plasma at this stage

2 During the later stages (second week time of healing) any unhealed burn becomes a nutritional problem particularly with regard to protein balance This problem remains as long as a granulating surface exists, hence the need for early grafting At times as much as 300 Gm of protein a day is necessary (Co Tui, Levenson) If the patient is able to take enough nourishment by mouth, amino acids or any other suitable form of protein are adequate If supplemental parenteral nourishment is necessary, essentially only three substances are available whole blood, plasma or amino acids As far as the relative merits of plasma and amino acids are concerned the question is largely a financial one In some cases 2 liters or more of plasma would be needed every day for weeks which would involve an outlay of thousands of dollars if commercial plasma was used Amino acids are much cheaper and are of practical value in these large amounts

Two hundred and fifty cc of citrated plasma contains no more than 12 5 Gm of protein Two hundred and fifty cc of 5 per cent amino acid solution (the strength usually given) also contain 12 5 Gm of protein and consequently is equal in action to the same volume of plasma in supplying the protein needs of the body where speed of action is not essential

References

Blalock Alfred Experimental Shock VII The Importance of the Local Loss of Fluid in the Production of the Low Blood Pressure After Burns *Arch Surg* **22** 610 (April) 1931

Co Tui, Wright Arthur M Mulholland J H Barcham I S and Breed E S The Nutritional Care of Cases of Extensive Burns *Ann Surg* **119** 815 (June) 1944

Evans E I and Bigger I A The Rationale of Whole Blood Therapy in Severe Burns A Clinical Study ibid **122** 693 (Oct ) 1945

Fox C L Jr Oral Sodium Lactate in the Treatment of Burn Shock THE JOURNAL Jan 22, 1944 p 207

Levenson S M Davidson C S Lund C C and Taylor F H L The Nutrition of Patients with Thermal Burns *Surg Gynec & Obst* **80** 449 (May) 1945

Moyer C A Coller F A Iob Vivian Vaughan H H and Marty Doris A Study of the Interrelationship of Salt Solutions Serum and Defibrinated Blood in the Treatment of Severely Scalded Anesthetized Dogs, *Ann Surg* **120** 367 (Sept ) 1944

Rosenthal, S M Experimental Chemotherapy of Burns and Shock III Effects of Systemic Therapy on Mortality *Public Health Rep* **58** 513 (March 26) 1943

## ELECTROENCEPHALOGRAPHY

*To the Editor*—1 What types of electroencephalographs are available? What is the relative ease of operating the different models? 2 Are there textbooks of electroencephalography? 3 What postgraduate courses of electroencephalography are available?

O L Bendheim M D Phoenix Ariz

ANSWER—1 A committee has been organized by the American Medical Association to pass on standards for electroencephalographic equipment. At present, however it is only fair to point out that the adequacy of apparatus is in almost inverse proportion to the amount of advertising done by manufacturers

2 The only complete textbook on electroencephalography in English is that of F A and Erna L Gibbs (Atlas of Electroencephalography Cambridge, Mass, Addison-Wesley Press) An authoritative chapter on electroencephalography by Herbert Jasper is to be found in Epilepsy and Cerebral Localization by Wilder Penfield and Theodore C Erickson. The value of electroencephalography to the psychologist has been considered in detail by Donald Lindsley in Hunt's Personality and Behavior Disorders New York, Ronald Press 1944 A manual for technicians has been written by R S Ogilvie Manual of Electroencephalography for Technicians (Cambridge, Mass Addison-Wesley Press Inc. 1945)

3 Postgraduate courses in electroencephalography have been given by the Neurological Institute New York, the University of Pennsylvania and the University of Michigan A three weeks course in electroencephalography is scheduled for June 3 to 29 1946 by the Department of Psychiatry University of Illinois Medical School A notice of this course is to be found in THE JOURNAL May 18, 1946, page 243

## OTOSCLEROSIS AND PREGNANCY—INHERITANCE OF OTOSCLEROSIS

*To the Editor*—I should like some information regarding the subject of pregnancy and otosclerosis From the literature and particularly recently there seems to be little evidence that we need to consider a therapeutic abortion on those having this condition Is there any hereditary factor present in the offspring of a mother having otosclerosis?

C P Whalen M D Kankakee Ill

ANSWER—The adverse effect of pregnancy on hearing in cases of otosclerosis has tended to be exaggerated in the textbooks Nevertheless about one out of four pregnancies occurring in otosclerotic women results in a definite acceleration of the hearing loss Since the fenestration operation now offers a reasonable chance of regaining serviceable hearing it is questionable whether therapeutic abortion would be indicated

There is a strong hereditary tendency in otosclerosis When both parents are afflicted, the children are almost certain to become deafened but if only one parent is afflicted, the children will not always develop impaired hearing

## ATTACKS OF UNCONSCIOUSNESS

*To the Editor* —A man aged 67 a farmer who grew up in the Swiss Alps began having fainting spells two years ago which would be preceded by a feeling of tension in the region of the fifth cervical vertebra This feeling would be referred to the occiput and the patient would suddenly drop unconscious or remain seated staring straight ahead On being placed in a horizontal position he would immediately regain consciousness and feel normal and act apparently normally with no after-effects and any pallor he had would disappear from his face These attacks would occur as often as three times during a meal Examination revealed a healthy appearance with good color and fresh clear skin moderately thickened radial arteries and palpable pulse in the dorsal pedis arteries heart sounds were normal urinalysis gave negative results the systolic pressure was 120 diastolic 78 all reflexes were equal and sufficiently active, the Kahn test was negative The cardiographic report stated that there was evidence of moderate damage due probably to coronary artery disease On the basis of my diagnosis of cerebral anemia due to arteriosclerosis I administered vasodilators in the form of nitrites by mouth and nicotinamide and deproteinated pancreatic extract parenterally with considerable palliative improvement His attacks continue however though at much greater intervals and recently he has developed a weakness in the legs which threatens to make an invalid of him I would like any suggestions you may be able to offer regarding further study and treatment in this case?

Ewart S Sarvis M D Sumas Wash

Answer —The suggested diagnosis of cerebral vascular disease is a most likely one However, the possibility of a central nervous system lesion of some other sort cannot be ruled out by "reflexes equal and sufficiently active" One must consider narcolepsy and epilepsy A central nervous system neoplasm would seem to be a good possibility This seems the more likely with recently developed weakness in the legs A hyperactive carotid sinus reflex is a more remote possibility At any rate a thoroughgoing examination of the nervous system is indicated. This should include an examination of the fundi an examination of the spinal fluid if there is no contraindication and encephalography if available An electrocardiogram at age 67 that shows "evidence of moderate damage due probably to coronary artery disease is not especially significant

## PENICILLIN TREATMENT OF SECONDARY SYPHILIS

*To the Editor* —A boy aged 15 was attacked by a naval officer who had anal relationship with him Several weeks later the boy had a mild rash which the family thought was due to acne Subsequently swelling and pain developed over the left clavicle with fever and rectal bleeding On examination he had enlarged glands in the axilla a palpable spleen a diffuse macular rash and some tender nodes felt rectally Syphilis was considered but the boy denied any type of exposure X ray of the clavicle showed a periostitis Peripheral blood study and bone marrow puncture ruled out infectious mononucleosis or blood dyscrasia Aspiration of a lymph node was negative. Dark field examination of scrapings of a skin lesion showed spirochetes The Wassermann reaction was reported positive The Kahn reaction originally reported doubtful was also positive Afterward the boy admitted exposure He was given a total of 6 000 000 units of penicillin within ten days first 40 000 units every three hours then 100 000 units every three hours His Wassermann reaction decreased from 32 units to 16 units within one week The rash and the periostitis disappeared and he is apparently well Should the boy now be considered cured and no further therapy given or should he get additional oxophenarsine hydrochloride or a bismuth compound and if so for how long and in what dosage?

M D New York

Answer.—There have been an insufficient number of cases of secondary syphilis treated with a total dosage of 6 million units of sodium penicillin given at three hourly intervals over a period of eight to ten days to give an accurate estimate of the likelihood of cure in a case such as that described Future therapy would depend to a large extent on the availability of such information

Some comment which may be of value, however, can be given, based on existing knowledge of other dosage schemes

Secondary syphilis treated with a total dosage of 2 4 million Oxford units given 40,000 units every three hours for sixty injections will have an anticipated cure rate of between 80 and 90 per cent When semi-intensive arsenotherapy with one of the phenarsine derivatives is employed simultaneously with the penicillin course the anticipated cure rate is considerably higher (Moore, J E, and others The Journal, Sept. 9, 1944 p 67 Eagle, Harry, and others *Ven Dis Inform* 27 3 [Jan ] 1946 Schock, A G, and Alexander L J The Journal, March 16 1946, p 696) Satisfactory information is not available as to the results when the arsenic-bismuth course follows the penicillin therapy It would not be anticipated that any short or substandard course would be of great value.

Increasing the total dosage or the amount per individual injection of sodium penicillin in the treatment of syphilis as in the case presented, does not greatly increase the anticipated cure rate within the range of 1.2 to 4 0 million Oxford units total dosage. It is always best to give maximum dosage, however since penicillin as at present available, is a mixture of several salts of different potency and is far from standardized for the treatment of syphilis Increasing the total number of injections by decreasing the interval between injections to two hours instead of three hours or by prolonging the course of treatment, will result in a higher anticipated cure rate. Thus, treatment given over a ten day period, as in the present instance, would be expected to give better results than if given over the more standard seven to eight day interval but this could not be expressed in absolute percentage terms

In summary, the anticipated cure rate in the present instance would be at least 80 per cent and, because of the somewhat larger than standard dosage given over a slightly longer period might be better than 90 per cent If post-treatment observation can be maintained regularly, no additional therapy but rather monthly physical examination and blood serologic tests for the next year, would seem to be the principal immediate indication, with a spinal fluid study shortly after six months Normally the blood serologic test should become negative between the third and the ninth month and remain so If there is clinical evidence of relapse or progression, if the blood serologic test does not become negative or reverts to a sustained positive after an initial negative response, or if the spinal fluid study is positive, then additional treatment is indicated and should be considered. This treatment should be individually and expertly planned. It could consist in retreatment with penicillin or in the institution of a standard course of chemotherapy with a phenarsine derivative and a bismuth preparation or a combination of an arsenical and penicillin. Retreatment should be carried through as for a new case, as though no previous treatment had been given, using maximum dosage

## WEATHER AND VASODILATATION

*To the Editor* —Is there any information available on the effect of atmospheric pressure changes on the blood pressure and if so what is that effect and how much? I have made a few observations and it does seem to me that blood pressures are higher when barometric pressures are high and vice versa I have also noticed many times in people whose veins are prominent on the back of their hands that these veins stand out much more prominently at times of low barometer while when the barometer is high they are much smaller and more threadlike Could this mean that low barometric pressure acts as a vasodilator? Could there be anything in the old saying I feel tough today it must be the weather"? Any information on this subject will be greatly appreciated

Charles B Rohr M D Alum Bridge W Va

Answer.—The relationship of weather to illness and physiologic activity has been studied most exhaustively by William F Petersen (The Patient and the Weather, in 4 volumes, Ann Arbor, Mich, Edwards Brothers, 1934 to 1945) It is reported that the incidence of coronary occlusions rises with changes in barometric pressure Fluctuations in the intensity of discomfort in arthritic patients are definitely correlated to changes in barometric pressure Changes in environmental temperature are reflected by the arterial tension Cold causes the pressure to rise because of peripheral vasoconstriction. The cold pressor test of Hines and Brown utilizes this phenomenon as a basis for measuring the reactivity of the vasomotor apparatus There is considerable variation in the intensity of response between different individuals, excessive reactivity to cold implies a sensitive, labile, hyperreactive vasomotor mechanism and is strongly suggestive of future hypertension Hyperreactors are potential hypertensives

Heat is an effective temporary vasodilator There are many observations to the effect that the arterial tension is lowered during spells of hot weather A relaxing hot bath reduces the arterial tension considerably, though only temporarily Weather does affect the feeling of well-being, but just how the effects are brought about is not yet clear

## SUBJECTIVE VISUAL SENSATIONS

*To the Editor* —A man aged 43 an Arabian complains of red vision for about fifteen minutes on awakening each morning at 4 o clock with frontal headache The patient has been in the United States about twenty years He is employed as building superintendent About two years ago he had a recurrence of malaria and was successfully treated with atabrine and quinine In July 1945 his blood pressure was 120/80 the urine acid with a specific gravity of 1 030 and 1 to 2 pus cells occasionally blood hemoglobin is 89 per cent red blood cell count 4 900 000 and white blood cell count 5,500 The Wassermann reaction is negative The red vision" has persisted for the last eight months The fundi and conjunctiva seem to be normal each time I examine him Kindly advise as to diagnosis and treatment

Martin H Greenfield M D Brooklyn

Answer —Subjective visual sensations occur in a great variety of forms, including color Generally, special significance need not be attached to them Of course there is always an explanation, even if one is not able to find it The important thing is to differentiate sensations that are significant of some important pathologic process and ignore the others

The frontal headache is another matter That may be of ocular origin and calls for examination of refraction and motility It is possible that ophthalmoscopic study would show cause for the red vision.

# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL. 131, NO. 8 — CHICAGO, ILLINOIS — JUNE 22, 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

## CONGENITAL HYPERTROPHIC PYLORIC STENOSIS


WILLIAM E. LADD, M.D., PAUL F. WARE, M.D.
and
LAWRENCE K. PICKETT, M.D.
Boston


Congenital hypertrophic pyloric stenosis has been written about frequently and its treatment has become moderately well standardized, nevertheless in the series of over a thousand cases that have occurred in the Children's Hospital, situations have arisen which either are not emphasized in the literature or are in need of clarification. It should be noted that this report deals with patients operated on by various members of the surgical visiting and resident staff.

The mortality of this disease in any children's hospital should not rise above 1 or 2 per cent. To attain such a result requires attention to the details of preoperative and postoperative care as well as to the operative technic. One should also be on the alert for complications or the occasional associated anomalies.

In 1939 Ladd and Gross[1] reported a series of 765 cases of pyloric stenosis treated in this hospital. In 1933 Lanman and Mahoney[2] had reported 405 of these cases. The present report deals particularly with an additional 380 patients operated on between 1939 and 1945.

### ETIOLOGIC FACTORS

Many factors have been reported to bear a causal relation to congenital hypertrophic pyloric stenosis. These have been repeatedly observed and confirmed by numerous observers, but it is still impossible to assess their true significance and the exact role they play.

*Sex.*—Males predominate in all reported series. In our hospital approximately 85 per cent of the cases occurred in male infants. No one has ever offered a satisfactory explanation for this overwhelming incidence.

*First Born.*—Pyloric stenosis is reported to occur more frequently in the first born of a family, averaging 50 to 60 per cent of cases in most series. Our own figures bear this out as our patients represented first births in approximately 55 per cent of cases.

*Race.*—We have noted no particular racial disposition in our series. While it is true that certain countries report fewer cases it seems likely that this is due to nonrecognition of the cases rather than to a smaller incidence. We have never observed a case in a Negro infant, although this is apparently pure chance, as Donovan[3] reports about 2 per cent of his cases to be in Negroes, while figures from the Charity Hospital in New Orleans[4] show 30 per cent of their cases occurring in Negro babies.

*Heredity.*—Families with the disease present in several siblings or found in successive generations are not infrequent. We have encountered one set of identical twins each with pyloric stenosis. Reports from the literature would indicate that this disease has never been reported in only 1 of 2 identical twins. Pyloric stenosis has also been reported in stillbirths and in a seven months fetus. These are all strong arguments in favor of a hereditary factor but no satisfactory explanation has ever been advanced as to exactly what this factor is.

### PATHOGENESIS

We have found no one of the various theories of pathogenesis completely acceptable and believe a combination of views necessary to explain the salient features of pyloric stenosis.

1. The presence of the pyloric tumor at birth is generally agreed on, and indeed its occurrence has been reported in premature infants and stillbirths.

2. Work hypertrophy is the second factor of interest. The views of Lehman (quoted by Szilagyi and McGraw[5]) are interesting in this regard. He believes that work hypertrophy results as the pyloric muscle attempts to overcome a resistant sphincter.

3. Pylorospasm is the third factor to be considered.

4. We feel that the combination of pylorospasm and a work hypertrophied pyloric tumor together with edema of mucous membrane from the mechanical irritation of the curds best explains the clinical picture of congenital hypertrophic pyloric stenosis. The onset of symptoms (usually between the second and fifth weeks), the severity of the vomiting and the ultimate development of complete pyloric obstruction are directly related to the degree of hypertrophy present in the individual case. The role of these factors may be depicted in an occasional case by barium swallows at intervals, showing a progression of changes from the early normal pyloric canal to the gradual narrowing and lengthening as work hypertrophy occurs and eventually showing the roentgenographic picture of advanced pyloric obstruction. Such a series of roentgenograms correlate definitely with the clinical picture


From the Department of Surgery, Harvard Medical School and Surgical Service, the Children's Hospital.
Dr. Ladd is William E. Ladd professor of child surgery emeritus, Harvard Medical School and surgeon-in-chief emeritus, the Children's Hospital. Dr. Ware is assistant in surgery, Harvard Medical School and resident surgeon, the Children's Hospital. Dr. Pickett was formerly surgical intern, the Children's Hospital.


1. Ladd, W. E. and Gross, R. E.: Abdominal Surgery in Infancy and Childhood, Philadelphia, W. B. Saunders Company, 1941, chapter 1.
2. Lanman, T. H. and Mahoney, P. J.: Congenital Hypertrophic Pyloric Stenosis, Surg., Gynec. & Obst. 47: 398, 1933.
3. Donovan, E. J.: Congenital Hypertrophic Pyloric Stenosis, Ann. Surg. 96: 174, 1932.
4. Romano, S. A. (with McFetridge, E.): The Essential Considerations of Congenital Hypertrophic Pyloric Stenosis, Internat. Surg. Digest 25: 131, 150 (March) 1938.
5. Szilagyi, D. E. and McGraw, A. B.: The Problems of Infantile Pyloric Stenosis, Surgery 13: 764, 1943.

of a baby with normal feeding habits at first, then the gradual onset of regurgitation, and finally the explosive projectile vomiting of severe pyloric obstruction

### PATHOLOGY

The essential changes in pyloric stenosis are limited to the pylorus itself. Other pathologic variations are purely secondary and are related to the obstruction present with resultant starvation.

Grossly the pylorus is seen as a spindle shaped, olive sized mass with a pale glistening serosal surface. On palpation the tumor is cartilaginous in consistency, extends for varying distance onto the gastric wall and ends abruptly on its duodenal end. In postmortem specimens the interior of the pyloric canal is almost completely closed by folds of mucous membrane, with a sharp termination of the stenosis at the duodenal end.

Microscopically the important finding is a tremendous hypertrophy of the circular, smooth muscle layer together with an actual increase in the number of smooth muscle fibers. Sections of the mucosal layer reveal edema and a slight leukocytic infiltration.

### SYMPTOMS AND SIGNS

*Dehydration.*—Since the majority of patients with pyloric stenosis are 4 weeks of age or more when first seen, the evidences of dehydration are usually well defined. The infant is thin and wizened looking, with almost no subcutaneous fat and with the skin falling in folds. The eyeballs may be soft, the fontanel sunken and the infant feverish. The mother will frequently volunteer that the baby voids infrequently.

*Vomiting.*—This symptom usually appears in the second or third week of life. Vomiting is at first merely regurgitation and at infrequent intervals. As the obstruction becomes more complete, the baby vomits explosively after almost every meal. However, the child is continually hungry and will feed eagerly even immediately after vomiting. The vomitus never contains bile, although in late cases it may contain old blood due to edematous gastric mucosa.

*Weight.*—As vomiting continues, the child at first fails to gain in weight and then later there is actual weight loss. At the time of operation the infant is usually below his birth weight.

*Scanty Stools.*—These babies do not suffer from constipation, but rather as the obstruction progresses there is less and less fecal residue and the babies pass small, hard, dry, constipated looking stools. If these infants have diarrhea, it is a symptom of serious import.

*Alkalosis.*—Prolonged vomiting or misguided gastric lavage may lead to a huge loss of electrolytes with hypochloremia, and the infant may show severe alkalotic respirations, general hypertonicity and even convulsions. Fewer babies in such a condition are being seen as the diagnosis is made earlier and earlier.

*Peristaltic Waves.*—These may be seen best during feeding. Waves may be noted to pass from left to right, across the child's epigastrium, increasing in volume as more and more feeding is taken and ending abruptly as the child vomits projectilely. While abdominal patterning may be seen occasionally in undernourished babies, the huge waves present in patients with pyloric stenosis are characterized by appearing only in the epigastrium.

*Pyloric Tumor.*—Palpation of an olive sized mass in the right upper quadrant is the most important finding for confirming the diagnosis. The infant should be fed to afford relaxation. One should not confuse the pole of the right kidney with the tumor. We have palpated a definite tumor in over 98 per cent of cases. The percentage of cases in which one can successfully palpate a tumor is directly related to the number of cases one has an opportunity to examine, to the method of palpation and to the patience of the surgeon. The ideal moment for the successful palpation of the tumor is immediately after the infant has vomited.

### LABORATORY DATA

The red blood cell count and hemoglobin values are essentially normal in these babies. Determinations should not be done until after the baby is hydrated, as otherwise one may be misled by the hemoconcentration present. Urine examination is usually negative except for the presence of acetone due to ketosis. The serum protein is frequently a low normal value after hydration, but for some reason these infants rarely show a nutritional edema. In the occasional alkalotic baby the serum chloride is of some importance, and its level is directly related to the severity of the child's obstruction. Formerly, plasma and vitamin C determinations were made and found to be uniformly low.

### ROENTGENOLOGIC EXAMINATIONS

The more facile one becomes in palpating a pyloric tumor, the fewer will be the indications for roentgen confirmation of the diagnosis. A plain film of the abdomen may be of no value if the baby has just vomited. The administration of a thin barium mixture is therefore desirable in obscure cases but not without danger, owing to the possibilities of aspiration. If examination shows almost complete retention, a tube should be then passed and the barium removed.

The essential roentgen features of diagnosis are (1) gastric dilatation, (2) intermittent hyperperistalsis, (3) a greatly elongated pyloric canal which is only 2 to 3 mm. in width and (4) delayed gastric emptying time. Retention of over 75 per cent of a barium meal at the end of three hours indicates definite pyloric obstruction.

### DIFFERENTIAL DIAGNOSIS

*Pylorospasm.*—The status of pylorospasm as a distinct clinical entity we do not propose to discuss at length. However, there is a definite group of cases that resemble classic pyloric stenosis babies very closely. Whether their symptoms are due to "pylorospasm" or to mild forms of organic stenosis we do not know. In any case there are clearcut differentiating points.

A detailed history in such babies will reveal a classic intermittence of symptoms with varying intervals of well-being. Hypertonicity is present but responds well to sedatives and antispasmodics. An occasional case may show all the obstructive symptoms of a pyloric stenosis, but generally they have a milder course. In addition, the onset of symptoms is usually later and there is no male preponderance.

*Infectious Vomiting.*—Infection as the cause of the baby's symptoms may be easily ruled out by a careful physical examination. Diarrhea is apt to be present, and also fever and leukocytosis. Again, the symptoms are relatively mild and of course there is no palpable tumor.

*Improper Feeding.*—Infants often develop complaints comparable to pyloric stenosis shortly after leaving the

obstetric ward Careful analysis should therefore be made of the amount type and actual mechanics of the feeding Careful feeding by a competent nursing staff for two or three days will often completely resolve the child's difficulties

*Intracranial Injury*—The symptoms of babies with intracranial hemorrhage usually date from birth They vomit without relation to feeding, may be cyanotic, fail to nurse, convulse and show an irregular pulse and respirations Lumbar puncture reveals grossly bloody spinal fluid Subdural hematoma resulting from intracranial injury frequently causes vomiting, convulsions, irritability and stupor, but these symptoms usually become evident later than in babies with more diffuse hemorrhage Subdural taps reveal excessive xanthochromic fluid Xanthochromic fluid or blood clearly differentiates intracranial injury from pyloric stenosis

*Chalasia*—We have recently begun to recognize a new symptom complex for which the word chalasia of the esophagus has been suggested by Dr Edward B D Neuhauser[6] of our x-ray department These babies vomit persistently but lack other signs of pyloric stenosis The condition may be definitely differentiated from pyloric stenosis by roentgenologic examination which shows the gastric cardia in a state of continuous relaxation with frequent regurgitation of the barium which has been given Babies with this difficulty respond well to a therapeutic test of thickened feedings while they are kept in Fowler's position

*Extrinsic Intestinal Obstruction Malrotation*—A malrotated colon causing duodenal obstruction may show peristaltic waves in the epigastrium The vomiting may be explosive, but the vomitus will be bile stained and no tumor can be palpated Under such circumstances a roentgenologic examination should be made to reveal the true diagnosis

*Volvulus*—A volvulus may be present in cases of malrotation Again, the onset is early, the vomitus is bile stained and a roentgenogram is helpful In the presence of a strangulating obstruction, differentiation is not difficult

*Intrinsic Intestinal Obstruction*—Duodenal stenosis is the only type which may be confusing Usually the symptoms date from birth, the vomitus is bile stained, no tumor is palpable and a barium meal offers considerable assistance

### PREOPERATIVE CARE

Pyloromyotomy should never be regarded as an emergency procedure The aim in every case should be to restore the baby to as nearly normal a nutritional state as possible before operation Correction of dehydration, ketosis and low chlorides by adequate fluid therapy are as important as surgical skill in lowering mortality rates in this condition Two or three days of preparation with parenteral fluids should be the minimum, and occasionally in cases of long standing with severe obstruction five to six days of preparation may be necessary before the baby is a suitable operative risk

In general, one should maintain the infant's fluid intake at 2½ to 3 ounces per pound daily In this clinic two intravenous infusions and two subcutaneous clysses are given daily Five per cent dextrose in water, 10 cc per pound of body weight is given intravenously and isotonic solution or half isotonic solution of sodium chloride in 2 5 per cent glucose, 15 cc per pound of body weight, is given subcutaneously

In the poorer risk debilitated patients with long-standing obstruction and malnutrition, whole blood transfusions raise the serum protein level and in addition bring the red blood cell count and hemoglobin values to satisfactory levels Plasma protein transfusions improve the general condition of the patient and materially aid wound healing The amounts of plasma and whole blood given correspond to 10 cc per pound of body weight One hundred mg of vitamin C given twice daily in the clysis fluid will restore rapidly the depleted plasma vitamin C level of these babies Normal serum protein levels and adequate vitamin C therapy encourage a well healed wound

Amigen solutions either intravenously or subcutaneously offer still another source of increased protein intake in such babies Full formula feedings are maintained during the preoperative period regardless of the vomiting in the majority of cases, as small amounts of feeding will be absorbed We have been gratified in a few cases to have infants retain a fair proportion of a feeding consisting of equal parts of 10 per cent amigen and 10 per cent glucose in the face of decided pyloric obstruction

### TREATMENT

It is almost the universal consensus that surgical treatment is the treatment of choice This opinion has been held at the Children's Hospital since 1915

### PREPARATION FOR OPERATION

Conservation of body heat is a primary consideration in these debilitated infants The extremities are wrapped in several layers of sheet wadding, and the baby is pinned to the operating table with a hot water bottle under his back to provide heat and improve operative exposure The temperature of the operating room should likewise be carefully regulated The skin of the abdomen is cleansed with ether followed by half strength tincture of iodine and the exposed surface quickly draped A small urethral catheter is passed down through the nose and the stomach contents are aspirated The catheter is then left in place during the operation to deflate the stomach, which improves respiration and facilitates anesthesia

### ANESTHESIA

Premedication consists in the administration of atropine sulfate in appropriate doses Barbiturates and morphine are unnecessary and perhaps dangerous Open drop ether is used almost routinely in this clinic, and it has proved to be eminently satisfactory Relaxation is excellent, with no danger of evisceration, and in the hands of expert anesthetists leaves little to be desired If one experienced in infant anesthesia is not available, probably local procaine infiltration of the abdominal wall is the method of second choice We have found this method satisfactory for a small number of patients who are particularly bad risks If used as a routine, however, its disadvantages are likely to be only too apparent The operative procedure is prolonged, relaxation is poor, and sudden straining or crying of the infant may result in evisceration of the intestine with its attendant difficulties and shock

### OPERATIVE TECHNIC

A great variety of abdominal incisions have been employed by different surgeons Formerly, most of our cases were done through a right rectus wound How-

6 Neuhauser E B D Personal communication to the authors

ever, in the past five years the gridiron incision of Robertson [7] has been the approach of choice in this clinic Some men prefer a high midline incision Meredith [8] varies the right rectus by transversely opening the posterior rectus sheath and peritoneum and Davis [9] has recently advocated a transverse incision through the skin, subcutaneous tissues and anterior rectus fascia, longitudinal splitting of the rectus muscle and a transverse peritoneal opening

The gridiron incision is made 2 inches in length parallel to and one fingerbreadth below the costal margin, starting at the lateral edge of the right rectus muscle and is then extended laterally Careful hemostasis is practiced and subcutaneous bleeders are tied with silk (0000 or 00000 in size) The external oblique and internal oblique muscle layers are then divided in the direction of their fibers and the transversalis muscle and peritoneum opened transversely as one layer With the liver edge retracted, the antrum of the stomach presents and the pylorus is easily delivered into the wound Occasionally it is necessary to palpate the tumor and then "milk" it into the wound with the right index finger A ½ to ¾ inch incision through the serosa and superficial musculature is then made on the relatively avascular superior anterior surface The incision should continue onto the gastric wall but should stop just short of the duodenal end of the tumor The bulk of the hypertrophied muscle may then be divided bluntly with the scalpel handle The blades of a hemostatic snap are then inserted into the incision in the pylorus and opened This separates the remaining muscle fibers and allows the mucosa to pout above the level of the serosa In this part of the procedure the main problem is to separate completely the muscle of the duodenal end without opening the lumen of the duodenum Occasionally oozing is encountered from the pyloric incision, which usually can be controlled by pressure with a warm saline pack The release of traction on the stomach will also relieve the engorgement of the vessels and reduce troublesome bleeding to a minimum Rarely it may be necessary to ligate a persistent bleeding vessel

The pylorus having been returned to the abdomen, the peritoneum and transversalis layer are closed with a continuous suture of 0000 chromic catgut Each muscle layer then is sutured with interrupted 00000 silk and the subcutaneous tissues and skin are approximated with the same suture material The infant is then wrapped in warm blankets, thoroughly suctioned and rebreathed with oxygen for five to ten minutes, the stomach catheter is then removed and the baby is returned to the ward

## POSTOPERATIVE CARE

Occasionally it may be necessary to give an intravenous injection of glucose or plasma on the operating table but usually the postoperative fluids are deferred until the baby has returned to the ward

Many slightly different postoperative feeding programs have been successfully used for these babies by various men The following feeding regimen has been in use in this hospital for many years and has been completely satisfactory

Feedings are begun as soon as the baby is conscious, and fluid is given every two hours for the first thirty-six hours The composition of the feedings is roughly as follows and varied according to individual indications

2 feedings of 1 ounce of sterile water,
4 feedings of 1 ounce of whey,
4 feedings of ½ ounce of whey and ½ ounce of breast milk,
4 feedings, decreasing whey by 1 drachm and increasing breast milk by 1 drachm at each feeding, and
4 feedings of breast milk with 1 drachm increase with each feeding

This regimen covers the first thirty-six hours postoperatively and at its conclusion the baby is receiving 1½ ounces of breast milk every two hours Parenteral fluids are necessary during this period to supplement the baby's oral intake and fulfil the fluid requirement of 2½ to 3 ounces fluid per pound in twenty-four hours Occasionally a small amount of regurgitation may be noted during the first postoperative day but this is usually negligible in amount

The feeding schedule is now lengthened to three hours and the breast milk gradually increased to 2½ ounces per feeding If breast milk is not available, a 40 calory modification of water, karo and equal parts of whole milk and skimmed milk may be substituted When the stools and feeding habits are normal, a whole milk formula containing 50 to 55 calories per pound is substituted and after ten to fourteen days the interval between feedings may be increased to four hours

Postoperative transfusions of plasma and whole blood are given as indicated by the red blood cell count and the serum protein and hemoglobin values

The skin sutures are removed on the fifth and sixth postoperative days and the baby discharged home on the ninth or tenth day

Close follow-up visits are then made and the formula is adjusted as necessary until satisfactory and prolonged weight gain is assured

## COMPLICATIONS

*Duodenal Perforation* —In any large series of cases in which adequate pyloromyotomies have been done the duodenal mucosa may be opened in a few instances This is easily understandable in view of the abrupt termination of the hypertrophied muscle at its duodenal end and the importance of separating these distal muscle fibers if complete relief of the obstruction is to be accomplished

If this accident should occur, prompt recognition is essential, as otherwise a fatal peritonitis may result in these debilitated infants One may first notice a small area of pouted everted mucosa or slight bile staining or most often the escape of a few bubbles of gas

In over a thousand cases of pyloric stenosis in which operation has been performed during the past thirty years the duodenum has been accidentally opened twenty-three times Nine of these perforations occurred in the 380 cases seen between 1939 and 1945 Fortunately, in each case the perforation was noted and immediately closed The stomach mucosa was also opened once during this period There were no untoward results following perforation in any of these recent cases In patients operated on before 1939, three deaths occurred following perforation but only one of these was due to peritonitis

A perforation of the mucosa at the duodenal end of the pyloric tumor merely indicates that the incision has been extended too far In our experience the simplest and most effective repair is to close the incision by one or two sutures of fine silk at the duodenal end The indwelling gastric tube is placed on suction postoper-

7 Robertson D E Congenital Pyloric Stenosis Ann Surg 112 687 1940
8 Meredith E. W Pyloric Stenosis Pennsylvania M J 43 1686, 1940
9 Davis H H Right Rectus Gridiron Incision in Pyloric Stenosis Surg Gynec & Obst. 78 211 1944

atively for forty-eight to seventy-two hours and the baby maintained on parenteral fluids In the more recent cases sulfonamide therapy has also been given If the child's condition is satisfactory the tube is removed on the third or fourth postoperative day and routine pyloric feedings are started

*Otitis Media*—Otitis media has been a frequent complication, occurring in 24 cases in the past six years—an incidence of 6 3 per cent In 6 of these cases (25 per cent) both ear drums were involved Myringotomy was necessary in 5 instances The infection was presumably due to the frequent vomiting causing blocking of the eustachian tube orifices The occurrence of otitis media did not seem to affect the prognosis in any way

*Wound Infection and Evisceration*—There were 11 instances of wound infection in these recent 380 cases (3 0 per cent) In 2 cases evisceration occurred but successful resuturing was performed One child required a secondary herniorrhaphy but was then completely well All 3 of these cases occurred in right rectus wounds

*Pneumonia*—Pneumonitis was found as a complication in 9 instances In a 4 pound (1,815 Gm ) premature infant pulmonary infection apparently resulted from massive aspiration of mucus postoperatively and ended fatally In the remaining 8 cases whether infection was present preoperatively as the result of aspiration and accentuated by inhalation anesthesia or represented a postanesthetic pneumonitis could not be determined

*Malrotation*—Five cases of malrotation of the colon with duodenal obstruction were noted in this group of 380 cases In 3 cases the duodenal obstruction was recognized and repair of the malrotation was effected at the time of pyloromyotomy One of these 3 cases occurred in a 4 pound premature infant with congenital heart disease In the fourth case symptoms of duodenal obstruction became evident after the pyloric obstruction had been relieved In the fifth case operation was performed at 11 days of age for malrotation Four weeks later the cardinal findings of pyloric stenosis appeared and pyloromyotomy was carried out In all 5 cases a Ladd's procedure[10] was done successfully with complete relief of symptoms In 2 babies an incidental malrotation was found at the time of pyloromyotomy Since there was no evidence of duodenal pressure or obstruction no additional operative procedure was done

## OPERATIVE RESULTS

In this series of 380 cases of pyloric stenosis treated surgically there have been 4 deaths A brief report of each case together with the essential postmortem findings follows

J McC. a 4 pound 4 ounce (1,928 Gm ) premature infant with classic findings of pyloric stenosis associated with cyanotic spells, was otherwise normal Pyloromyotomy was performed Postoperatively the child had three severe cyanotic spells and died five hours after operation Postmortem examination revealed severe bilateral bronchopneumonia with aspirated gastric contents

S S, a 6 pound 6 ounce (2,898 Gm ) Mongol infant, was diagnosed as having pyloric stenosis The infant died eighteen hours postoperatively with a central nervous system type of respiratory arrest. Autopsy revealed numerous defects of the central nervous system together with anomalies of the kidneys and ureters

F B was operated on for pyloric stenosis The baby did well for five days and then developed an uncontrollable diarrhea On the ninth postoperative day he experienced severe cyanosis and labored respirations one hour following a blood transfusion Autopsy revealed pulmonary edema and a terminal bronchopneumonia due to aspiration

E W a 5 pound 12 ounce (2,608 Gm ) 3 week old infant who had an uneventful pyloromyotomy, began to show signs of intestinal obstruction on the third postoperative day with abdominal distention and bile stained vomitus Reexploration was planned, but the baby developed sudden respiratory distress and cyanosis and died suddenly a few hours before the scheduled exploration Postmortem examination revealed a stenosis of the ileum

The satisfying steady decline in mortality following pyloromyotomy at the Children's Hospital may be seen from the accompanying table In the past three and one-half years 225 consecutive cases of pyloric stenosis have been treated surgically without a fatality

*Decline in Mortality Following Pyloromyotomy*

| Year | Cases | Deaths | Mortality, per Cent |
|---|---|---|---|
| 1915 1935 | 588 | 35 | 5 95 |
| 1936 1945 | 557 | 5 | 0 89 |

## SUMMARY

1 One thousand one hundred and forty-five patients with pyloric stenosis have been operated on by various members of the Surgical Service of the Children s Hospital since 1915

2 Eighty-five per cent of cases occur in males and particularly in the first born of a family

3 The essential pathologic finding is hypertrophy of the circular muscle layer of the pylorus

4 The cardinal findings are (*a*) dehydration, (*b*) projectile vomiting, (*c*) scanty stools and urine, (*d*) visible gastric waves and (*e*) a palpable pyloric tumor

5 Proper fluid therapy is the most important aspect of preoperative care to lessen operative risk

6 Pyloromyotomy under ether anesthesia is the procedure of choice, preferably through a Robertson gridiron incision

7 Complications include duodenal perforation, otitis media and pneumonia, wound infection and evisceration or severe diarrhea

8 Operative mortality in 557 cases seen during the past ten years is 0 9 per cent Recently 225 patients with pyloric stenosis have been operated on consecutively without a fatality

330 Dartmouth Street, Boston 16

10 Ladd W E Surgical Diseases of the Alimentary Tract in Infants New England J Med 215 705 (Oct 15) 1936

**Possibilities of Cooperative Research**—One of the most striking characteristics of an expert investigator is his strong individualism He has his own personal curiosities, his own plans for work and his own ways and methods for carrying out his plans It is difficult for him to engage with other experts as a member of a team New ideas for research come to mind in the course of his investigation that enticingly lead him away to fresh fields for discovery He wishes to follow the prospects he foresees, unchecked by obligation to associates He acts thus not because he fails to respect or appreciate highly what others are doing but because he is satisfying an eager personal interest What proves attractive to him furthermore, may not prove attractive to others Indeed, it may be difficult for him to justify to others the course he intends to pursue—Cannon, Walter B The Way of an Investigator, New York, W W Norton & Co, Inc, 1945

# THE PERPETUATION OF NERVOUS DISORDERS BY ARMY PSYCHIATRIC PROCEDURE

CLAUDE UHLER M D
Dallas Texas

Psychiatry was prepared for World War II The previous twenty years had marked the golden age in psychiatric research and treatment Mental hygiene had reached actively into the community in close working relationship with educational, law enforcement and social welfare agencies Enlightenment on the nature of mental disease had opened the way to clinical observation in the schools and playgrounds State hospitals were clearing the umbrage of insanity Mental sufferers were submitting voluntarily to commitment under the assurance of early cure and continued respectability after discharge Conferences were dynamic with discussion about interpersonal relations, parents of nervous children, sibling rivalries, character dominance and the prevailing culture as causes of maladjustment Psychoanalytic principles had been incorporated into psychiatric thinking for an understanding of the psychologic mechanisms operating in the germination of mental disease Tests and questionnaires were prolific in the evaluation of aptitudes, emotional instabilities and personality trends Projective procedures were curtailing projections by the examiners Psychiatrists were "looking at" every discipline of personal influence Then the war came and with it the opportunity to look at the results of their labors

The Office of the Surgeon General had organized its staff of psychiatric consultants Psychiatry for the first time received equal recognition in rank with medicine and surgery At each of the service command headquarters a psychiatric consultant was appointed for the purpose of counsel and direction Psychiatrists were assigned to the staffs of the promptly constructed general and station hospitals Induction centers were staffed with the leading psychiatrists in the community Reception centers, replacement training centers and ports of embarkation had psychiatrists

Psychiatry was faced with a challenge Manuals and bulletins were hastily devised and distributed covering the classification and disposition of anticipated casualties The setup seemed to be perfect In the discussion which follows, attention is directed to some of the reasons for the failure of the Army to utilize the most skilled psychiatric talent ever assembled in one organization in the history of medicine

In the course of the first year the psychiatric problem was serious The numbers of cases taxed the experience of the examiners in the necessity for snap diagnoses and dispositions formulated to meet manpower requirements Many psychiatrists were assigned to general medical duties They became gradually more isolated in the field under the orders of their immediate command Wider became the gap between them and the headquarters which issued official psychiatric directives Disposition and CDD boards were cluttered with cases Patients were remaining on the wards from two to three months in no relation to condition or progress Many did not see a psychiatrist for weeks at a time Seventy per cent of the time of the psychiatrist on duty in the Zone of the Interior was consumed with clerical work and board meetings The outpatient departments had long rosters of "goldbricks" on sick call In the course of the remaining years of the war a drama of psychiatric debacle was unfolded which threatens to perpetuate mental invalidism for many years The incidence, the prolongation and the refractoriness of mental disease at the present time together comprise the indictment against Army psychiatric procedure

The enlisted men in a service unit assigned to a prisoner of war camp provide a rich harvest for psychiatric consultant work These men represent largely the "eight balls" in the Army, men who by reason of disability or inefficiency filter through a variety of assignments after repeated board appearances and periods of hospitalization to land in maintenance and repair, latrine orderly and guard duty over prisoners of war Seventy-two per cent of the enlisted strength claim chronic ailments which disqualify them for duty A psychiatric study of 380 men of this group reveals that 30 per cent of the total strength of the unit are unfit for duty of any kind in the military service

Among the three principal types of serious personality disorders, namely the psychoneuroses, the constitutional psychopathic states and the psychoses, the second type predominates There were few psychotics Many of the inadequate types of psychopaths were schizophrenic, but in the interest of quick disposition they were classified constitutionally inadequate The schizophrenic, like a chameleon, changes color from one hospital to another, and the disposition of his case is deferred The psychopath remains black on his record alone, and his disposition is perfunctory

These men were studied with attention to distinctly positive elements in the psychogenesis of each condition In accordance with official directive the principal psychiatric categories were prohibited by name in the case records In their place were substituted the complaint, the symptoms or descriptive paraphrases This official directive, by its evasion of positive diagnosis, resulted in confusion and misinterpretation among psychiatrists, internists and commanding officers alike, spread distrust for psychiatric nomenclature generally and placed the psychiatrist in the position of temporizer or an agent to maneuver dispositions to fit the occasion regardless of the diagnosis Symptoms and subtypes in the principal categories of nervous disorders blend imperceptibly without demarcation This fluidity was exploited mercilessly by official procedure so as to force the diagnosis to serve exclusively the military duties exacted of the soldier Accordingly, the diagnosis varied with the purpose of the examination and the pending requisitions, such as those in induction centers, reception centers, replacement training centers, combat zones and special service units This explains the wide disparities in the recommendations on the same man under different military disciplines Actually some paraphrase of psychoneurosis or psychopath or feebleminded or normal could be attached to the same soldier in agreement with the nature of the requisition which he had to be applied against, without regard for his fitness for those duties or for his own mental liabilities

The psychiatrist was prevented from exercising his trained judgment in the practical problems which confronted him Too frequently his opinion was accepted only when it supported the preconceived views of his commanding officer, a Regular Army physician, promoted to administrative authority at the outbreak of hostilities with no knowledge of psychiatry This is

exemplified in the statement of a commanding officer of a large station hospital "We had no psychoneuroses in World War I Where are they coming from now?" War manpower had to be served, to be sure It should not have been purchased, however, at the cost of more than one-half million mental misfits carried along for an indefinite period of six months to three years

Instructions and directives issued from time to time from the Office of the Surgeon General carried no applicability to critical problems in the various units Administrative psychiatrists operated for the most part only with other administrative branches of the service Clinical psychiatrists worked detached with little opportunity for independent action Psychiatry became an expediency and in some instances an additional military discipline bearing no semblance to a branch of medicine

Orders, in the form of "ground rules," to ignore the psychogenic factor in disabilities hampered treatment as well as diagnosis Even in the presence of organic changes conspicuous on physical examination a large portion of the disability may be of psychogenic origin In conditions where organic changes are not demonstrated it is reasonable also to suspect strong psychogenic influence, as in lumbosacral strain, neuritis, forms of arthritis, cardiovascular instabilities, angiospasms and gastrointestinal dysfunctions Psychosomatic medicine is not new Time and tradition establish psychoneurosis as illness, not an epithet Army psychiatry dropped this view and with it all the experience gained in this field from World War I Fortunately overseas units did not share this handicap

## ILLUSTRATIVE CASES

Case reports follow in accordance with standard classification The psychoneuroses comprise neurasthenia, anxiety states, conversion states, obsessive reactions and reactive depressions

A private aged 37, with three years' service, complained of an 'all in feeling and nervousness He had headaches and noticed that he was absent minded when he was given several orders at the same time Prior to military service he had been healthy working hard as a farm hand Overseas he contracted malaria, and for the past two years he had been admitted to hospitals with relapses of chills and weakness He complained of stomach trouble and felt short of breath even at rest. Sometimes he was too weak to sit up He had acquired a neurasthenic state secondary to the repeated hospitalizations which his original relapses required He declared vigorously that he would like to return to duty, but he was at a loss to know just what he was capable of doing The variety and vagueness of complaints with lack of energy, irritability and weakness distinguished this reaction from conversion neurosis This soldier received ten reassignments and transfers Each hospitalization period simply marked an interlude between transfers His final psychiatric diagnosis was interpreted as qualification for a prisoner of war camp assignment

In anxiety states there is a feeling of tension and anxiety dominating the soldier's reactions, changing in intensity from time to time in the same situation They are precipitated by fears and sudden shocks, loss of friends and relatives, marital upsets and feelings of guilt

A private aged 25 with two years and seven months service complained of headaches ear trouble and pains in the abdomen He did not mention nervousness at first He reluctantly admitted that he had been a little nervous all his life. He seemed to be ashamed of his timidity in childhood He was always very sensitive He cried when he was reprimanded by his school teacher He had been decidedly a home boy He went only with one girl since he was 16 years old and he was engaged to marry her He had been inducted on limited service because of nervousness He had been hospitalized five times for a total period of one year and three months On interview he choked and stuttered. He repeated "I'm giving you all the truth about myself I'm not trying to get out of anything I am not bucking for a discharge Religion is the only thing that holds me up I often pray for help I'll do anything they tell me to do but to tell you the truth for months at a time I have not been given anything to do"

Allowances were made for the soldier at every post He had been exempted from basic training, and subsequent assignments involved only light duty This soldier required no more of an emotional upset than separation from home and family to develop an anxiety state similar to that arising from fear and sudden shock in combat In this case also frequent reassignments as a substitute for psychotherapy led to a dependent invalid state His assignment to this camp exemplified the universal misundefstanding of psychiatric diagnosis

Conversion states are defense mechanisms against disappointments and conflicts where the original idea is repressed and the attendant emotion attaches itself to one special physical system resulting in some such defect as paralysis, convulsions, blindness or pain

A private aged 24, with five years' service, had a good previous work record and had adjusted satisfactorily before he was inducted He had rarely been sick He had thirty months overseas duty, with seven months' combat experience He was evacuated by rotation to the United States He had been hospitalized seven times for indigestion and pains in the stomach When he was shipped out from his last post he stated that he had been told that he was due to appear before a board in the hospital but that there was no empty bed at the time and maybe the next post would be able to take care of him For the past six months he had been losing weight He had weak tired feelings Since the date of cancellation of his board review he had had an aggravation of gastric pain and vomiting This was construed to be an attempt to evade duty Although he had been examined thoroughly for peptic ulcer he insisted that he had some organic condition which the doctors could not find. He had been transferred to three new posts since he returned from overseas Even though he had been hospitalized repeatedly, he had received no psychiatric disposition

A sergeant aged 26 with fifteen months service in the China-India-Burma theater of operations made a request to see the psychiatrist. He had a fear of being in crowds Since he arrived in the United States he had tried to avoid people on the sidewalks He thought that he was being stared at. He agreed that there was nothing logical in this feeling He did not think that he looked different from other persons He would walk four or five blocks out of his way down side streets to avoid crowds on the sidewalk He had been in isolated sections among the same men for months in the jungles of India He thought that perhaps this experience had something to do with his feelings in crowds at this time When he asked his commanding officer at his previous post if he could see a psychiatrist he was given K. P duty He was told that if he reported for sick call again he would be transferred. He gave the information that he was very sensitive in childhood He was fondly attached to his only sister Recently his sister began having fainting spells She was being treated by a physician three times a week with "some kind of body massage." He did not know what the treatments consisted of and both he and his mother had been trying to persuade her to see a psychiatrist He worried because his sister never told them much about the treatment He had always been curious 'about psychiatrists and the way they made people well' His sister never had an attack at home or when she

was alone but always among crowds on the street, in the movies or in stores It was precisely such places which created panic in him He believed that he needed a psychoanalysis The soldier's worry about his sister formed the basis for his phobia He accused himself for not being able to help her Whenever he received news about her he became more doubtful of her recovery He never noticed any nervous trouble of his own until his sister began having spells Fears for her health were displaced to a situation of his own unconscious creation, of identical locale, in the form of a phobia of crowds on sidewalks His interest in psychiatry came from a desire to help his sister by securing treatment for his malady, which bore a close resemblance to hers By identification, as he was cured he visualized his sister's recovery also

This soldier had received no psychotherapy "Goldbricking" had to be discouraged The scarcity of courts-martial for malingering attest to the success of this discipline And the price paid for it is the perpetuation of mental disease in thousands of genuinely disabled men

In reactive depression states a realistic chain of depressive circumstances is recounted, in logical and understandable sequence, of sufficient emotional significance to justify the reaction The resulting depression in spirits is not always manifested openly by tearfulness and agitation and is probably more disturbing in its suppressed forms with inner turmoil of emotion Soldiers with a reactive depression were dealt with harshly The noncoms had little tolerance for them They put them through toughening up tactics Credit is due them however for their intelligent interest and responsiveness when they could be contacted about individual cases Here the difficulty was that general hospitals carried no provision for contact with line officers, and communication was cumbersome In 1944 reconditioning centers were organized under station hospital administration too few and too late to salvage any material fit for duty from the chronic invalidism then prevalent The convalescent centers which grew out of this experiment provided the only facility for psychiatric treatment under official directive since the outbreak of hostilities Then the war was over

A private aged 23 had been in the service for six months assigned to the interrogation of German prisoners He stated that he had "been overworked, called to duty four times without sleep for fifty two hours" He was born and reared in Germany He had been exposed to the prevailing brutality in his community for several years before coming to this country He recited incidents of many beatings at the hands of the young Nazis at school He came to this country at 16 on the affidavit of his uncle, leaving behind a 10 year old sister He worked as a factory hand in a radio plant He made strenuous efforts to raise enough money to bring his sister also He heard reports of the suffering which was imposed on the Jewish families One week after he had deposited money in the bank to assure visa for his sister, war was declared and the United States consul left Germany Subsequently he read of the deportation of Jewish children to Poland, where they were placed in ghettos He got news from the prisoners at this camp about the wholesale mutilation and the incineration alive of the occupants of these ghettos, and the fate of his sister was constantly before him He became depressed and weak and did not have strength enough to complete basic training He was getting worse in the course of processing prisoners Examination revealed a reactive depression with anxiety and tension and hatred initiated by years of bitterness toward the Nazis for their inhuman practices He stated that he tried to do his duty in the compound as interpreter, but his contacts with the prisoners always revived memories of the suffering which they caused his family As he spoke he trembled and perspired and tried hard to choke back his sobs "It's my little sister that is always in front of me day and night She would be 16 now" These apprehensions produced a paralyzing state of depression which handicapped him for the most meager responsibilities

This soldier's assignment to a German prisoner of war camp cannot be justified by military necessity

A private aged 24, with four years' service, had spent forty months overseas He had a rigorous assignment in outposts, where he contracted malaria and "jungle rot" During his periods of best health his performance was so commendable that he was promoted successively to the grade of sergeant After returning to the United States by rotation he was assigned to military police duty He was directing traffic on his post when a woman drove her automobile through a formation as retreat was sounded He "flagged" her down and admonished her that if she did that again she would be taken to the provost marshal's office She was indignant and drove on A short time later he was admitted to the hospital for treatment of his "jungle rot" Here he received notice that he was demoted to the grade of private because of "discourtesy and misconduct" The woman had written to the commanding general that the soldier's insolence had caused her to have a miscarriage The soldier was then transferred to a prisoner of war camp Examination revealed a tense, anxious and depressed condition He stated "I'm scared—I never knew what it was to be afraid overseas but back here everything scares me—I can't sleep—I don't have any spirit—I try to do my guard duty but I can't even think—I don't have any life in me—I find myself crying without knowing what I am crying about" Although he did not speak about his demotion he exhibited suppressed emotion as he was questioned about it He strained himself to conceal his humiliation over the loss in grade He suppressed the idea itself, but feelings of remorse broke through periodically so that he cried "without knowing why"

After four years' service this soldier had his first interview with a psychiatrist at a prisoner of war camp

The constitutional psychopathic states are characterized by their noncompromising reaction These soldiers are unable to follow conventional rules and resist official standards of conduct Their records are marked by inefficiency, alcoholism and frequent disciplinary infractions

A private aged 29 had been in the service for one year without any assignment for the past six months because of inefficiency He had been taken out of basic training because he could not keep up At this camp he had led a desultory existence ineffective even for simple maintenance jobs At an early age he had been orphaned He was reared by an older sister He was a behavior problem in school, engaging in many fights After a series of misdemeanors he was committed to a reform school He never held a job more than a few weeks He was never self supporting In the Army he accomplished no more than he did in civilian life He would leave his duties and go to his barracks to lie down He left the post without a pass He received company punishments and court-martial He had been a drag on the training program from the time he was inducted Once while he was guarding prisoners he left to get a drink of water He thought it to be "all right because there was another guard at the end of the detail" This was the first occasion of referral to a psychiatrist for examination

A private aged 24 with two years and eight months service was referred because of neglect of his personal appearance and "senseless behavior" He would not shave unless he was ordered He was reported to be discourteous, impudent and insubordinate He became drunk "on a few beers" and had to be assisted to his barracks He never received a company punishment or court martial The family history revealed pathologic heritage. A maternal aunt was psychotic. His mother was epileptic His father was a chronic alcoholic addict, and all his father's relatives were vagrants He had

always been a problem He was ill tempered, flew into rages and resented correction At the same time he was timid among other boys, afraid to go out at night and always carried a knife He never held a job because he could not get along with his boss He was never able to support himself and yet he married three times As a soldier he was stubborn, disregarded orders and wilfully made trivial mistakes "to make the serg-ass sore' When he found himself about to get into trouble he went on sick call with weak eyes, painful feet and cramps He brought his wife to one of the dances at the Officers' Club to 'prove to her that the USO dances were better" During interview he was indifferent He tapped on the desk started to light a cigaret and wanted to chew gum He asked "What are you, a nut doctor? I'm crazy as Hell Say, could I get out if I went nuts?"

This soldier was constitutionally psychopathic It is interesting to note that, according to his own story, he enjoyed more independence and personal satisfaction in the military service than he did in civilian life His only complaint was that his wife needed more money He had never previously been considered a case for psychiatric study

In the asocial class of psychopath there is a conspicuous lack of consideration for the feelings and rights of others These men are irritable, arrogant and dishonest

A private aged 20, with two years' service, was referred from the stockade where he was awaiting trial for absence without official leave. He had a record of frequent such offenses He had two courts martial for assault The soldier came of good sturdy lineage of Southwest pioneers His father was a farmer of even disposition but firm and stoic in morals He was reared in a family atmosphere of inspiring devotion, which was reflected in the behavior of all the other five children He was nervous restless and ill tempered His mother told him that he was more trouble than all the other children put together He had never been ill in his life At 13 he viciously attacked his teacher He then ran away from home and roamed over the country He learned to drink among vagrants At 15 he had a bar room brawl and beat up three grown men He was sentenced to six months in a reform school At the end of thirty days he was released on the provision that his parents remove him from the state He returned in a few weeks He was arrested six times for drunkenness Three days after he was inducted he was absent without official leave After his last court-martial he was released by transfer to a staging area He received a delay en route, overstayed his leave and landed in the guard house. In the course of the psychiatric interview it was revealed that he had never been able to get along with his father although he admitted that he was always treated kindly He was childishly attached to his mother He hated to see his father come home from work He would not admit any ill feeling but he recalled that he always wanted to leave when his father was around the house

In his reaction this soldier represents an arrested emotional growth, remaining at a mother fixation level, with resistance against identification with the father Subsequently every disciplinarian became a father image which he freely attacked He had never previously been referred for psychiatric study

Mental deficiency is a form of constitutional psychopathic state in which the principal handicap for the performance of duty is inaptitude Screening at the induction centers eliminates the seriously defective Illiteracy is not itself indicative of mental deficiency There were twelve illiterate soldiers at this camp Three were seriously feebleminded, assigned to guard duty

A private aged 23, with two years and six months' service, was referred because of fainting spells Two sisters had epilepsy One was confined as psychotic to a state institution The soldier had never attended school His only job was railroad track repair At 16 he began having attacks of unconsciousness On one occasion he fell and rolled down an embankment, receiving cuts and bruises He stated that he told his sergeant that he had spells but the "sergeant said that he had spells too" He was court martialed at his first post for having whisky in his possession on guard duty He explained, 'The guy that was coming on duty next told me to take it so it would be there when he came on" Another time he was "chasing" prisoners past headquarters and failed to salute the general 'He was busy talking I did not think he saw me' He stated that at his last prisoner of war camp he did guard duty every other day and "stayed drunk all the time" He had spells about three times a year This was his first hospital admission

This type of behavior is typical of mental deficiency The case is complicated by epilepsy His lack of responsibility, indifference to correction and untrainability are in line with his level of intelligence This case typifies the career of ten mentally defective soldiers referred for examination because of noneffectiveness One mental defective has been carried along for four years with repeated reassignments from latrine and orderly room work to guard duty who is illiterate, has a disabling stutter and cannot urinate in the presence of other soldiers

Chronic alcoholism was present in many of the psychopathic states It is an expression of neurotic character or mental disease In Army procedure it is not so considered The term is used exclusively as an indictment in routine disciplinary measures In this one field of maladjustment commanding officers found frequent use for psychiatrists They ordered a clearance of nervous disability and accordingly an indictment against any soldier whom they wanted to dispose of It then became the psychiatrist's duty to name the soldier a psychopath As one psychiatrist phrased it, 'In a 368 disposition state only the worst you can find out about the man's character, even if you have to exaggerate Get him out" The resulting discharge without honor was of little concern One soldier returning from combat overseas with a good conduct citation and a rating of excellent character at his previous assignments was eliminated in this manner On the other hand a soldier could be admitted to the hospital in an alcoholic stupor with delirium tremens and be discharged to duty in five days as an anxiety state with no mention of alcoholism in his diagnosis This was not a solitary outpost incident This is recorded in one of the largest West Coast general hospitals Psychiatry served no purpose as a fact finding instrument

"Goldbrick" refers to malingerers who feign illness consciously in order to evade duty The wide disparity between the popular use of the epithet and the actual diagnosis of malingering invalidates its application Practically all the soldiers included in this study were "goldbricks" The War Department establishes clear specifications for the indictment of malingerers Psychiatric study reveals that in most instances in which there is conscious intent to avoid duty by pretending illness there is also present a serious personality distortion which obscures, in pathologic significance, the conscious intent to deceive Besides, by War Department regulation a psychiatric opinion to the effect that a soldier is consciously exaggerating his symptoms automatically prescribes that soldier to a court-martial Psychiatrists followed orders, but they shied from the actual initiation of a purely penalizing procedure They labeled the soldier anxiety state instead and the real

malingerers gladly accepted the nomination In this manner again a fundamental psychiatric principle, namely that of developing insight and the capacity for self appraisal, was defeated by Army psychiatric procedure

Psychoses are rarely seen among the enlisted men at a prisoner of war camp The reason can only be speculated They may have been screened out before they reached this level of assignment by many periods of hospitalizations and board appearances It might be said that the only condition which militated against assignment to a prisoner of war camp was insanity of the type that a staff sergeant could recognize

A private aged 33, with three years' service, was referred because he had been acting queerly in the past few days He was found singing at the top of his voice on guard duty Another time he had walked away from detail into a private home, where he was found drinking coffee Off duty he sat in his barracks biting his fingernails, with a blank stare The soldier was an artist, and prior to enlistment he taught portrait painting at a fashion academy He entered the service because he wanted to assist at camouflage. He failed to graduate from the officers' candidate school He had spent five weeks in the locked ward of a station hospital two years previously When he was discharged from the hospital he was assigned to a prisoner of war camp On psychiatric interview he presented a tense stare with the appearance of deep preoccupation He became self conscious when his attention was held He quickly jerked his hand from his mouth when he was questioned about his nail biting He explained that he was afraid that some one would think that he was insane He complained "I can't think things out because I always hear some one saying what I am thinking" This soldier for two years mechanically performed his duties He possessed no independence in feeling or thinking He was not readily accessible, and he did not seek medical aid He never voluntarily reported for sick call the entire three years that he was in the Army He had an advanced dementia precox reaction He had been assigned to the camp as another attempt at rehabilitation

If the psychosis is not sensationally conspicuous it passes unnoticed because the decline in mentality is obscured in the course of numerous transfers and short-term assignments In this case even a record of confinement to a locked ward failed to fix attention on the psychiatric liability of reassignment The psychiatrist had not overlooked the problem

SUMMARY

In the evaluation of the mental disorders at the prisoner of war camp attention was given to the soldier's account of his prior experiences, his reactions to his present situation and his personal disqualifications for duty The digressions in the reactions toward such experiences as are common to all soldiers determine their pathologic character Hysteria conversion states were almost endemic Morale was low The restrictions which were applied to the prisoners radiated over the activities of the men who guarded them By reason of assignment to a prisoner camp the enlisted men came to include themselves in the same low caste which enshrouded the prisoners The assignment was a fertile field for the exaggeration of mental disease, which, ironically enough, seemed to be, under current regulations, the essential qualification for just this assignment

The personnel represented the seepage from all organizations in the Army, largely consisting of soldiers who had been rejected by every other branch of the service They had a career of many periods of hospitalizations and many reassignments caused by repeated applications against requisitions received Thirty per cent of the enlisted strength of the unit were unfit for service of any kind Psychopathic reactions predominated Among the 380 men who were serious psychiatric casualties only 15 had received more than one interview with a psychiatrist Two hundred and twelve had never previously been referred to a psychiatrist since the time they were inducted

This exposition of failure on the part of the psychiatric administrative branch of the Army to organize and employ available psychiatric skills is presented with a view of explaining the universal dissatisfaction with psychiatric results in the zone of the interior during the war The gigantic rehabilitation load facing the country today stands evidence Psychiatry is now applying its resources in civilian life in a manner to compensate for its forced ineffectiveness in the Army

223 North Willomet Avenue, Dallas 11

## NITROGEN MUSTARDS IN THE TREATMENT OF NEOPLASTIC DISEASE

Official Statement

CORNELIUS P RHOADS M D
Chairman Committee on Growth of the National Research Council
New York

The chemical and biologic properties of the nitrogen mustards have recently been summarized [1] Through the cooperation of the Chemical Warfare Service, United States Army, the National Defense Research Committee and the Committee on Medical Research of the Office of Scientific Research and Development, the National Research Council and with aid from the Jane Coffin Childs Memorial Fund for Medical Research, studies were undertaken to ascertain the value of the clinical use of the nitrogen mustards in the treatment of neoplastic disease *Tris*(β-chloroethyl)amine hydrochloride and methyl-*bis*(β-chloroethyl)amine hydrochloride are the only compounds of the nitrogen mustard series thus far investigated in this association The studies were begun under a contract between the Office of Scientific Research and Development and Yale University, and authority to carry out the work was subsequently given by the Committee on Atypical Growth of the National Research Council to the University of Chicago Medical School, the University of Utah Medical School and Memorial Hospital, New York Thus far, a total of 160 patients suffering from neoplastic disease (chiefly lymphoma, leukemia and allied conditions) has been treated with these agents Detailed clinical reports of the therapeutic results obtained are now in process of publication [2]

The present status of methyl *bis*(β chloroethyl) amine hydrochloride and *tris*(β chloroethyl) amine hydrochloride (nitrogen mustards) in the treatment of neoplastic disease

1 Gilman A, and Philips F S The Biological Actions and Therapeutic Applications of the β-Chloroethyl Amines and Sulfides Science **103**: 409 415 (April 5) 1946

2 Goodman L S Wintrobe M M Dameshek W Goodman M J Gilman A and McLennan M T Clinical Experiences with the Use of Methyl-*bis* (β-Chloroethyl) Amine Hydrochloride and *Tris* (β Chloroethyl) Amine Hydrochloride (Nitrogen Mustards) in the Therapy of Hodgkin s Disease Lymphosarcoma Leukemia and Certain Allied and Miscellaneous Disorders, to be published Jacobson L O Spurr C L. Gurman Barron, E S Smith T Lushbaugh C, and Dick G F Studies on the Effect of Methyl *bis*(β-Chloroethyl)Amine Hydrochloride (DEMA) on Malignant Disease of the Hemopoietic System to be published Karnofsky, D A Craver, L F Rhoads C P and Abels, J C An Evaluation of Methyl *bis*(β Chloroethyl)Amine Hydrochloride and *Tris*(β-Chloroethyl)Amine Hydrochloride (Nitrogen Mustards) in the Treatment of Lymphomas Leukemia and Allied Diseases to be published

The present therapeutic status of the nitrogen mustards is herewith summarized and is presented for the information of the medical profession The agents are available for experimental purposes only through the Committee on Growth National Research Council, in cooperation with the Chemical Warfare Service

1 Methyl-*bis*(β-chloroethyl)amine hydrochloride has been used more extensively than *tris*(β-chloroethyl) amine hydrochloride On the basis of this experience the methyl-*bis* compound seems to be preferable, as venous thrombosis is not so likely to follow at the injection site

2 The dosage of the methyl-*bis* compound recommended as a single course is 0 1 mg per kilogram intravenously on four successive days (a total of 0 4 mg per kilogram) This recommendation is based on experience in which larger total doses given as a single course have proved to be hazardous

3 The toxic effects of methyl-*bis*(β-chloroethyl) amine hydrochloride are (*a*) severe local inflammatory reaction if the material escapes into the tissues at the site of the intravenous injection, (*b*) varying degrees of nausea and vomiting occurring one to eight hours after a single dose and continuing for three to twenty-four hours, associated less constantly with anorexia and weight loss, weakness and headaches and (*c*) damage to the blood forming organs The alterations in the peripheral blood which may result from a course of treatment follow in the order of their frequency 1 Leukopenia (lymphopenia followed by neutropenia) may be moderate to severe and may persist for one month or more Symptoms due to agranulocytosis have rarely been observed 2 Normocytic anemia similar to that which may follow conventional x-ray therapy is not infrequent 3 Bleeding tendencies, at times accompanied by thrombocytopenia, may occur They include bleeding from the gums and rectum and small purpuric spots, but such findings are rare after the ordinary course of treatment

4 The following general comments may be made on the therapeutic value of the nitrogen mustards thus far examined for the treatment of the neoplastic diseases mentioned in this report

(*a*) They are not a cure for such neoplastic diseases as have been studied.

(*b*) The nitrogen mustards in large enough doses are injurious to many types of tissue, they appear to exert their greatest effects on rapidly growing tissue, presumably either normal or neoplastic.

(*c*) Their predominant toxicologic effect is damage to normal hemopoietic function The extent of this injury is the limiting factor in determining the amount that can be given to an individual In some cases the hemopoietic injury exceeds the effect on the tumor

(*d*) The tumor regressions induced by these compounds (even with maximum dosages) are temporary, with maximal persistence rarely extending beyond several months

(*e*) The effects of the nitrogen mustards are in many respects similar to those of x-rays It should be noted, however, that the great advantage of radiation therapy is that it can be given locally

5 *Treatment of Hodgkin's Disease*—In patients with early and slowly progressing disease, regression of lymph nodes and symptomatic remissions lasting from four to eight months may follow a course of treatment with methyl-*bis*(β-chloroethyl)amine hydrochloride. Usually, however, improvement, as evidenced by disappearance of fever, feeling of well being and weight gain, continues only from two weeks to a few months and is followed by fairly rapid relapse The relapses may respond to further therapy, but the remissions induced are progressively shorter in duration Decreased fever and general symptomatic improvement have been the most constant and conspicuous effect of this compound

Cases responding favorably show regression of lymph nodes and occasionally decrease in size of the liver and spleen, but in the more advanced or active forms of the disease such regressions are less frequent and if they occur are short lived The more rapidly progressive the disease, the shorter the clinical remission

Large masses of matted lymph nodes, invasion of the disease beyond the lymph nodes, and bone lesions, in general, may not show a favorable response, even though general symptomatic improvement including relief from pain due to bone involvement may occur The anemia of Hodgkin's disease is sometimes improved Skin lesions due to Hodgkin's disease may or may not be affected, and pruritus is only slightly and inconstantly relieved

In the late stages of the disease and when x-ray treatment is without effect, methyl-*bis*(β-chloroethyl) amine hydrochloride seldom produces a prolonged improvement but has in some instances significantly interrupted the progress of the disease

In the early, slowly progressive case with localized disease, x-rays are still the preferred method of treatment If the disease becomes widespread and systemic effects are present, such as fever, anorexia, weakness and anemia, treatment of the localized lesions with x-rays may not produce a satisfactory systemic remission In such cases the methyl-*bis* compound has proved to be of considerable use in causing temporary symptomatic remissions, and the treatment may be repeated as long and as often as the hematologic status permits

6 *Treatment of Lymphosarcoma*—The highly aggressive, rapidly growing type of lymphosarcoma usually has not been significantly affected by maximum doses of the methyl-*bis* compound In such disease x-ray therapy likewise has proved not to be of much value

The type of lymphosarcoma characterized by normal or elevated white blood cell count, consisting chiefly of lymphocytes, and with enlarged lymph nodes diagnosed histologically as lymphosarcoma, may respond satisfactorily to the methyl-*bis* compounds, as evidenced by a prolonged depression of the white blood cell count and regression of enlarged nodes There is little doubt that radiation therapy is also effective in cases of this type

7 *Treatment of Giant Follicle Lymphoma (Brill-Symmer's Disease)*—The methyl-*bis* compound may produce a therapeutic effect in early or relatively benign cases, x-ray therapy is also effective and its use is to be preferred

8 *Treatment of Lymphatic Leukemia*—The methyl-*bis* compound does not appear to be of value in the treatment of acute lymphoblastic leukemia In the slowly progressing and chronic forms it will lower the white blood cell count and decrease the size of the lymph nodes with somewhat less effect on an enlarged liver and spleen, but it may cause a fall in hemoglobin levels Far advanced cases with severe anemia do not respond favorably, and the use of the methyl-*bis* compound in this situation is not recommended

In general, slowly progressing forms of lymphatic leukemia respond favorably to cautiously administered methyl-*bis* compound as well as to x-rays, but the former because of its toxicity is regarded as unnecessarily hazardous for use in early stages

9 *The Treatment of Myeloblastic Leukemia*—The methyl-*bis* compound appears to be of no value in the treatment of acute myeloblastic leukemia In the chronic forms of the disease either x-rays or the methyl-*bis* compound are usually useful When a greatly enlarged spleen is present, local irradiation seems preferable

10 *Miscellaneous Types of Cancer*—The experimental use of the nitrogen mustards in the treatment of any active, extensive, neoplastic process is probably justified if other methods of control have proved to be without benefit Preliminary and limited trials in melanosarcoma, metastatic mammary and cervical carcinoma multiple myeloma and sympathicoblastoma have not been encouraging A limited but favorable experience with the methyl-*bis* compound in inducing temporary symptomatic remissions in anaplastic carcinoma of the lung has encouraged further trials in this type of disease The clinical response of polycythemia rubra vera to the methyl-*bis* compound appears to be comparable to results obtained with radioactive phosphorus

### FUTURE WORK

It is planned to continue laboratory and clinical work with these agents in the hope that certain types of cancer may be found to be unusually sensitive to the action of the nitrogen mustards that a compound allied to the methyl-*bis* compound with a more selective destructive action on cancer tissue may be discovered, and that techniques for improving the therapeutic effectiveness of the nitrogen mustards may be developed The value of combining nitrogen mustard with other types of cancer therapy will also be investigated

Methyl-*bis*(β-chloroethyl)amine hydrochloride will be distributed free to qualified institutions for investigational purposes on application to the Committee on Growth National Research Council, Washington, D C

The members of the Committee on Growth are

Cornelius P Rhoads, Chairman, Memorial Hospital, New York
Florence R Sabin Secretary, the Rockefeller Institute for Medical Research, New York
A R Dochez, College of Physicians and Surgeons, New York
A Baird Hastings, Harvard University Medical School, Boston
Charles B Huggins, University of Chicago Medical School, Chicago
Donald F Jones, the Connecticut Agricultural Experiment Station, New Haven
C. C Little, the Roscoe B Jackson Memorial Laboratory, Bar Harbor, Maine
Carl R Moore, University of Chicago, Chicago
John Morton, University of Rochester School of Medicine and Dentistry, Rochester, N Y
James B Murphy, the Rockefeller Institute for Medical Research, New York
Eugene P Pendergrass, the University of Pennsylvania Medical School, Philadelphia
Howard C Taylor Jr, New York University Medical College, New York
Merle A Tuve, Carnegie Institution of Washington, Washington, D C
M C Winternitz, Yale University School of Medicine, New Haven, Conn

## PULMONARY CALCIFICATION AND SENSITIVITY TO HISTOPLASMIN, TUBERCULIN AND HAPLOSPORANGIN

AMOS CHRISTIE, M D and J C. PETERSON, M D
Nashville, Tenn

In a recent paper we[1] reviewed the problem of calcification occurring in the chests of persons who are insensitive to tuberculin At that time we outlined the clinical and epidemiologic evidence for suspecting a benign form of histoplasmosis or some other biologically related infection to be the cause of this phenomenon

These studies have been undertaken in order to throw light on certain clinical observations that there exists in many sections of the United States a prevalence of pulmonary calcification far in excess of that which can be explained on the basis of tuberculosis as revealed by tuberculin cutaneous testing In the past twenty years there has been an increasing interest in this subject and there have appeared a number of papers which show a consistent discrepancy between the tuberculin tests and the prevalence of pulmonary calcification In these papers 27 to 83 per cent of young persons were found to have pulmonary calcification, a phenomenon generally accepted as indicative of tuberculosis yet in each study one half or less of the patients were found to have positive tuberculin tests These reports were the outcome of studies conducted with few exceptions on young people living in or adjacent to the western Appalachian plateau or the eastern slope of the Mississippi River basin and the bordering states of the western slope of the Mississippi River basin"

While anergy or loss of sensitivity to tuberculin from complete healing of the tuberculous process may be an acceptable explanation in some cases we do not believe that this can explain the decided prevalence of pulmonary calcification in this area We were challenged to investigate other reasons which might explain this phenomenon

Cox and Smith,[3] Aronson Saylor and Parr[4] and others have shown that coccidioidomycosis is in certain areas of the West responsible for a primary complex which goes on to calcification The suggestion of Smith[5] that histoplasmosis occurs most frequently in the area where pulmonary calcification is high in those whose reaction to tuberculin is negative seemed to offer a good working hypothesis

We accordingly began to perform cutaneous tests with extracts of Histoplasma capsulatum and to look for nonfatal examples of the infection The fungus H capsulatum had been reported to cause acute and subacute granulomatous lesions progressing with great regularity to a fatal termination Our studies have enabled us to observe examples of a benign form of histoplasmosis and to discover that many people react to extracts of the fungus A remarkable correlation

From the Department of Pediatrics Vanderbilt University School of Medicine

1 Christie Amos and Peterson J C Pulmonary Calcification in Negative Reactors to Tuberculin Am J Pub Health 35:1131 1945

2 A nearly complete bibliography of these studies is to be found in footnote 1

3 Cox Alvin J and Smith Charles Edward Arrested Pulmonary Coccidioidal Granuloma Arch Path 27:717 (April) 1939

4 Aronson Joseph D Saylor Robert M and Parr Erma L Relationship of Coccidioidomycosis to Calcified Pulmonary Nodules Arch Path 34:51 (July) 1942

5 Smith Charles E. Coccidioidomycosis M Clin North America 27 790 1943

between these observations and the presence of nontuberculous pulmonary calcification has been shown [6]

It is our purpose in this paper to elaborate this thesis further by presenting the results of cutaneous tests and roentgenographic studies in another group of children

## MATERIAL AND METHODS OF STUDY

In this study children from an institution for child care were examined The home, a boarding school, is located in Davidson County Tenn, on the outskirts of Nashville in rolling farm country From routine observations made over a period of several years in our clinic we knew that in the group there were many who had pulmonary calcifications but who did not react to tuberculin The stability of the population enabled us to make a nearly complete study of the whole group, and the fact that the children were from various sections of the state of Tennessee enabled us to make observations on the intrastate geographic distribution of the various phenomena observed This feature of these observations will be reported in a subsequent paper

The age distribution of this group is shown in table 2 The sex distribution is approximately equal The children all attend school on the premises

Roentgenograms of the chests were made with portable equipment on 4 by 5 inch stereoscopic films They were read for the presence or absence of calcification by Dr E F Harrison of the Division of Tuberculosis Control, Tennessee Department of Public Health

All children included in the studies were given intradermal tests with 0 1 mg of old tuberculin, a preparation of histoplasmin [7] and haplosporangin,[8] an antigen derived from Haplosporangium parvum, a fungus isolated by Emmons and Ashburn [9] and shown by them to be related to granulomatous lesions of the lungs of certain rodents

The interpretations of the cutaneous tests were made as follows They were read at seventy-two hours Edema surrounded by a large area of erythema was present in all positive reactions, and an area of induration for more than 5 mm around the site of inoculation was present Reactions were called negative if no induration was present It may be stated that very few equivocal reactions were encountered

The roentgenographic studies and the cutaneous testing were carried out independently to preclude any possible basis for bias

## RESULTS

Three hundred and forty-four children were tested for sensitivity to tuberculin, histoplasmin and haplosporangin, and roentgenograms of their chests were made

Seventy-four (21 5 per cent) reacted to 0 1 mg of tuberculin One hundred and eighty-three (53 2 per cent) had intrathoracic shadows interpreted as calcifications Two hundred and fifty-two (73 2 per cent) reacted to histoplasmin None of the children reacted to haplosporangin These results are shown in table 1, from which it may be seen that in this study, as in our previous report, there is a much greater incidence of pulmonary calcification than of sensitivity to tuberculin More children had calcifications in the absence of sensitivity to tuberculin than had it in conjunction with sensitivity to tuberculin There were more children sensitive to histoplasmin than there were children who had calcifications

It is of interest to point out that tests with a second fungus extract haplosporangin, failed to elicit a single clearly positive reaction Although there were in the group four tests with this antigen which showed slight erythema less than 5 mm in diameter, none showed induration

If the occurrence of calcified pulmonary nodules and the sensitivity to tuberculin and histoplasmin are shown by age groups it may be seen that in the youngest group represented, aged 5 to 9 years, only 1 of the 27 was sensitive to tuberculin, while 13, or almost 50 per cent, had calcifications and 19, or 68 per cent, were sensitive to histoplasmin In the older age groups

TABLE 1—*The Occurrence by Number and Percentage of Sensitivity to Tuberculin, Histoplasmin and Haplosporangin and the Presence of Intrathoracic Calcifications in Tennessee Children*

| Number Examined | Tuberculin Positive | | Histoplasmin Positive | | Haplosporangin Positive | | Intrathoracic Calcifications | |
|---|---|---|---|---|---|---|---|---|
| | No | % | No | % | No | % | No | % |
| 344 | 74 | 21.5 | 252 | 73.2 | 0 | 0 0 | 183 | 53 2 |

TABLE 2—*Number and Percentage of Tennessee Children with Calcifications Their Reactions to Histoplasmin and to Tuberculin by Age Groups*

| Age | Number in Age Group | Tuberculin Positive | | Histoplasmin Positive | | Calcifications | |
|---|---|---|---|---|---|---|---|
| | | No | % | No | % | No | % |
| Total | 344 | 74 | 21 4 | 252 | 73 2 | 183 | 53 4 |
| Under 5 yrs | 0 | 0 | | 0 | | 0 | |
| 5- 9 yrs | 27 | 1 | 3 6 | 19 | 67 0 | 13 | 46.5 |
| 10-14 yrs | 195 | 38 | 19.5 | 120 | 61 8 | 100 | 51.3 |
| 15-19 yrs | 122 | 35 | 27 7 | 107 | 87 5 | 70 | 57.3 |

this general relationship was maintained, but the differential values were not as striking These observations are shown in table 2 The age of appearance of calcification is intermediate between the age observed for the development of sensitivity to tuberculin and that observed for the development of sensitivity to histoplasmin It is obvious from this as was shown in our previous study, that the age at which sensitivity to histoplasmin develops and that at which calcification develops are in such relationship that they might be directly associated The age at which sensitivity to tuberculin appears lags so far behind that for the deposition of calcium that it would not seem to have the same degree of association

Table 3 reveals the number and percentage of children with calcifications according to their reaction to tuberculin and histoplasmin This table shows that 42 (70 per cent) of 60 children who reacted to both histoplasmin and tuberculin had pulmonary calcification One hundred and twenty (62 5 per cent) of 192 children who reacted only to histoplasmin were found to have calcifications in their chests Seven (50 per cent) of the 14 who reacted only to tuberculin had calcifications in their chests These figures suggest that pulmonary calcification occurs less frequently in relation to sen-

6 Palmer Carroll E Nontuberculous Pulmonary Calcifications and Sensitivity to Histoplasmin Pub Health Rep **60**: 513 1945 Christie and Peterson [1]

7 The histoplasmin used in this study was the same lot as that used in our previous study

8 This antigen was supplied by Dr Charles E Smith Half of the group received 0 1 cc of 1 1 000 dilution and the other half received 0 1 cc of 1 100 dilution

9 Emmons C W and Ashburn L L The Isolation of Haplosporangium Parvum N Sp and Coccidioides Immitis from Wild Rodents Their Relationship to Coccidioidomycosis Pub Health Rep **57** 1715 1942

sitivity to tuberculin than in relation to sensitivity to histoplasmin That calcifications should occur more commonly when the child is sensitive to both antigens should be expected and is borne out by table 3

Table 4 reveals that 14 (17 9 per cent) of 78 children who did not react to either antigen had calcifications in their chests This is entirely consistent with our previous study A review of the roentgenograms of these 14 children showed that only 2 had massive conglomerate or multiple calcifications The other 12 had calcifications which were borderline and could very well have been called negative They showed small areas of increased density concerning which it was extremely difficult to be certain as to whether they were vessels, calcifications or small areas of other confluent densities A few of these children might have given a positive reaction to 1 mg of old tuberculin Anergy or loss of sensitivity to either or to both antigens is probably not so uncommon but that it could explain these few exceptions One must also consider the possibility that there are other infections in this area which may lead to pulmonary calcification

## COMMENT

This study, in a manner strikingly similar to the one previously reported shows a remarkable relationship between sensitivity to histoplasmin and the development of pulmonary calcification The early development of sensitivity to histoplasmin followed by the development of the calcification at a rate much greater than the age specific rate of sensitivity to tuberculin suggests that most of the lesions are more likely to be related to the development of sensitivity to histoplasmin than to be associated with tuberculosis It is extremely unlikely that these clinical manifestations are limited to the Tennessee area where they were observed, indeed, the studies of Palmer and Furcolow [10] suggest a broad geographic incidence, since they report similar conditions commonly present in various sections of the Mississippi valley and less frequently in most sections of the United States

Present concepts of the primary complex or first infection tuberculosis in its relation to pulmonary calcification need reevaluation The same may be true of tuberculosis due to reinfection The significance of these studies in relation to thousands of veterans in whom pulmonary calcifications have developed while they were in the armed forces needs study Present day concepts based on mass roentgenographic studies need to be redefined The significance of the observations and their importance to the clinician, public health officer, roentgenologist and pathologist we believe to be obvious

TABLE 3.—*Number and Percentage of Tennessee Children with Calcifications According to Their Reaction to Tuberculin and to Histoplasmin*

| Type of Reaction | | No | Per Cent of Whole Group | With Calcifications: No | With Calcifications: Per Cent of Reaction Group |
|---|---|---|---|---|---|
| Total | | 344 | | 183 | 53 2 |
| Tuberculin + | Histoplasmin + | 69 | 17 4 | 42 | 70 0 |
| Tuberculin + | Histoplasmin — | 14 | 4 1 | 7 | 50 0 |
| Tuberculin — | Histoplasmin + | 192 | 55.8 | 120 | 62.5 |
| Tuberculin — | Histoplasmin — | 78 | 22 6 | 14 | 17 9 |

10 Furcolow Michael L, and Palmer Carroll E The Geographic Distributions of Sensitivity to *Histoplasmin* read before the Southern Medical Society at Cincinnati in November 1945

The observations herein reported confirm in part those of Emmons and Olson [11] concerning the occurrence of cross sensitivity in animals infected with Haplosporangium parvum and Histoplasma capsulatum His studies showed that sensitivity to haplosporangin was absent in animals infected with Histoplasma capsulatum, Blastomyces dermatitidis and Coccidioides immitis Our studies show that individuals reacting to histoplasmin and possibly infected with this organism do not react to haplosporangin This would also allow us to state that infection with Haplosporangium parvum plays no significant part in the development of nontuberculous pulmonary calcification in Tennessee

TABLE 4.—*Histoplasmin and Tuberculin Reactions in 183 Children with Pulmonary Calcification*

| Pulmonary Calcification and | | Number with Calcification | Percentage of Whole Group |
|---|---|---|---|
| Histoplasmin + | Tuberculin + | 42 | 23 0 |
| Histoplasmin + | Tuberculin — | 120 | 65 6 |
| Subtotal histoplasmin + | | 162 | 88 6 |
| Tuberculin + | Histoplasmin + | 42 | 23 0 |
| Tuberculin + | Histoplasmin — | 7 | 3 8 |
| Subtotal tuberculin + | | 49 | 26 3 |
| Histoplasmin — | Tuberculin — | 14* | 7 6 |

* Any equivocal or doubtful calcification has been recorded as positive

## CONCLUSIONS

1 A study of the roentgenograms of their chests and the cutaneous sensitivity to histoplasmin and to tuberculin of 344 Tennessee children and young adults indicates the existence of a relationship between sensitivity to histoplasmin and pulmonary calcification

2 The absence of cutaneous sensitivity to haplosporangin in 344 subjects, 53 per cent of whom were found to have pulmonary calcifications, would seem to preclude the possibility that infection with Haplosporangium parvum has a significant bearing on the development of pulmonary calcifications in residents of Tennessee

11 Emmons C W and Olson B J Studies of the Role of Fungi in Pulmonary Diseases I Cross Reactions of Histoplasmin, Pub Health Rep **60**: 1383, 1945

**The Roman Hospital System**—The legend of the origin of the first hospital in Rome has often been told Plague or some other pestilence having broken out in the city in 293 B C., a mission was sent to seek help from Epidaurus A sacred serpent was entrusted with the task of healing, and as the ship sailed up the Tiber the serpent swan ashore and landed on the island of St. Bartholomew The plague was stayed, and on the island, which is shaped like a ship and bears a serpent and staff carved on the "prow" there was established the hospital from which many years later (A D 1123), came Rahere the monk to found St Bartholomew's Hospital in London. To the island hospital of Rome in the days of the republic men sent their sick slaves so as to avoid the trouble of caring for them at home. Thus it became a haven for the sick poor Later, in the first and second centuries A D, there is mentioned by various writers the existence of valetudinaria which appear to have been private hospitals or "nursing homes" They may have developed eventually into public institutions It was only to be expected that in the well organized Roman army there should be hospital accommodation for sick and wounded soldiers These were established at various strategic points, and the sites of several of them have been excavated. One of the most perfect examples is at Novaesium, near Düsseldorf It dates from about A D 100 and, constructed on the corridor system, is strangely modern—Guthrie, Douglas A History of Medicine, Philadelphia, J B Lippincott Company, *1946*

# AMPHETAMINE (BENZEDRINE) SULFATE FOR ACUTE BARBITURATE POISONING

A. W FREIREICH, M D
and
J W LANDSBERG M D
Hempstead N Y

The treatment of coma resulting from barbiturate poisoning still taxes the therapeutic skill of the physician Numerous drugs have been tried in the past with variable success Among the more popular may be mentioned ephedrine, nikethamide, strychnine and brucine. Picrotoxin has received extensive trial in the past few years [1] with many favorable results yet leaves something to be desired in the treatment of the deeply comatose patient In our experience, when the quantity of barbiturate ingested has been large, particularly when the more rapidly acting derivatives are used, the amount of picrotoxin required to counteract it is so great that convulsions appear, necessitating the intravenous injection of barbiturates to control them The present status of therapy with picrotoxin can best be summed up in the report of the Council on Pharmacy and Chemistry [2] "The details of events in the course of animal experiments show that it is necessary to poison the animal with picrotoxin in order to elicit the antagonism What results when the two drugs are given together is not a direct reversal of the depressed state but a combined form of poisoning by picrotoxin and the barbiturate with a mixture of depression and stimulation, from which within a given range of doses the animal ultimately recovers"

Amphetamine (benzedrine) sulfate as a drug useful in counteracting poisoning by the barbiturates was first suggested by Myerson [3] In numerous carefully controlled studies, he and his associates demonstrated the reciprocal pharmacologic effects of amphetamine sulfate and the barbiturates [4] Reifenstein and Davidoff [5] have demonstrated that the depth and duration of narcosis with soluble amytal were affected by the drug, as in every case the narcosis was completely counteracted by the injection of 20 or 30 mg of amphetamine sulfate intravenously, and in 5 instances by only 10 mg

The typical case of poisoning by barbiturates presents a picture of extreme depression of the central nervous system with coma, shallow respiration and low blood pressure falling rapidly to shock levels [6] The effect of the administration of amphetamine is twofold sympathomimetic and wakeful-psychologic [3] The sympathomimetic action is demonstrated by a rise in blood pressure, an increase in the rate and depth of the respiration and an increase in the pulse rate In its wakeful-psychologic effects amphetamine specifically counteracts the soporific action of the barbiturates Pharmacologically it would seem that amphetamine is a suitable antidote in barbiturate intoxication

An attempt to evaluate its effectiveness was made by us on patients admitted routinely to Meadowbrook Hospital (Nassau County, N Y) in coma from an overdosage of barbiturates taken with suicidal intent The patients were treated as admitted, no effort at selection being made To date we have treated 14 patients The diagnosis of barbiturate poisoning was made by physical examination and from history supplied by relatives and confirmed by demonstration of the drug in the urine and in the gastric contents when lavage was performed

## METHOD OF STUDY

As soon as the patient was admitted treatment with intravenous injections of amphetamine sulfate was instituted [7] We used a preparation containing 10 mg of amphetamine sulfate in 1 cc of isotonic solution of sodium chloride A complete examination was made of the pupillary reflexes, deep tendon reflexes, pulse rate, respiratory rate and blood pressure before the injection, and then the contents of one ampule (10 mg) were injected intravenously without dilution (Later we found we could use larger doses with safety and started treatment in some instances with injections of 40 mg of the undiluted drug and continued with 20 mg doses injected every thirty minutes) Observations of the blood pressure and pulse rate were made just before and after each injection An immediate rise in blood pressure with an increase in the rate and fulness of the pulse were obtained in all cases The pupils became dilated as a result of the sympathomimetic action and remained so during the course of the treatment Supportive treatment in the form of fluids given intravenously was used in some cases when dehydration was present Except in case 11, in which the supply of amphetamine sulfate was exhausted, no other drug was employed

## REPORT OF CASES

CASE 1—V B, a white woman aged 23, was admitted about ten hours after having taken thirty capsules (22½ grains, or 1 46 Gm) of pentobarbital sodium On admission the patient was comatose, with face flushed, lips dry and somewhat cyanotic and reflexes diminished to absent The blood pressure was 90/65, the pulse rate 80, the respiratory rate 12 and the temperature 98 F

The patient received four doses of 10 mg of amphetamine sulfate intravenously over a period of five hours After receiving a total of 40 mg she reacted to the spoken voice with a return of reflexes He recovery was uneventful

CASE 2—H V, a white woman aged 43, had taken ten capsules (15 grains, or 1 Gm) of seconal four hours before admission. On admission the patient was comatose, breathing stertorously, with pupils dilated and face flushed. The blood pressure was 130/80, the pulse rate 150, the respiratory rate 15 and the temperature 97 F Reflexes were absent

The patient received 20 mg of amphetamine sulfate intravenously every half hour After receiving a total of 90 mg the patient had reacted to the drug sufficiently to converse with her

From the medical service (Dr E C Jessup chief) of Meadowbrook Hospital Nassau County N Y

1 Dorsey, J F The Picrotoxin Treatment of Barbiturate Poisoning J Nerv & Ment Dis. 99: 367 (April) 1944 Anderson J P The Treatment of Barbiturate Intoxication with Special Reference to Picrotoxin A Report of Twenty Cases Ann Int Med 14: 2037 (May) 1941 France C J Barnett M and Yonkman F F Recovery from Eight Grains of Barbiturates in Attempted Suicide J A M A 122 173 (May 15) 1943 Bleckwenn W J and Masten M G The Antidotal Treatment of Barbiturate Intoxication Report of Treatment with Picrotoxin in Six Cases ibid 111: 504 (Aug 6) 1938 Kohn R Platt S S and Yaltman S Y The Picrotoxin Barbiturate Antagonism ibid. 111: 387 (July 30) 1938

2 Present Status of Picrotoxin in Poisoning by the Barbiturates report of the Council on Pharmacy and Chemistry J A M A 112 431 (Feb 4) 1939

3 Myerson Abraham The Rationale of Amphetamine (Benzedrine) Sulfate Therapy, Am J M Sc. 199: 729 (May) 1940

4 Myerson, Abraham The Reciprocal Pharmacologic Effects of Amphetamine (Benzedrine) Sulfate and the Barbiturates New England J Med 221: 561 (Oct 12) 1939 Myerson A Loman J Rinkel, M, and Lesses M F The Effect of Amphetamine (Benzedrine) Sulfate and Paredrine Hydrobromide on Sodium Amytal Narcosis, ibid 221: 1015 (Dec 28) 1939 Myerson A and Loman J Intravenous Drip Administration of Autonomic Drugs ibid 224: 412 (March 6) 1941

5 Reifenstein E C Jr and Davidoff, E. Intravenous Benzedrine Sulfate as an Antagonist to Intravenous Soluble Amytal Proc. Soc Exper Biol & Med 38: 181 (Feb) 1938

6 Goodman L. and Gilman A The Pharmacological Basis of Therapeutics, New York Macmillan Company, 1941, pp. 140-142

7 Amphetamine (benzedrine) sulfate supplied by Smith Kline & French Laboratories, Philadelphia.

husband. All reflexes had become present. The patient reacted after three hours and her recovery was uneventful

CASE 3—V B, a white woman aged 26, was admitted about four hours after having taken ten capsules (15 grains) of pentobarbital sodium The patient was comatose on admission, the pupils were contracted and did not respond to light The reflexes were completely absent, and the extremities were cold The blood pressure was 120/100, the pulse rate 68, the respiratory rate 24 and the temperature 99 F

The patient received four doses of 20 mg of amphetamine sulfate intravenously over a period of one and a half hours After receiving a total dosage of 80 mg the patient was reactive responding rationally to questions Her recovery was uneventful

CASE 4—V B, the person who on her first admission as patient 1 was treated for barbiturate poisoning, about twelve hours before her second admission had taken thirty capsules (22½ grains) of pentobarbital sodium She was comatose, with face flushed pupils dilated reflexes absent and extremities cold The blood pressure was 84/65 pulse rate 80 the respiratory rate 16 and the temperature 97 4 F Her general condition was worse than on the previous admission

The patient received a total of 320 mg of amphetamine sulfate intravenously over a period of seven and a half hours At the end of this time she was responsive Her recovery was uneventful

CASE 5—A M, a white man aged 38 was admitted to the hospital in a deep coma The pupils were constricted and did not respond to light. All the deep reflexes were diminished It was stated that he had taken twenty capsules of amytal (3 grains or 0 2 Gm each?) The temperature was 97 F, the pulse rate 68 and the respiratory rate 15

The patient received a total of 150 mg of amphetamine sulfate intravenously over a period of eight hours and except for a slight headache, his recovery was uneventful

CASE 6—E W a white woman aged 40, was stated to have taken 12 grains (0 78 Gm) of pentobarbital sodium about two hours before admission She was comatose The pupils were constricted and did not react to light. The deep reflexes were diminished The temperature was 98 F, the pulse rate 90, the respiratory rate 20 and the blood pressure 90/70

The patient was given one intravenous injection of 40 mg of amphetamine sulfate, and one-half hour later she was awake and responding to questions

CASE 7—L M a white woman aged 45, was stated to have taken 12 grains (0 78 Gm) of pentobarbital sodium (How long a time before admission the drug had been taken was not known) She also had a history of acute alcoholism On admission she was semicomatose. The deep reflexes were diminished, but the pupils reacted to light The temperature was 100.2 F, the pulse rate 89, the respiratory rate 20 and the blood pressure 128/78

She was given one intravenous injection of 20 mg of amphetamine sulfate, and one-half hour later she had responded sufficiently to speak, although her speech was somewhat slurred Her recovery was uneventful

CASE 8—V G, a white man aged 41, was said to have taken ten tablets of a barbiturate of unknown strength On admission he was comatose. The pupils were slightly dilated but reacted to light The temperature was 100 F the pulse rate 110, the respiratory rate 28 and the blood pressure 96/68

The patient received a total of 40 mg of amphetamine sulfate intravenously over a period of three hours One-half hour after the last injection he responded His recovery was uneventful

CASE 9—M C, a white woman aged 39, was said to have taken seconal sodium 23 grains (1 5 Gm.) phenobarbital 20 grains (1 3 Gm) and bromides 10 grains (0 65 Gm) about eight hours before admission On admission she was comatose. The pupils reacted to light, and the deep reflexes were diminished She did not respond to painful stimuli The temperature was 98 6 F, the pulse rate 20, the respiratory rate 30, and the blood pressure 110/70

She received a total of 400 mg of amphetamine sulfate injected intravenously over a period of eight hours At the end of this period she was conscious and complained only of slight drowsiness Her recovery was uneventful

CASE 10—E T, a white woman aged 41, was said to have taken fifty tablets, ½ grain (0 03 Gm) each, of phenobarbital On admission she was semicomatose The pupils reacted to light All deep reflexes were moderately diminished The patient reacted to painful stimuli The temperature was 99 F, the pulse rate 90, the respiratory rate 10 and the blood pressure 80/?

She received a total of 100 mg of amphetamine sulfate intravenously over a period of about six hours At the end of this time she responded Her recovery was uneventful

CASE 11—J C., a white man aged 45 was admitted in coma and with depressed respiration The deep tendon reflexes were absent. The temperature was 101 F, the pulse rate 95 and the respiratory rate 24

The patient was said to have taken twenty capsules of sodium amytal (3 grains, or 0.2 Gm, each), a total of 60 grains (4 Gm) Treatment was started with the injection of 20 mg of amphetamine sulfate intravenously every half hour After 360 mg had been used the supply of the drug was exhausted, and no more could be obtained. Treatment was continued with the administration of caffeine and sodium benzoate and ephedrine

On the day after admission the patient's temperature rose to 105 4 F, and the pulse rate to 132 Signs of consolidation at the base of the right lung were present. Sulfadiazine and penicillin were administered, but the patient died on the second day after admission

An autopsy revealed an early pneumonia in the lower lobe of the right lung in the stage of red hepatization

Chemical analysis of the liver and urine revealed the presence of barbiturates in large amount.

CASE 12—E C., a white woman aged 30 was admitted with a history of having taken nine or ten capsules of pentobarbital sodium and a quantity of whisky on the night before admission. Therapy was instituted about eighteen hours after the drug had been ingested After 200 mg of amphetamine sulfate had been injected intravenously the patient was opening her eyes and trying to sit up in bed Her recovery was uneventful

CASE 13—L C, a white woman aged 54, was admitted with a history of having taken fourteen capsules of seconal (1½ grains or 0 1 Gm, each) When the ambulance surgeon had seen her at home the respirations had been depressed to 4 per minute and artificial respiration was administered On admission to the hospital the pupils were small and did not react to light There was no corneal reflex The deep tendon reflexes were all absent except for a slight response in the left knee. The blood pressure was 70/60

After receiving 210 mg of amphetamine sulfate intravenously, the patient began to react to painful stimuli The pupils reacted to light, and the deep reflexes had returned Her recovery was uneventful

CASE 14—V G, a white woman aged 36, was admitted with a history of having taken forty to fifty tablets of evipal sodium about one hour previously She had been given 1 cc of picrotoxin (strength?) by her attending physician prior to admission She was deeply comatose The blood pressure was 122/80, the pulse rate 112 and the respiratory rate 28.

Treatment was instituted with 30 mg of amphetamine sulfate injected intravenously and was continued with 20 mg every half hour After receiving 190 mg of the drug she began to react to painful stimuli and tried to speak

On the day after admission the temperature rose to 102 4 F and there were signs of pneumonia at the lower lobe of the right lung With the administration of penicillin and of sulfonamides the pneumonia cleared, the temperature became normal and recovery was uneventful

## COMMENT

The need for active and persistent treatment of barbiturate poisoning cannot be stressed too strongly. A false sense of security is felt on observing the state of coma resulting from an overdosage of barbiturates

Unless cyanosis, Cheyne-Stokes respiration or an elevation of temperature has supervened the impression is obtained that the patient is merely in a deep sleep and will awaken after the effects of the drug have worn off Valuable time may be lost before instituting therapy If active treatment is not undertaken rapidly, death will occur from respiratory depression, usually a terminal bronchopneumonia or pulmonary atelectasis

Picrotoxin has received wide use in barbiturate intoxication It is a powerful stimulant of the central nervous system and for the most part is an effective drug in the depressed state of barbiturate poisoning However, its action on the cerebral cortex is less than that on the midbrain, the medulla and the spinal cord This leads to the result commonly observed in its use in barbiturate poisoning the patient is in a state of convulsions and is still deeply in coma The dangers inherent in the use of this powerful convulsant led us to evaluate the therapeutic properties of amphetamine sulfate

The reciprocal pharmacologic action of amphetamine sulfate and the barbiturates allows for the use of much larger doses of amphetamine than one could administer to a person under normal physiologic conditions One of our patients required as much as 400 mg of amphetamine intravenously No unusual toxic effects were noted The hyperthyroidism of 1 patient did not become adversely affected by the use of the drug

The evaluation of any drug in barbiturate intoxication is very difficult the individual response to different doses is so variable No doubt some of the patients, if undisturbed, might have had a long sleep and awakened none the worse for their experience However, the need for active treatment to prevent pulmonary stasis congestion, pneumonia and atelectasis is always present The shallow respiration of the person in deep sleep makes him a potential candidate for these pulmonary complications, and shortening the period of sleep, even though it may not be essential to preserve life, is desirable

Results of treatment with picrotoxin for patients having taken as little as 10 grains (0 65 Gm ) of a barbiturate have been reported Some of these patients would have recovered, no doubt, without any treatment with the drug

In a series[8] of 24 cases of barbiturate poisoning in which treatment with picrotoxin was given, five fatalities occurred In the present group of 14 cases of treatment with amphetamine sulfate injected intravenously the death of only 1 patient resulted

### SUMMARY AND CONCLUSIONS

Fourteen patients poisoned with barbiturates were treated with amphetamine sulfate injected intravenously Thirteen patients recovered without any observable ill effects except for some headache The patient who died had not received in our estimation, a sufficient quantity of amphetamine sulfate because no more of the drug was available

Experience with this small series of cases of poisoning with barbiturates is favorable enough to warrant further use of amphetamine sulfate for this type of therapy

8 Reifenstein E. C. Jr Reifenstein E C Sr Mignault J W and Raffaele A J Picrotoxin in the Treatment of Acute Barbiturate Poisoning A Review of the Literature with Report of 2 Cases Ann Int Med **13**: 1013 (Dec ) 1939

# Clinical Notes, Suggestions and New Instruments

## MENINGITIS DUE TO ESCHERICHIA COLI TREATED WITH STREPTOMYCIN

LIEUTENANT COLONEL ALEXANDER J ALEXANDER
M C A U S (Inactive Status)
Lexington Ky

Meningitis due to Escherichia coli is fortunately not common. It is most frequently found in newborn infants Occasionally it is secondary to bacteremia or to wounds penetrating the meninges, especially when there is fecal contamination Strong and Edwards[1] reported a case of meningitis due to E coli following a wound in which a bullet had lodged in the sacrum penetrating the spinal canal Recovery followed the removal of the foreign body with drainage of a previously undiscovered subdural abscess and therapy with large doses of sulfadiazine Such fortunate results are not common and in most cases the sulfonamides have little or no effect on organisms of the colon typhoid group Until recently the prognosis in meningitis due to E coli has been extremely poor and the mortality rate exceedingly high owing largely to the lack of an effective chemotherapeutic or antibiotic agent The recent development of new antibiotics particularly streptomycin has raised the first ray of hope in the treatment of this condition Streptomycin is known to have a definite effect on E coli and on other gram-negative organisms in vitro[2] There is evidence in unpublished reports from several sources that streptomycin is effective in vivo against many of these organisms No references either in the medical literature or in unpublished reports, were found on the use of streptomycin in the treatment of meningitis due to E coli As streptomycin is a new therapeutic agent for which dosages have not been fully established, and since the types of infection which respond to it have not yet been completely determined this case is thought to be sufficiently interesting and instructive to be reported

TABLE 1.—*Examination of the Spinal Fluid*

| Date | Cell Count | Polymorphonuclears | Lymphocytes | Sugar | Total Protein |
|---|---|---|---|---|---|
| October 14 | 507 | 70 | 30 | 0 | 124 |
| October 15 | 900 | 40 | 60 | 45 | 61 |
| October 16 | 204 | 49 | 51 | 55 | 60 |
| October 17 | 142 | 58 | 42 | 57 | 76 |
| October 18 | 922 | 25 | 75 | 50 | 61 |
| October 19 | 144 | 29 | 71 | 37 | 61 |
| October 20 | 108 | 6 | 94 | 47 | 60 |
| October 21 | 110 | 7 | 93 | 55 | 70 |
| October 22 | 88 | 5 | 95 | 51 | 57 |
| October 23 | 105 | 3 | 97 | 51 | 47 |
| October 24 | 72 | 6 | 94 | 50 | 43 |
| October 25 | 216 | 10 | 90 | 42 | 51 |
| October 26 | 203 | 10 | 90 | 50 | 53 |
| October 28 | 189 | 10 | 90 | 50 | 40 |
| October 31 | 69 | 16 | 84 | 50 | 28 |
| November 5 | 35 | 0 | 100 | 45 | 21 |

### REPORT OF CASE

*History*.—C L a private aged 19 was wounded in action in France Jan 12 1945 sustaining extensive injuries including compound comminuted fractures of both tibias partial amputation of the left foot and fracture of the laminas of the twelfth dorsal vertebra He received supportive measures and emergency surgical treatment including debridement. A note at the time of debridement stated that the spinal cord and covering were intact A few days after injury a urinary fistula developed This closed spontaneously shortly thereafter Subsequent urologic examinations disclosed no abnormality Saucerization of

From McCloskey General Hospital Temple Texas

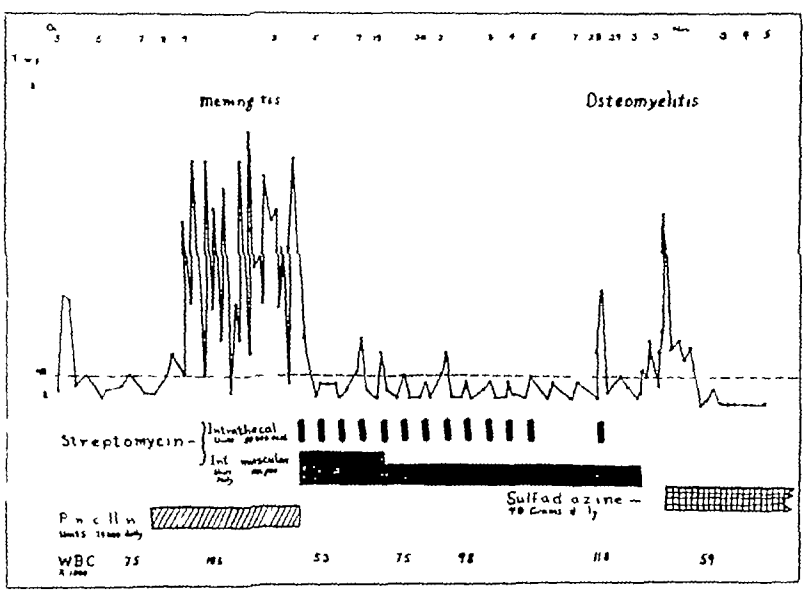
1 Strong P S and Edwards J E Escherichia Coli Meningitis Treated with Sulfadiazine J A M A **129** 210 (Sept 15) 1945

2 Helmholz H E The Effect of Streptomycin on Bacteria Commonly Found in Urinary Infections Proc Staff Meet Mayo Clin **20** 337 (Oct 31) 1945

the upper end of the right tibia was performed on April 20 because of osteomyelitis. A sinus over the involved portion of the right tibia continued to drain intermittently. The course was otherwise uneventful.

On October 7, in preparation for reamputation of the left foot, the patient was started on penicillin 15 000 units intramuscularly every three hours. On October 8, under spinal anesthesia (procaine 150 mg.) reamputation of the left foot was performed and a small piece of shrapnel removed from under the skin of the right side of the back. The following day the temperature rose to 102 F. and the patient complained of severe headache. For the next five days the temperature was septic in type. Persistent vomiting developed. The patient noticed that his neck was sore but there was no stiffness. Headache became more severe. Nothing was found in the abdomen or wounds to account for the fever. Examinations by the medical and neurologic consultants failed to reveal any significant findings until October 14, when there was slight stiffness of the neck and slight blurring of the optic disk margins. Lumbar puncture revealed opalescent fluid, pressure 160 mm. of water, dynamics normal. Penicillin 10,000 units was injected intrathecally, pending spinal fluid studies.

*Physical Examination.*—The patient was tall and thin, weighing about 120 pounds (54 Kg.). He was obviously critically ill. He was emotionally upset, complained of a severe headache and did not wish to be disturbed. There was a draining sinus over the lateral aspect of the upper end of the right tibia. Examination of the other wounds and scars showed no evidence of infection. There was no redness, swelling or tenderness over the twelfth dorsal vertebra or the scar just to the left of it. There was definite nuchal rigidity. Kernig's sign could not be tested because of splints and bandages on the legs. The deep tendon reflexes were slightly hyperactive and equal. There were no pathologic reflexes. The optic disks showed slight haziness of the margins without choking. The remainder of the physical examination was negative.




Clinical course

*Laboratory Examination.*—The white blood cell count ranged between 5,300 and 11 800.

Urinalyses on October 10 and 11 showed many pus cells with clumps but examinations thereafter were negative.

Smears of pus from the sinus over the right tibia showed gram positive cocci and gram negative bacilli. Cultures were overgrown by Proteus vulgaris.

Blood culture on October 14 was sterile but on October 15 yielded a growth of E. coli. Blood cultures thereafter were sterile.

The spinal fluid cell counts and chemical findings are recorded in the accompanying table. Smear of the spinal fluid on October 14 showed large gram negative rods, with an apparent capsule, morphologically resembling Klebsiella pneumoniae. Daily smears of spinal fluid thereafter, through October 26 and on October 28 and 31 and November 5, showed no organisms. On spinal fluid cultures done October 14 and 17 E. coli was recovered. All other cultures showed no growth.

The organisms on culture were smaller than those seen on the direct smear. They were coliform in size and shape, were motile and gave the typical sugar reactions and indole production of E. coli. It was felt that the morphologic characteristics of the organism, as seen on the original smear, had been altered by penicillin therapy. Growth of the organism obtained from spinal fluid on October 14 was suppressed by 4 S. units of streptomycin per cubic centimeter. There was no change in streptomycin sensitivity of the organism obtained on spinal fluid culture October 17. Unfortunately, laboratory facilities were not available for determination of the streptomycin concentration in spinal fluid, blood or urine.

*Treatment and Course.*—The patient was given 50,000 S. units of streptomycin intrathecally and was started on streptomycin 200 000 S. units intramuscularly every three hours. Penicillin, which had been given since October 7, was discontinued. An initial temperature rise to 103.8 F. was followed within sixteen hours by a fall to normal level, which was maintained thereafter except for a slight secondary rise to be described. The patient's clinical improvement was no less dramatic than the rapid disappearance of his septic temperature. Vomiting ceased, headache disappeared and his emotional outlook was greatly improved. The nuchal rigidity definitely diminished. On the third day the laboratory reported that the organism in the spinal fluid was E. coli, not K. pneumoniae, as had been suspected. In view of the good response to streptomycin and the known effect of this drug on infections due to E. coli it was felt that no change in therapy should be instituted. Although E. coli was recovered from blood culture on the second day and from the spinal fluid again on the fourth day, the patient's clinical condition steadily improved. Stiffness of the neck gradually disappeared after about five days. The intramuscular dose of streptomycin was reduced to 125,000 S. units on the fifth day. Daily intrathecal injections were continued through the twelfth day. On the fifteenth day the temperature rose to 100.4 F. and it was feared there might be a recurrence of the meningeal infection. However, lumbar puncture revealed clear fluid with essentially the same findings as two days previously. At this time the sinus over the right tibia had ceased draining and there were increased redness and swelling around the sinus tract. Within a few hours this opened again draining profusely, and the temperature returned to normal. Intramuscular streptomycin was discontinued after the seventeenth day. That evening the temperature rose to 99.2 and the next day to 102 F. The skin around the sinus tract over the right tibia was again red and tender. It was believed that the temperature elevation was due entirely to the osteomyelitis. The patient was therefore started on sulfadiazine. Saucerization of the upper end of the right tibia was subsequently performed on November 24. There has been no recurrence of symptoms suggesting meningitis.

## COMMENT

Streptomycin was successfully used in the treatment of a patient critically ill with meningitis due to Escherichia coli. The source of infection was probably a bacteremia secondary to a mixed type of osteomyelitis of the right tibia since E. coli was found on blood culture. Urinary tract infection, present during the onset of fever was not felt to be the source, since pyuria had completely cleared before the onset of bacteremia and meningeal symptoms. The intramuscular dosage of streptomycin was 1,600 000 S. units daily for four days, then 1,000,000 S. units daily for an additional twelve days. The intrathecal dose was 50,000 S. units daily for twelve days, with one addi

tional dose on the fifteenth day of treatment The total dosage of streptomycin was 18,275,000 S units intramuscularly and 650,000 S units intrathecally The dosage used was empirical, and in retrospect, larger intrathecal doses were probably indicated Although there was a rapid fall in the patient's temperature curve and a dramatic improvement in his general condition, laboratory tests showed that the blood stream and spinal fluid infection did not respond as rapidly as the patient's clinical condition seemed to indicate The persistent finding of approximately 200 cells in the spinal fluid during the period of intrathecal therapy, and the abrupt diminution of pleocytosis after intraspinal administration was discontinued, suggest that the persistently increased cell count was due at least in part to intrathecal therapy No other ill effects or complications due to therapy were noted There was no apparent improvement in the osteomyelitis, although as a mixed infection this was difficult to appraise The rapid clinical improvement, and the ultimate recovery from a previously devastating type of infection, make this case worthy of note The recognized effect of streptomycin on E coli and the excellent results obtained in this case make the further use of streptomycin in E coli meningitis warranted

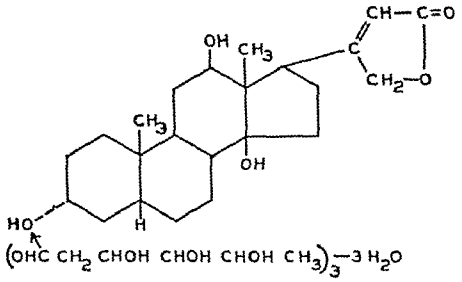
# Council on Pharmacy and Chemistry

## NEW AND NONOFFICIAL REMEDIES

*The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies A copy of the rules on which the Council bases its action will be sent on application*

AUSTIN SMITH M D, *Secretary*

**DIGOXIN** — $C_{41}H_{64}O_{14}$ (M W 780 92) — A crystalline glycoside which may be prepared from the leaves of Digitalis lanata or Digitalis orientalis The crude digilanids from the leaves are separated by physical methods into digilanids A, B and C Digoxin is formed from digilanid C by hydrolytic removal of acetyl and glucose groups It is standardized by chemical and physical methods and prescribed in terms of weight The structural formula of digoxin may be represented as follows




$(OHC\,CH_2\,CHOH\,CHOH\,CHOH\,CH_3)_3 - 3\,H_2O$

*Actions and Uses*—The actions and uses are closely similar to those of digitalis U S P As a purified substance it is claimed to have particular usefulness when rapid digitalization is necessary, usually within a few hours when administered by mouth and within a few minutes when given intravenously

*Dosage*—Before administering the usual dose of digoxin it must be ascertained that no drug of the digitalis group has been given within two weeks

For rapid digitalization by the oral route an initial dose of approximately 0 75 to 1 5 mg may be administered followed by doses of 0.25 to 0 75 mg at six hour intervals until the ventricular rate lies between 60 and 70, or the maximum therapeutic effect is obtained or toxic symptoms appear Patients who have received digitalis therapy during the preceding two weeks are given 1 mg or less as an initial dose

Very rapid digitalization may be accomplished with an intravenous injection of 0 75 to 1 0 mg Ventricular slowing usually begins within a few minutes and is maximal in one to two hours If complete digitalization is not obtained after six hours, additional doses of 0.25 to 0 5 mg of digoxin may be given intravenously at six hour intervals

For maintenance 0 25 to 0 75 mg may be given daily by mouth, or 0.25 to 0 5 mg may be given intravenously

Digoxin injection is a tissue irritant and the contents of the ampul should be diluted with 10 cc of sterile isotonic solution The product should be injected slowly (five to ten minutes) and care taken to avoid extravenous injection

*Tests and Standards*—

*Digoxin occurs as a white odorless crystalline powder possessing a bitter taste (care!)* When recrystallized from aqueous ethanol it appears in the form of characteristic clusters of thin crystals Digoxin is soluble in alcohol and pyridine but is practically insoluble in chloroform ether and water It melts with decomposition at from 255 to 265 C when placed in a bath previously heated to 250 C

Dissolve 1 mg of digoxin in 2 cc of glacial acetic acid containing 0 01 per cent of ferric chloride and add 1 cc of sulfuric acid to form a subjacent layer a pure brown ring free from red color is formed at the junction of the liquids In a short time the acetic acid layer acquires an indigo-blue color (Keller Kiliani test for presence of digitoxose)

Reflux 0 1 Gm of dry digoxin with 10 cc of alcohol 10 cc of water 0 08 cc of hydrochloric acid (specific gravity 1 16) for one half hour Neutralize the solution to litmus paper with 1 normal sodium hydroxide and evaporate to 2 cc in vacuum filter dry the digoxigenin obtained at 80 C and weigh (yield 45-46 per cent) When recrystallized from alcohol water, the melting point of the product is 210 213 C Dilute the filtrate from the hydrolysis to 25 cc add 0 04 cc of hydrochloric acid (specific gravity 1 16) and heat on a steam bath for twenty minutes Neutralize the solution to litmus paper with sodium hydroxide solution and evaporate to a thick syrup in vacuum

Dry the syrup in vacuum over sulfuric acid and extract the residue three times with anhydrous acetone Evaporate the acetone and dry the residue in vacuum at 80 C If crystals are not formed allow the syrupy residue to stand in an ice chamber until crystals separate the isolated crystals of digitoxose melt at 109 112 C

Dry 0 1 Gm of digoxin in vacuum over phosphorus pentoxide for four hours the loss in weight is not more than 0 5 per cent

The crystallographic and optical properties of digoxin may be summarized as follows The crystals belong to the triclinic system their crystalline habit is platy to tabular with rhombic outline characteristically appearing with one acute angle or corner truncated The crystals are biaxial positive with moderate optic angle The refractive indexes are $\alpha = 1\,522$ $\beta = 1\,550$ and $\gamma = 1\,610$ Birefringence is positive $(\gamma-\alpha) = 0\,088$ Dispersion $r > v$ weak

BURROUGHS WELLCOME & CO, INC, NEW YORK

**Tabloid Digoxin** 0.25 mg

**Solution of Digoxin, 0 05 per cent W/V** 30 cc bottle Each cubic centimeter contains 0 5 mg of digoxin in 70 per cent alcohol solution

**Hypoloid Digoxin Injection, 0 05 per cent W/V** 1 cc Contains 0 5 mg of digoxin per cubic centimeter in 70 per cent alcohol solution

**THEOPHYLLINE ETHYLENEDIAMINE** (See New and Nonofficial Remedies, 1945, p 388)

The following dosage forms have been accepted

BARRY BIOLOGICAL LABORATORY DIVISION OF BARRY ALLERGY LABORATORIES, INC DETROIT

**Solution Aminophylline** 0 50 Gm in 2 cc and 20 cc ampuls and 0.25 Gm in 10 cc ampuls

G D SEARLE & COMPANY, CHICAGO

**Aminophylline Supposicones** 0 50 Gm Each suppository contains aminophylline 0 50 Gm incorporated into a suppository base consisting of a polyethyleneglycol of high molecular weight (Carbowax 4 000 W) and propyleneglycol stearate (Emcol PS 50)

WYETH INCORPORATED, PHILADELPHIA

**Suppositories Aminophylline** 0 5 Gm

**PRIVINE HYDROCHLORIDE** (See THE JOURNAL, June 8 1946 p 522)

The following additional dosage form has been accepted

CIBA PHARMACEUTICAL PRODUCTS, INC, SUMMIT, N J

**Privine Hydrochloride Nasal Jelly, 0 05%** 20 Gm tubes Each 1 Gm contains naphazoline hydrochloride 0 5 mg in a buffered water soluble base containing glycerin tragacanth and aromatics with merthiolate 0 01 mg as a preservative

**PENICILLIN** (See New and Nonofficial Remedies 1945, p 214)

The following dosage forms have been accepted

ABBOTT LABORATORIES, NORTH CHICAGO, ILL

**Penicillin Calcium** 100 000 and 200 000 Oxford unit vials

BRISTOL LABORATORIES, INC NEW YORK

**Penicillin Calcium** 20 cc. vials 100 000 and 200 000 Oxford units

**ASCORBIC ACID** (See New and Nonofficial Remedies, 1945 p 622)

The following dosage form has been accepted

ENDO PRODUCTS, INC, RICHMOND HILL, N Y

**Tablets Ascorbic Acid** 10 mg, 25 mg, 50 mg and 100 mg

# COUNCIL ON FOODS AND NUTRITION

## VITAMIN DEFICIENCIES STIGMAS, SYMPTOMS AND THERAPY

*The accompanying syllabus is a consensus of current views Lack of complete information due to continued rapid development of the subject renders certain statements tentative and subject to probable early revision In presenting this syllabus the Council directs that emphasis be placed on the view that vitamins must never be relied on as a substitute for the regular consumption of an adequate diet*

JAMES R WILSON, M D *Secretary*

The stigmas and symptoms associated with deficiency of vitamin A, thiamine, riboflavin, niacin, ascorbic acid vitamin D and vitamin K are listed in this syllabus together with a statement concerning treatment of each deficiency Deficiencies of several vitamins, notably biotin pyridoxine, pantothenic acid and vitamin E are not accompanied by stigmas which can be recognized at present.[1] The subject is in a stage of fluidity and development which probably will necessitate early revision or amplification Particularly is this true of the diagnosis and treatment of deficiency of folic acid This vitamin has been prepared in isolated form so recently that its consideration here is omitted Not many of the stigmas listed are diagnostic of a vitamin deficiency in themselves but the occurrence of several of these stigmas in association is at least presumptive evidence of some nutritional failure Vitamin deficiencies commonly encountered in clinical practice are multiple Scrutiny of the dietary history is indicated in cases in which several of the stigmas listed are present Due attention should be paid to the well known fact that stresses such as pregnancy, exposure or disease may occasion the development of deficiency states when the diet otherwise might be considered adequate

Treatment for a deficiency involves administration orally or, if need be, parenterally of large enough doses of the vitamin to be of therapeutic value and continuation of this treatment *for long enough periods to assure a satisfactory therapeutic trial* However since the diagnosis is necessarily presumptive in many instances, exclusive dependence on specific therapy is justified only infrequently and basic to good treatment in all cases is a diet planned to be adequate nutritionally and assurance that the diet is eaten.[2] The diet is important for the education of the patient and as a means of dispensing factors heretofore not isolated which will be contained in the foods of such a diet Likewise helpful in treatment because of its content of factors not as yet identified is some good source of the vitamin B complex as a whole Products such as brewers' yeast or an extract of such yeast, wheat germ extracts of cereal grasses or of rice bran crude extract of liver or desiccated liver represent such sources. For a patient who cannot take foods or drugs orally or in whom absorption is poor, crude liver extract may be given intramuscularly or even on occasion it may be diluted with sterile isotonic solution of sodium chloride or dextrose and administered by vein

### Stigmas suggesting deficiency of vitamin A

*Xerosis of the conjunctiva*

Thickening with loss of transparency, so that only the more superficial vessels of the bulbar conjunctiva are clearly seen, associated with more or less yellow pigmentation, especially along the horizontal meridian of the eyeball, infrequently associated with small foamlike plaques called Bitot s spots

*Papular eruptions of pilosebaceous follicles*

A grater-like feel, which in early stages resembles gooseflesh but, when more fully developed, presents the picture of keratosis pilaris The extensor surfaces of the arms and thighs and the flexor surfaces of the legs are primarily affected.

*Xerosis or astcatosis of the skin*

Dryness, scaliness and crinkling, in extreme cases resembling alligator skin In early stages the condition is associated with keratosis pilaris but it persists and extends after follicles have disappeared, the body hairs being broken and later lost. All parts of the body are involved but the skin of the extremities, particularly of the legs is more severely affected than the skin of the head and the trunk

*Follicular conjunctivitis*

Hypertrophy of the follicles particularly of the lower eyelids

*Night blindness*

Conspicuous only in cases of advanced severe deficiency

*Keratomalacia*

Thickening with subsequent ulceration and necrosis of the cornea present only in most severe and advanced forms of deficiency

### *Treatment of vitamin A deficiency*

*Early deficiency state*

25 000 U S P units of vitamin A twice daily for two months or longer

*More chronic states*

25,000 U S P units of vitamin A two to three times daily for a prolonged period

### Stigmas suggesting deficiency of thiamine

*Loss of strength* of the quadriceps disproportionate to loss of general strength, evidenced by difficulty in rising from the squatting position

*Loss of vibration sense* first of the toes and later of the malleoli and tibias

*Tenderness of the calves and hyperesthesia of the feet*

*Diminution and loss of the achilles tendon and patellar reflexes first* Other tendon reflexes are lost in the later stages of the polyneuritis of "dry beriberi"

*Edema* of the shins ankles and knee joints found in "wet beriberi

*Enlarged heart with dependent edema* and elevated venous pressure Poor response to rest and administration of digitalis unless thiamine is given This is a late manifestation of severe deficiency (beriberi heart)

*Papillary edema with retinal hemorrhages* associated with ophthalmoplegia and polyneuritis The condition is a late manifestation of severe deficiency

### *Treatment of thiamine deficiency*

*Acute deficiency state*

10 to 20 mg or more of thiamine twice daily until relief of symptoms, this may be days or weeks

*Chronic deficiency state*

5 to 10 mg or more of thiamine twice daily for a prolonged period

### Stigmas suggesting deficiency of riboflavin

*Congestion of the limbic plexus*

Visible with a small hand lens or the +20 lens of the ophthalmoscope, invasion of the cornea by capillaries arising from this plexus (vascularization) requires a biomicroscope and slit lamp for detection

*Cheilosis*

Represented in chronic deficiency by excessive and irregular wrinkling in acute deficiency by swelling and erasure of the normal wrinkling of the lips Reddening thinning, scaling, chapping of epithelium are associated

### *Treatment of riboflavin deficiency*

*Acute deficiency state*

5 mg of riboflavin three times daily for weeks

*Chronic deficiency state*

3 to 5 mg of riboflavin three times daily for a prolonged period

1 Handbook of Nutrition A Symposium Prepared Under the Auspices of the Council on Foods and Nutrition of the American Medical Association 1943

2 Jolliffe Norman The Preventive and Therapeutic Use of Vitamins J A M A 129 613 (Oct 27) 1945

*Angular stomatitis*
Various combinations of erythema and open fissuring in the angles of the mouth with or without a white, moist maceration (perlèche), scars of healed fissures

*Dyssebacia*
An erythema overlaid with somewhat greasy, flaky accumulations resembling hoar frost, noted mostly in the alae nasi, canthi, pinnae and other folds of the skin, accompanied in some cases by coarsening and elevation of the sebaceous follicles of the nose and cheeks, the latter also seen with deficiency of vitamin A

*Magenta tongue*
A purplish red coloring with moderate edema and flattening of filiform papillae, observed in more advanced deficiency

### Stigmas suggesting deficiency of niacin

*Edema of the tongue*
Shown by dental indentations

*Increased redness of the tongue*
Beefy red in chronic states scarlet red in severe acute deficiency

*Congestion and hypertrophy of the papillae of the tongue, followed by fusion and atrophy*
In early stages the fungiform papillae are congested and hypertrophied This is followed by hypertrophy of the filiform papillae and later by their flattening As they atrophy they fuse or mat together with multiple fissuring to give a cobblestone appearance and finally baldness Vincent's infection of tongue and fauces, ulceration and pseudomembrane formation may or may not accompany these changes in the more advanced stages of this deficiency

*Dermatitis*
Erythema, rough scaling, with ulceration and formation of bullae, affecting primarily areas of the skin exposed to light namely, wrists, ankles, neck and face, observed only in severe deficiency (pellagra) and then frequently associated with diarrhea and dementia

*Encephalopathy*
Clouding of consciousness, cogwheel rigidity and grasping, sucking reflexes observed in acute, severe deficiency

### Stigmas suggesting deficiency of ascorbic acid

*Redness, edema, tenderness and bleeding on pressure of the gums*
Observed in acute or subacute deficiency of moderate severity, sometimes with, but usually without, other signs of ascorbic acid deficiency

*Thickening and increased firmness of the gums*
With recession and exposure of the base of the teeth, including recession of interdental papillae, observed in chronic deficiency

*Retraction of the gums*
Leaving pockets between gum and tooth, secondary infection and resulting pyorrhea, observed in chronic deficiency

*Loosening and shedding of the teeth*

*Increased capillary fragility*
Manifested by petechial hemorrhages of the skin, especially in the tourniquet test, observed in more severe acute and subacute deficiency Easy bruising, spontaneous ecchymosis of the skin, idiopathic hemorrhage into joints and slow healing of wounds observed in severe acute and subacute deficiency

### Stigmas suggesting deficiency of vitamin D

*Deformities of the skeleton*
Bowed legs malformation of the chest (funnel breast) and defects of the teeth may be residues of early rickets which is usually no longer active or susceptible to treatment enlargement of the wrists elbows, knees ankles and chosto chondral junctions (beading, rachitic rosary) and bulging forehead (cranial bosses) which respond to treatment are found in infancy and in the rare example of late rickets

### Stigmas suggesting deficiency of vitamin K

*A tendency to bleeding*
Particularly from minor wounds, related to abnormal lengthening of the prothrombin time developing spontaneously in newborn infants, observed in adults after treatment with dicumarol or large doses of salicylates, in advanced disease of the liver with poor excretion of bile, and in disease of the intestine, such as sprue in which vitamin absorption is disturbed.

### *Treatment of niacin deficiency*

*Acute deficiency state*
100 mg or more of niacinamide twice daily for weeks

*Chronic state*
100 mg of niacinamide twice daily over a prolonged period

### *Treatment of ascorbic acid deficiency*

*Acute or subacute deficiency state*
100 mg or more of ascorbic acid for weeks

*Chronic deficiency state*
100 mg of ascorbic acid three times daily over a prolonged period

### *Treatment of vitamin D deficiency*

*In infants*
1 500 to 2,500 U S P units of vitamin D daily, continued for several months (double this amount for premature infants)

### *Treatment of vitamin K deficiency*

*In adults*
1 mg of vitamin K two to three times daily with or without bile (1 Gm of desiccated bile or bile salts)

*In newborn babies*
1 mg of synthetic vitamin K intramuscularly daily in oil solution for several days

### Deficiency symptoms

A diagnosis of vitamin deficiency only rarely can be based on symptoms or less significant abnormalities than those which have been listed thus far However, such symptoms and abnormalities frequently accompany the more specific lesions of deficiency

Symptoms commonly observed with deficiency of thiamine, also less conspicuously in deficiency of other vitamins, include apathy, lethargy, increased emotional irritability, hypersensitivity to noise and painful stimuli, headache, vague fears, confusion of thought, uncertainty of memory asthenia, loss of manual dexterity, insomnia heart consciousness, paresthesia, anorexia, nausea, flatulence, epigastric pain, constipation.

Photophobia burning of the eyes, lacrimation and eyestrain not relieved by glasses are encountered in deficiency of riboflavin

Other abnormalities unrelated to deficiency of any single vitamin but commonly observed in persons who are malnourished are dry, brittle lack luster rebellious so-called staring head hair, a loss of sleekness analogous to the rough coat of malnourished animals, blepharitis spider-like telangiectasis of the face, seborrhea of the face patchy pigmentation of the face, especially suborbital and circumoral sinus arrhythmia bradycardia, tachycardia low blood pressure, loss of tone of muscles and anemia

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - Chicago 10, Ill

Cable Address Medic, Chicago

Subscription price Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY JUNE 22 1946

## STUDIES IN REVIVAL OF ORGANISMS

From his observations in animal experiments on revival after exsanguination, Negovski[1] emphasizes that death does not always occur abruptly The final changes responsible for true biologic death are usually preceded by a period of so called clinical death, which begins when heart action and respiration cease Clinical death in many instances represents a reversible transition from life to death Intra-arterial administration of blood under pressure is not a complete method of resuscitation in fact the results have been somewhat disappointing Artificial respiration, of equal importance, must be started immediately after revival and must be sufficiently intensive This prompt application, necessary for starting the first spontaneous gasp and indirectly for early return of eye reflexes, may decide the outcome of the entire effort The appearance of the spontaneous gasp in the second minute of revival leads to recovery of nearly 100 per cent of animals, while a delay of nine minutes means death of all reviving animals, if revival is to be followed by a complete and lasting recovery, the period of clinical death must not last longer than five or six minutes Temporary revival can occur after longer periods of clinical death, but the animals do not live long, since the nervous system in such animals is not completely restored During the revival the heart begins to function first, later the tone of the vessels is reestablished, and finally spontaneous breathing is resumed The reflex excitability of the respiratory center is reestablished earlier than that of the vasomotor center Spontaneous respiration precedes restoration of the respiratory center reflex Thus during death the older mechanism of respiratory function survives longer, and during revival this primitive system of humoral regulation is restored more promptly than the highly evolved system of reflex regulation The return of the separate groups of muscles into the respiratory effort also takes place in reverse order The contractions of neck muscles return first, the movements of the thoracic cage follow, and finally the diaphragm begins active contraction Negovski's experimental and clinical observations demonstrate that the more sensitive portions of the central nervous system, without which life is impossible, cannot survive complete anemia for a period exceeding five to six minutes The sequence in which different functions of the central nervous system return is determined by the phylogenetic development of corresponding parts of the brain Areas of the brain which are older phylogenetically were restored sooner Microscopic study of the brain of dogs revived after protracted periods of six to twenty minutes of clinical death revealed striking irreversible changes

As a rule, the earlier any given function makes its appearance in the process of ontogenesis or phylogenesis the sooner is it restored during revival The heart revives before spontaneous respiration is restored In the beginning the revived heart is not amenable to regulation by its nerves In general, during the first steps of revival the effects of automatism are seen, representing the intrinsic activity of organs not yet subordinated to control by the nervous system In the early stages of revival anaerobic respiration is the first to appear as oldest phylogenetically During revival external respiration for example diaphragmatic respiration, which first appears phylogenetically in reptiles, is restored later than costal Also the oldest mode of respiratory regulation, the humoral appears earlier than the reflex control Only at some later time does there appear the reflex control which represents the later type of control in the evolutionary development The central nervous system responds to revival later than all other structures, and its individual functions return in the order of phylogenesis The older functions in general are more stable, for in the process of dying there is an earlier extinction of those functions which phylogenetically are more recent In this sense the return to life recapitulates in reverse order the ebbing of life those processes which resist death the longest or die the latest are those which revive the earliest

Investigations carried out in a maternity clinic on the effect of anemia on the central nervous system of the newborn reveal that the resistance of the newborn to blood loss, especially of their central nervous system, is quite considerable Contrary to the accepted view, the author's experiences suggest that breathing may be restored in the newborn even when heart action has stopped with prompt institution of revival measures The spontaneous respiration of the newborn can be restored with the aid of the pulmotor after exsanguination lasting for thirty minutes, and, if feeble heart action should be present, restoration of spontaneous breathing is possible as late as two hours after birth

1 Negovski V A Agonal States and Clinical Death Problems in Revival of Organisms Am. Rev Soviet Med. 3:339 (April) 1946

## TEMPORAL ARTERITIS A NEW DISEASE ENTITY

Horton, Magath and Brown[1] reported in 1931 observations on 2 patients with fever weakness anorexia, loss of weight, anemia mild leukocytosis and painful tender areas over the scalp and along the temporal vessels These symptoms had been present from four to six weeks Localized periarteritis and arteritis were present in each case Relapses and complete remissions had occurred in both Study of the microscopic sections of the blood vessels removed for biopsy disclosed identical lesions Both patients apparently recovered completely from the local condition although one died two years later from congestive heart failure The bacteriologic studies were largely negative The authors believe that the condition described represents a new clinical syndrome the etiology of which is obscure Dick and Freeman[2] in 1940 reported 2 similar cases and pointed out the characteristic occurrence of giant cells in the inflammatory process of the involved artery Gilmour[3] described postmortem studies in 4 cases of what he termed giant cell chronic arteritis of unknown etiology The histologic picture, although involving many branches of the aorta and the internal and external carotid arteries, frequently presented a focal distribution The presence of multinuclear giant cells was the same as described for cases of temporal arteritis Sproul's[4] postmortem study of a typical case of temporal arteritis revealed profound alterations in the arterial tree The multinucleated giant cell proliferation was a prominent microscopic feature Murphy's[5] patient, a woman aged 71, made a rapid recovery after the removal of a segment of the temporal artery about 5 cm in length Necropsy in a case of characteristic temporal arteritis reported by Chasnoff and Vorzimer[6] revealed a diffuse involvement of the arterial system These authors emphasize that arteritis of the temporal vessels is probably a local manifestation of a systemic arterial disease which cannot be regarded as nonfatal

In a recent article in the *Quarterly Journal of Medicine* Cooke and his associates[7] review the literature on the subject and add 7 cases to the total of 31 reported in the literature Analysis of the cases so far reported shows that headache was a prominent feature of the syndrome and was present at some time in all cases In 6 of the authors' cases the temporal artery showed thrombosis Many cerebral symptoms have been noted, probably caused by the involvement of the cerebral vessels At least half of all the patients had visual disturbances leading in many instances to complete loss of sight The varying types of eye symptoms and signs suggest that the disease must affect the arterial supply of the optic and ocular motor nerves and the retina in varying degree Inflammation of the temporal artery is striking because of thickening and reddening along its course Postmortem examinations carried out in 2 of their cases revealed the characteristic histologic picture in the aorta and the temporal radial, subclavian femoral coronary retinal, celiac and mesenteric arteries Differentiation of the syndrome from other diseases involving the blood vascular system, such as periarteritis nodosa and thromboangiitis obliterans is not always easy because of many similarities

Both biopsy and postmortem observations in temporal arteritis have been unsatisfactory so far in that these studies were made at different stages of the disease, so that a clear conception of the pathologic process has been impossible to obtain The treatment is to a great extent systemic In some cases varying amounts of relief were obtained either from a resection of a segment of the temporal artery involved or of a biopsy The therapeutic effect of nicotinic acid, of potassium iodide in large doses and of thiamine is difficult to evaluate in the small number of cases thus treated The prognosis is relatively good as regards life, although with the generalized character of the disease it may be fatal in some cases

1 Horton B T Magath T B and Brown G E Arteritis of the Temporal Vessels Arch. Int Med. **53** 400 (March) 1934 Horton, B T and Magath T B Arteritis of the Temporal Vessels Report of 7 Cases, Proc. Staff Meet Mayo Clin **12**: 548 (Sept. 1) 1937

2 Dick George F and Freeman Gustave Temporal Arteritis J A M. A **114** 645 (Feb 24) 1940

3 Gilmour J R Giant Cell Chronic Arteritis J Path & Bact. **53**: 263 (Sept.) 1941

4 Sproul E E. A Case of Temporal Arteritis New York State J Med **42** 345 (Feb. 15) 1942

5 Murphy J R The Syndrome of Temporal Arteritis New York State J Med **42** 2236 (Dec 1) 1942

6 Chasnoff Julius and Vorzimer J J Temporal Arteritis A Local Manifestation of a Systemic Disease Ann Int. Med **20** 327 (Feb.) 1944

7 Cooke W T Cloake P C P Govan A D T and Colbeck J C Temporal Arteritis A Generalized Vascular Disease, Quart. J Med **15** 47 (Jan.) 1946

## CHILDHOOD MORTALITY FROM ACCIDENTS

Today accidents account for more deaths in childhood than almost any other cause White children under 20 years of age dying annually from accidents include 34 129 boys and 14,916 girls, and for the nonwhite group 5,976 boys and 2,990 girls This gives a sex ratio, boys to girls in the white group, of 2 2 and for the nonwhite group a sex ratio of 2 0 Nonwhite infants of both sexes suffer from fatal accidents more than twice as often as white infants In the age group 5-9 years, white boys show twice as many accidents as white girls Between 15 and 19 years white boys suffer nearly four times as many fatal accidents as white girls, and among nonwhite children the boys have a still higher ratio In a differential study George Wolff[1] shows that the death rates for accidents are highest in infancy, lower in the preschool and lowest in the elementary school age These rates rise again in adolescence with the beginning of occupational life

The high rates in the first year of life are due largely to mechanical suffocation, obstruction suffocation or puncture by ingested objects Although the total death

1 Wolff George Deaths from Accidents Among Children and Adolescents, Child **9** 83 (Dec.) 1944 Childhood Mortality from Accidents Children's Bureau U S Department of Labor

rate for accidents is high in infancy when compared with other age groups, it loses much of its significance through the greater prevalence of other causes of death at this age, such as premature birth, pneumonia and influenza, congenital malformations, injury at birth and diarrhea and enteritis In preschool age, school age and adolescence accidents become increasingly predominant because of the great decline in deaths from tuberculosis and acute infectious diseases After infancy the most important causes of accidental deaths in childhood are motor vehicle accidents, drowning, burns, injuries by firearms and injuries by falls

The racial differential in fatalities from accidents is not great except for the infant year, when nonwhite children suffer twice as high a death rate as white children, in all other age groups of childhood the ratios of nonwhite to white range between a minimum of 1 1 and the maximum of 1 4 Motor vehicle accidents occur consistently more often among white children of all ages The same is true for accidental drowning among the preschool and younger school children A consistently higher death rate exists for nonwhite children of all ages for food poisoning, conflagration and accidental burns and for other accidental poisoning and for injuries by firearms Differences between the sexes for fatal accidents are more striking than those between the races These differences can be explained by differing risks, behavior and susceptibilities of the sexes that may be inborn or acquired For example, the boys are more daring and even foolhardy, the girls are more timid and mature earlier, both physically and mentally

## Current Comment

### THE DIAGNOSIS OF CHRONIC BRUCELLOSIS

Brucellosis is one of the most important of the "new" diseases discovered in recent times by bacteriologic methods As emphasized by Harris,[1] brucellosis should receive consideration early in the diagnosis of obscure illness Unfortunately there is as yet not available any easy adequate specific means of diagnosis of chronic brucellosis The agglutination test is of significance only if positive A positive intradermal test indicates increased sensitivity, but it does not tell whether the infection is still active Negative skin tests have been observed in active brucella infection The opsonophagocytic test requires perfect technic with a virulent Brucella strain Increased phagocytosis with a positive skin test, the symptoms suggesting brucellosis, points to a still active infection The only definitely diagnostic procedure is isolation of Brucella by culture from the patient This concerns one of "the most difficult of all bacteria to isolate," and the cultural methods now in use are hardly practicable for daily routine work in the clinical laboratory The actual frequency of arthritis in brucellosis is not known The facts at hand point to a high incidence Of 157 arthritic patients observed by Goldfain[2] about half were believed to have brucellosis also Of 427 patients with brucellosis studied by Harris,[1] 74 had atrophic or hypertrophic arthritis Harris reports in detail 2 remarkable cases of advanced progressive atrophic arthritis, close study of which pointed to brucellosis as a factor Treatment of these cases included brucella vaccine and was followed in 1 case by cure, in the other by improvement in progress when the report was made Systematic study of the relation of brucellosis to chronic arthritis should be promoted Among localizations of chronic brucellosis are those in the female genitourinary tract Here tubal brucellosis appears to be of frequent occurrence but of infrequent recognition A better understanding of various chronic infections certainly requires more adequate cultural study, with special reference to the detection of brucellosis The importance of this infection calls for the organization of cooperative investigations of the problems of diagnosis and treatment

### FOURTH OF JULY FIREWORKS INJURIES

For five consecutive years from 1937 to 1941 inclusive the American Medical Association collected statistics relating to Fourth of July accidents resulting from fireworks and explosives The published analyses of these statistics were widely used in campaigns throughout the country to promote legislation banning the use of fireworks and for a safe and sane Fourth With the end of the war indications have come from several sources that fireworks manufacturers contemplate renewed campaigns to distribute explosives for use in celebrating Independence Day If this occurs, the inevitable result will be a great increase in the number of avoidable accidents from this source Consequently THE JOURNAL this year is resuming its collection of data on fireworks injuries Questionnaires are being sent to hospitals throughout the country, and their cooperation in the careful recording of fireworks injuries and prompt return of the information is urgently requested

### OUTLINE OF VITAMIN DEFICIENCIES

There appears in this issue (pp 666 and 667) an outline of the changes in the body resulting from vitamin deficiencies and their effective treatment This material has been prepared by the Council on Foods and Nutrition in conjunction with medical nutritionists familiar with the clinical detection of vitamin deficiency The signs and symptoms given in the outline represent current authoritative opinion as regards the stigma of vitamin lack As stated in the introductory comment, present knowledge does not justify the characterization of many of these changes as conclusive or pathognomonic, particularly when observed as an isolated finding Rather the abnormal finding should be considered as suggestive of the presence of a deficiency the existence of which should be corroborated by the finding of other changes and a history of dietary inadequacy

1 Harris H J Brucellosis Bull New York Acad Med 22: 147 (March) 1946

2 Goldfain Ephraim Chronic Arthritis and Undulant Fever Their Interrelationship J Oklahoma M A 31 111 (April) 1938

# MEDICINE AND THE WAR

## ARMY

### AVIATION MEDICAL EXAMINERS

A class of medical officers who have successfully completed the Aviation Medical Examiners' Course were recently graduated at the AAF School of Aviation Medicine, Randolph Field, Texas Brig Gen Eugen G Reinartz, commandant of the school, presented the diplomas

### AWARDED MERITORIOUS UNIT PLAQUE

The Meritorious Unit Service Plaque was recently awarded to the Pasadena Regional Hospital, Pasadena, Calif, for superior performance of duty in the maintenance of a high standard of discipline during the period Oct 1 1945 to March 31, 1946 On May 15, 1946 the Pasadena Regional Hospital became a general hospital and was renamed McCormack General Hospital It will become a plastic surgery and ophthalmologic center

### ARMY AWARDS AND COMMENDATIONS

#### Captain Donald W Cheff

Capt Donald W Cheff, Wilmington Del was recently awarded the Silver Star and the Bronze Star, posthumously The Silver Star was awarded to Captain Cheff for action on April 16, 1945 on Iwo Shima, the day he lost his life. The citation told how he landed with a platoon of his collecting company twenty-five minutes after H hour and set up a collecting station on the beach He led his litter bearers inland through heavy small arms fire and then returned to the beach, where he learned that casualties were mounting and that because of the long arduous litter haul there would be extended delay in evacuation By that time two ¼ ton ambulances had been landed Although Captain Cheff had been informed that the road to the regiment was insecure, heavily mined and under constant small arms fire, he personally led the ambulances to the battalion aid station, working through continuous enemy fire over a mine-strewn road He evacuated 8 casualties to the beach and then led the ambulances back and loaded them with 8 more casualties While proceeding back to the beach on the second trip, the ambulance in which he was riding struck a mine which killed all occupants

The Bronze Star medal was awarded the medical officer for action on Leyte on Dec 13 1944 During intense fighting troops suffered so great a number of casualties that it was impossible for litter bearers to evacuate the wounded from the battalion aid station because all routes to the rear had been cut off There existed only a route across 300 yards of rice paddies, waist deep in water Captain Cheff obtained an amphibious tractor to cross the paddy, directed it to the aid station and fearlessly accompanied it to the front lines where men had not yet been treated Dr Cheff graduated from the University of Nebraska College of Medicine, Omaha, in 1937 and entered the service June 20, 1942

#### Colonel Durward G Hall

Col Durward G Hall, formerly of Springfield, Mo, was recently commended by Lieut Gen John C H Lee U S Army, commanding who said Prior to your departure from the Mediterranean theater it is desired to commend you for the outstanding manner in which you performed your assigned mission of investigating the redeployment and utilization of medical department personnel in this theater Although assigned a definite War Department objective, you approached our medical problems with an open mind and visited every medical activity within the theater to determine by intimate contact our requirements to fulfil the assigned mission of this theater In spite of the exhausting nature of such a thorough survey in a limited period of time, you devoted many hours to acquainting individuals with the War Department redeployment policies and answering questions of personal interest to the individual Your keen perception and sound judgment resulted in recommendations to the War Department for adequate medical personnel and facilities to meet minimum occupational requirements These fair recommendations, which were made as a result of your searching survey, would not have been possible without an intimate knowledge of the problems presented"

Colonel Hall was also commended by Robert P Patterson, Secretary of War, who wrote 'I learn that you are about to terminate your tour of duty in the Surgeon General's Office following completion of your mission to the European and Mediterranean theaters and I wish to take this occasion to express to you my appreciation of the services which you have rendered over the past four months in assisting me in speeding up the release of medical department officers from the Army This work has been of an unusually valuable character and has been a direct aid to me in my discharge of the personal responsibility which I assumed last fall in this matter I wish to commend you officially for it'

Colonel Hall also received the Legion of Merit Accompanying this award was a citation stating, in part Col Durward G Hall, while serving in the Office of the Surgeon General in connection with personnel service from April 1942 to August 1945 was largely responsible for establishing numerous valuable personnel procedures His outstanding achievement in bringing great numbers of urgently needed doctors to the armed forces was an effective contribution to the welfare of the sick and wounded of World War II Dr Hall graduated from Rush Medical College Chicago, in 1935 and entered the service Jan 2, 1941

#### Major Bernard S Klauber

Major Bernard S Klauber, New York was recently authorized to wear the Army Citation Ribbon by direction of the Secretary of War for performance of meritorious service while serving as assistant chief of the neuropsychiatric service, Kennedy General Hospital Memphis Tenn, during the period January 1945 to December 1945 'Despite acute shortage of psychiatrists, Major Klauber cheerfully sacrificed virtually all his time and effort to achieving his mission His unselfish devotion to duty reflects great credit on himself and the military service' Dr Klauber graduated from New York University College of Medicine, New York in 1933 and entered the service Sept. 14, 1942

#### Captain Charles Marguiles

The Purple Heart and the Oak Leaf Cluster were recently presented to Capt Charles Marguiles New York, for wounds received on June 7 and June 9, 1944 during the invasion of Normandy Dr Marguiles graduated from New York University College of Medicine, New York in 1933 and entered the service Jan 23, 1941

#### Colonel Joseph M Hayman Jr

Col Joseph M Hayman Jr, Cleveland, was recently awarded the Legion of Merit for his outstanding work as chief of medical service at the Army's Tropical Disease Center, Moore General Hospital Swannanoa, N C Dr Hayman graduated from the University of Pennsylvania School of Medicine Philadelphia, in 1921 and entered the service in January 1942

#### Captain David Hadley

Capt. David Hadley Indianapolis was recently awarded the Bronze Star for going to an ambushed signal corps group and giving first aid, and for helping to rescue two airmen from a fallen plane and giving them first aid Dr Hadley graduated from the Indiana University School of Medicine, Indianapolis, in 1940 and entered the service April 27, 1942

# NAVY

## NAVY AWARDS AND COMMENDATIONS

### Commodore Thomas B Magath

The Legion of Merit was recently awarded to Commodore Thomas B Magath, Rochester Minn for exceptionally meritorious conduct as investigator for and adviser to the Surgeon General of the Navy on matters of sanitation and tropical medicine as navy representative on the Interdepartmental Quarantine Commission and as navy quarantine officer He visited many of the principal countries of the world helping to lay a foundation for future quarantine practices with special reference to air traffic' Dr Magath graduated from the University of Illinois College of Medicine Chicago in 1920 and entered the service June 21, 1941

### Lieutenant Commander Russell M Jensen

The Navy Unit Commendation Ribbon was recently awarded to Lieut Comdr Russell M Jensen San Diego Calif The citation read 'By virtue of your services in the unit during the above period (Dec 7 1941) you are hereby authorized to wear the Navy Unit Commendation Ribbon which is transferred herewith This authorization has been made a part of your official record in the Bureau of Naval Personnel The commendation is issued by direction of Chief of Naval Personnel W C Palmer Jr Lieutenant Commander U S N R' Dr Jensen graduated from Northwestern University Medical School Chicago in 1936 and entered the service Feb 4, 1941

### Captain Aclpfar Arell Marsteller

The Legion of Merit was recently awarded to Capt Aclpfar A Marsteller Chevy Chase, Md 'for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States in successive positions as organizer and medical officer in command of the Naval Mobile Hospital Number Six in New Zealand as medical officer in command of Navy Base Hospital Number Six in the advanced area as Medical Officer in command of the United States Naval Hospital San Leandro Calif and as special assistant in neuropsychiatry to the chief of the Bureau of Medicine and Surgery Because of his professional qualifications in neuropsychiatry and psychiatry and his unusual ability to organize and administer naval hospitals, Captain Marsteller was selected to establish the only neuropsychiatric hospital in the advanced areas and to reorganize two other hospitals in which the majority of patients were suffering from neuropsychiatric conditions Suggesting improved methods for the treatment of combat fatigue, he helped to make rehabilitation possible for a large number of cases and by his professional advice and experience rendered service of inestimable value on the Clemency Board Captain Marsteller's devotion to duty throughout his many assignments contributed to the health and welfare of personnel of the United States Naval Service" Dr Marsteller graduated from the Medical College of Virginia Richmond, in 1906 and entered the service Sept 14 1921

### Captain Albert M Snell

Capt Albert M Snell Rochester, Minn, was recently commended by the Secretary of the Navy for meritorious performance of duty as chief of the medical service United States Naval Hospital Oakland, Calif, from March 20, 1944 to Nov 5 1945 An inspiring leader and teacher, Captain Snell rendered invaluable service in efficiently administering the medical work at this hospital despite the tremendous turnover in patients Outstanding in the field of internal medicine, he was highly regarded by civilian leaders in this field in the San Francisco area and, by his important work with these specialists, brought great credit to the Naval Medical Corps Captain Snell's untiring devotion to the care of the sick and injured was in keeping with the highest traditions of the United States Naval Service" Dr Snell graduated from the University of Minnesota Medical School, Minneapolis, in 1918 and entered the service Dec 26, 1941

## THIRTY-EIGHTH ANNIVERSARY OF NAVY NURSE CORPS

The Navy Nurse Corps on May 13 celebrated the thirty eighth anniversary of its establishment In recognition of the occasion, Secretary of the Navy James Forrestal sent the following congratulatory message to Vice Admiral Ross T McIntire, Surgeon General of the Navy

"On the thirty-eighth anniversary of the Nurse Corps, I want to express on behalf of the Navy Department my congratulations to the Corps for its able performance in the war and its continuing activity in peace

'To the Nurse Corps may be attributed a substantial share of credit for the Navy's low death rate of casualties Throughout the war at advanced bases afloat and in the air, as well as at home navy nurses carried on their vital work with patience devotion fortitude and skill in the best traditions of their profession and of the Navy'

## LONG ISLAND COLLEGE OF MEDICINE COMMENDED

A Navy Department certificate of commendation was recently awarded to the Long Island College of Medicine for its part in training officers for the Medical Corps under the Navy C V-12 program

# VETERANS

## VETERANS' APPOINTMENTS

Dr Charles R Hess, Philadelphia, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He will assume the duties of physician in tuberculosis at the Veterans Administration Hospital, Oteen, N C

Dr Elmer P Sauer, Pittsburgh, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of tuberculosis specialist at the Veterans Administration Hospital, Dayton, Ohio

Dr Irving Pine Binghamton N Y recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of physician in tuberculosis at the largest Veterans Administration Tuberculosis Hospital, Oteen, N C

Dr Charles J Kaufman, Denver, recently accepted an appointment in the Department of Medicine and Surgery of the Veterans Administration He has assumed the duties of chief of the tuberculosis section at the Veterans Administration Hospital, Castle Point, N Y

Dr Neville H McNerney, formerly of Cleveland, has been appointed medical director of the Veterans Administration branch office number 6 with headquarters at 52 South Starling Street, Columbus Ohio He will have jurisdiction of the Veterans Administration activities in Ohio Kentucky and Michigan

## HOSPITAL CORPS VETERANS

Ruth O Kirkland, national secretary of the National Association of Veterans of the Hospital Corps, recently stated that this organization is setting up local chapters all over the states and is urging that doctors, hospitals and industry as a whole hire these medically trained veterans through the national headquarters office, 1705 M Street N W, Washington 6, D C, or through the local chapters of the National Association of Veterans of Hospital Corps

The National Association was chartered Aug 14, 1945 in the District of Columbia Those eligible for membership are honorably discharged hospital corpsmen of the Navy and Coast Guard and medical corpsmen of the Army

# PHYSICIANS SEPARATED FROM SERVICE

## ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

### Alabama

| | |
|---|---|
| Gordon George F | Birmingham |
| Long William H | Birmingham |
| McCarn Dan W | Warrior |
| McLeod John C Jr | Bay Minette |
| Moody Frank S | Tuscaloosa |
| Nicholson William H Jr | Fairfield |
| Noble William | Atalla |
| Richardson Peter L | Tuskegee |
| Richey Carl B Jr | Fort Payne |
| Trucks James F | Birmingham |

### Arizona

| | |
|---|---|
| Gonzalez Pablo M | Clifton |
| Porter Dwight H | Phoenix |
| Reed, Ernest C | Whipple |

### Arkansas

| | |
|---|---|
| Kirkland Samuel S | Marshall |
| Magness William C | Camden |
| Reed Charles C Jr | Little Rock |
| Turnbow, Robert L | Little Rock |

### California

| | |
|---|---|
| Acquarelli Mario J | Pasadena |
| Arnold Harry J | San Jose |
| Bartlett Alexander G | San Francisco |
| Berlove Ira J | San Francisco |
| Clark Wilfred S | Ventura |
| Cunningham Ralph T | Bakersfield |
| Davis Barnard | San Francisco |
| Edwards James S Jr | San Francisco |
| Effron Morton | Los Angeles |
| Feinstein Walter | Los Angeles |
| Gardemer Crane | San Francisco |
| Gill Gerald G | Oakland |
| Goldman Mervin J | San Francisco |
| Goldstein David M | Los Angeles |
| Green, Sydney H | Alcatraz Island |
| Hall Colby | Los Angeles |
| Harper Howard E. | Los Angeles |
| Harrod Charles S | San Francisco |
| Highman Walter J Jr | San Francisco |
| Jamison Robert C | Sacramento |
| Jones William A | Los Angeles |
| Kelley Douglas M | San Francisco |
| Kellogg Frederick | Long Beach |
| Kimball Theodore S | Glendale |
| King Stuart D | Pasadena |
| Kirz Edward A | Los Angeles |
| Laubhan Royle K. | San Francisco |
| LeDuc Isidor E Jr | San Diego |
| Lee Gilbert | Los Angeles |
| Levin Edward A | San Francisco |
| Lomas Max I | Los Angeles |
| Lovell Robert A | San Gabriel |
| Lyster Russell W | Los Angeles |
| Macer George A | Pasadena |
| May Angelo M Jr | San Francisco |
| Meals, Robert W | Los Angeles |
| Mintz I Lew | Los Angeles |
| Miracle Floyd A | Los Angeles |
| Mollenhauer Robert L | San Francisco |
| Newkirk, Merlin L | South Gate |
| Nisbet, Thomas W | Pasadena |
| Paoli Theodore H | San Francisco |
| Paullus George E Jr | Los Angeles |
| Pearl Milton J | San Francisco |
| Peers Robert S | Oakland |
| Pierose Perry N | Los Angeles |
| Pitlick William J | Pasadena |
| Powers Francis I | Glendora |
| Quinn Vincent J | Los Angeles |
| Rebell Frederick G | Los Angeles |
| Reilly William A | San Francisco |
| Reinberg Martin H | Los Angeles |
| Renger Julius J | Ventura |
| Richards Dexter N Jr | Berkeley |
| Rovak Anthony S | San Francisco |
| Rucker Rufus C | Oakland |
| Schenk, Harry L | Los Angeles |

### California—Continued

| | |
|---|---|
| Schneiderman Abraham | Los Angeles |
| Shapiro Morton | Los Angeles |
| Shumbane, Hyman J | Los Angeles |
| Sinclair Archibald D | San Francisco |
| Slocum, Yudell K | Van Nuys |
| Staley Percy A | Palm Springs |
| Stanton Elvin H | Glendora |
| Steindel Sam | Los Angeles |
| Stephenson William H | Los Angeles |
| Stern Bruce D | Los Angeles |
| Sturgeon Phillip | West Los Angeles |
| Thompson Donald G | Los Angeles |
| Thompson Kenneth J | Piedmont |
| Thompson Robert P | San Francisco |
| Thompson Vernon P | Los Angeles |
| Thorner Meyer C | Los Angeles |
| Townsend Kenneth | Los Angeles |
| Traxler Paul S | Los Angeles |
| Warnock Ernest H | San Marino |
| Weitz Marion G | San Bernardino |
| Westerhout, Fritz C | Manhattan Beach |
| Westphal, Glenn A | Elsinore |
| Wier Robert H | Los Angeles |
| Wilson Clay M | Pasadena |
| Wolff Frederick S | San Francisco |
| Woro Benjamin | Chowchilla |
| Wright Vinton H | Los Angeles |
| Wyers Robert E | Spadra |

### Colorado

| | |
|---|---|
| Gilman Harold E. | Denver |
| Holmes Harry S | Springfield |
| Menser Thomas D | Trinidad |
| Morgan David W | Denver |
| Mousel Claude M | Frederick |
| Randall, Morton H | Denver |
| Sadler Jackson L | Fort Collins |
| Straub John C | Flagler |
| Thorsness Edwin T | Denver |

### Connecticut

| | |
|---|---|
| Abrahams Meyer | New Canaan |
| Comstock Edward R | New London |
| Donnelly William A | Bridgeport |
| Flynn Harold A | New Haven |
| Monahan David T | Bridgeport |
| Rogol Louis | Danbury |
| Sherman Milton | Bridgeport |

### Delaware

| | |
|---|---|
| Feltz Thomas F | Wilmington |
| Lawrence, Charles T | Wilmington |
| Maroney, John W | Wilmington |
| Strobino Louis J | Wilmington |
| Washburn Victor D | Wilmington |

### District of Columbia

| | |
|---|---|
| Barton Jackson A. | Washington |
| Cross Allen S | Washington |
| Danish Jacob M | Washington |
| Fugitt Elmer W | Washington |
| Pellegrini Frank S | Washington |
| Reeves Clyde P | Washington |
| Smith James K. | Washington |
| Swartwout John A | Washington |
| Taggart Samuel R. | Washington |
| Tierney Gerald M | Washington |
| Trenis John W | Washington |
| White, Herman C. | Washington |
| Whitesell Frank B Jr | Washington |
| Whitman Beniah L | Washington |
| Wilson Alfred | Washington |

### Florida

| | |
|---|---|
| Boros William K. | Miami |
| Frederick, Albert R. | St Petersburg |
| Garcia Louis J | Tampa |
| McLeod, Norman W Jr | Miami |
| Messer Addison L | Tallahassee |
| Murphey, Daniel F H. | St Petersburg |

### Florida—Continued

| | |
|---|---|
| Nuzum, Russell K Jr | Miami |
| Poppe Frederick P | Miami |
| Ravitch Samuel J | Quincy |
| Ringer, Edward L | Lakeland |

### Georgia

| | |
|---|---|
| Arp Charles R | Atlanta |
| Berg, Joseph L | Augusta |
| Bolt William C | Atlanta |
| Bramblett August W Jr | Forsyth |
| Ferrell, Thomas J | Waycross |
| Frierson, Norton Jr | Atlanta |
| Lovejoy, George S | Atlanta |
| McAfee John C | Macon |
| Rambo, John H T | Atlanta |
| Rasmussen Earl | Emory University |
| Tucker John P | Augusta |
| Tyler Herbert D | Atlanta |

### Idaho

| | |
|---|---|
| Talbot Robert E | Wilder |
| Tall Asael | Rigby |

### Illinois

| | |
|---|---|
| Adland Samuel A | Chicago |
| Anderson, James O | Downey |
| Aufrecht Ernst | Benton |
| Baleiko Walter F | Oak Park |
| Blair Earl H | Chicago |
| Blaufuss Armin L | Geneva |
| Bher Zachary A | Chicago |
| Buttemiller George | Libertyville |
| Canfield Bruce H | Rockford |
| Cmelis Adolph R. | Marengo |
| Cohlan Wilbur R | Chicago |
| Collins Jerre C Jr | Cairo |
| Curtis David T | Farmer City |
| Davis John Llewellyn | Quincy |
| De Silva Edward B | Rock Island |
| Farrington Joseph D | Chicago |
| Fleck Warren L | Downers Grove |
| Freeland John E | Waukegan |
| Gray Thomas J | Rockford |
| Gustafson Joseph G | Moline |
| Hajduk, John M | Chicago |
| Hardt Harry G Jr | Chicago |
| Hirz Max | East St Louis |
| Howell Joseph D | Marshall |
| Kane Jerry J | East St. Louis |
| Kinzer Richard E | Chicago |
| Larrain Abel R | Chicago |
| Lebovitz Louis | Chicago |
| Levey Calvin I | Chicago |
| Lombardo Ignace P | Chicago |
| Marks Louis M | Chicago |
| Mundt G Henry Jr | Chicago |
| Nachman Adolph R | Chicago |
| Nelson Charles A | Pekin |
| Palmer William H | Rockford |
| Partipilo Anthony V | Chicago |
| Pastron Seymour S | Chicago |
| Perry Edward J | Chicago |
| Phelps Gardner D | Chicago |
| Phillips Frederick L | Chicago |
| Pisarski Edmund S | Chicago |
| Pope, George J | Chicago |
| Price, Harold | Chicago |
| Queen Frank B | Chicago |
| Ransom Gilbert T | Fairfield |
| Ries Lincoln | Chicago |
| Rosenblum Bernard F | Chicago |
| Rosengard Jerome L | Chicago |
| Saxon Leonard | Chicago |
| Schlesinger, Lee H | Hines |
| Schorr, Hyman J | Chicago |
| Seron, Vaheh M | Joliet |
| Serota Herman M | Chicago |
| Siemens, Roman | Chicago |
| Skinner, Merton B | Joliet |
| Snyder, Rufus A. | Chicago |

# PHYSICIANS SEPARATED FROM SERVICE

### Illinois—Continued

| | |
|---|---|
| Stansfield, Joseph T | Mt Carmel |
| Stazio Gerald M | Chicago |
| Stearns Alexander L | Chicago |
| Steckel Richard H | Chicago |
| Steinberg David W | Chicago |
| Stenn Fred F | Chicago |
| Stephens Edward F | Centralia |
| Sullivan William B | Chicago |
| Sutch, Vincent J | Champaign |
| Sweitzer Caesar | Chicago |
| Terrell Elmer E | Paris |
| Tulsky, Alex S | Chicago |
| Tysell, John E | Chicago |
| Weiss Leon H | Chicago |
| Werbel Harold J | Chicago |
| Willett Bradford J | Chicago |
| Wonderly Earl W | Aurora |
| Yamazaki, James N | Chicago |

### Indiana

| | |
|---|---|
| Denzer Edward K | Evansville |
| Dick Jack | Huntington |
| Fodor Oscar A | South Bend |
| Funkhouser James B | Indianapolis |
| Gladstone Naf H | Fort Wayne |
| Godersky George E | South Bend |
| Graham, Thomas G | Lafayette |
| Grigsby Robert E | Ligonier |
| Gros Hubert | Delphi |
| Hammersley George K | Frankfort |
| McCabe Theodore E | Fort Wayne |
| McFadden James M | Fort Wayne |
| Newcomb William K | Royal Center |
| Patton Rudolph F | Linton |
| Porter William L | College Corner |
| Premuda Franklin F | East Chicago |
| Price James O | Indianapolis |
| Reeves James R | Indianapolis |
| Reid Charles A | Indianapolis |
| Rudolph Carl J | South Bend |
| Stout Walter M | New Castle |
| Tate A Elizabeth G | Dunkirk |
| Wicker Eugene H | Gary |
| Wood William H | Evansville |

### Iowa

| | |
|---|---|
| Anderson Nevin B | Des Moines |
| Egloff William C | Mason City |
| Nolan John C | Ogden |
| Peisen Conan J | Des Moines |
| Penly, Don H | Waterloo |
| Rathe Herbert W | Waverly |
| Snyder Glen E | Grimes |
| Westly Gabriel T | Manly |
| Winter, Donald K | Indianapolis |

### Kansas

| | |
|---|---|
| Glazer Michael H | Leavenworth |
| Greenwood Edward D | Topeka |
| Hokr William K | Ellsworth |
| Lepon Arthur | Leavenworth |
| McLain Crawford E | Kansas City |
| Pinsker Jacob A | Hutchinson |
| Plett John V | Buhler |
| Poling Fowler B | Halstead |
| Remsberg Robert R | Kansas City |
| White Ralph E | Garnett |
| Williams Harold O | Cheney |

### Kentucky

| | |
|---|---|
| Bate, John T | Louisville |
| Carson William O | Bowling Green |
| Davis William B | Harrodsburg |
| Futrell John | Cadiz |
| Haynes John E | Dawson Springs |
| Liebert Louella H | Louisville |
| Manney Willis E | Outwood |
| Miller Joseph R | Hazel |
| Moore, Frank H | Bowling Green |
| Phillips Irwin E. | Worley |
| Reitz John F | Newport |
| Speir Charles H | Outwood |
| Twyman Wilbert M | Louisville |
| ashburn Burton V | Paducah |

### Louisiana

| | |
|---|---|
| Brown Joseph W Jr | Thibodaux |
| Burnstein Norman | New Orleans |
| De Laureal Thomas H | Lake Charles |
| Fishbein Harry | New Orleans |
| Garber Jared Y | Lake Charles |
| LaBarge Oza J | New Orleans |
| Lester Roy T | Coushatta |
| Marks Paul L | New Orleans |
| Martin, Roy V | Winnfield |
| Matthews, Edward D | New Orleans |
| Miangolarra, Charles J | New Orleans |
| Riche Hypolite G Jr | Baton Rouge |
| Swearingen David C | Shreveport |
| Wichser Celeste G | New Orleans |

### Maine

| | |
|---|---|
| Applin Hilton H | Brunswick |
| Brann Henry A | Madison |
| Curran Edward L | Bangor |
| Larrabee Charles F | Bar Harbor |
| LaTourette Kenneth A | Farmington |
| Lovelace Daniel D, Jr | Gorham |
| *Poore George C* | *Portland* |
| Rosenberg Nathan | Togus |
| Sweetser Peter W | Caribou |
| Trask Burton W | Augusta |

### Maryland

| | |
|---|---|
| Brooks Ross C | Baltimore |
| Conn Howard F | Baltimore |
| Copeland Murray M | Baltimore |
| Finney George G | Baltimore |
| Kinnamon Howard F Jr | Baltimore |
| Levin Max | Baltimore |
| Michaelson Elliot | Baltimore |
| Peter Arnold L | Baltimore |
| Scott, John M | Baltimore |
| Spear, Paul W | Baltimore |
| Stone Douglas H | Baltimore |
| Strong James C | Sparrows Point |

### Massachusetts

| | |
|---|---|
| Banquer Jacob E | Boston |
| Bluhm Samuel | Dorchester |
| Carr Francis H | Worcester |
| Cleary George H | Medford |
| Cross, Merrill M | Clinton |
| Cruff Frederick E | Norwell |
| Cutler, Isadore L | Waltham |
| Dodge George A | Brookline |
| Finck Albert J | Brookline |
| Gavolio Frank J | Waltham |
| Grife, Harry E | Roxbury Boston |
| Lipman, Daniel G | Lynn |
| Looney Joseph M | Norwood |
| McDermott John R | Methuen |
| Manelis Samuel R | New Bedford |
| Miller Nathaniel B | Greenfield |
| Nugent, Richard S | Wellesley |
| Palladino Charles A | Lynn |
| Pratt, Thomas D | Brookline |
| Raisbeck Alden | Boston |
| Rosenblum Garson M | Worcester |
| Shipp Luther M | West Medford |
| Souliotis Paul T | Worcester |
| Splaine, Russell L | Belmont |
| Steinberg Irving H | Northampton |
| Sullivan Charles R Jr | Pittsfield |
| Twarog Walter L. | Lowell |
| Whiting Richard G | Medford |
| Woolf Ralph B | Dorchester |

### Michigan

| | |
|---|---|
| Blashill James B | Detroit |
| Blum Benjamin B | Petoskey |
| Bookstein Abraham M | Detroit |
| Byrnes Allen W | Fort Custer |
| Cotant, John F | Detroit |
| Dana Harold M | Detroit |
| Doyle, Charles R. | Lansing |
| Durocher Raymond E | Ecorse |
| Fajans, Stefan S | Ann Arbor |
| Farhat Maynard M | Flint |
| Fill Leon | Detroit |

### Michigan—Continued

| | |
|---|---|
| Fulgenzi Andrew A | Detroit |
| Gabe Sigmund | Detroit |
| Gordon William H | Detroit |
| Gray, Edwin F | Flint |
| Greenbaum Henry | Detroit |
| Hart Charles E | Detroit |
| Hart, Russell T | Niles |
| Harvey Harmon T | Detroit |
| Howard Merildeen W | Detroit |
| Laird James I | Dearborn |
| Lane Milton | Bay City |
| List Martin L | Ann Arbor |
| MacMillan James M | Detroit |
| Mattson Harold F | Hillsdale |
| Metes John | Pontiac |
| Newkirk John A | Norway |
| Porritt Ross J | Pontiac |
| Postma Edward Y | Grand Rapids |
| Reck Lawrence E | Adrian |
| Robinson, Harold A | Detroit |
| Rosenman, Leonard D | Detroit |
| Schwartz Oscar D | Detroit |
| Sluyter, John S | Grand Rapids |
| Stokfisz Thaddeus | Detroit |
| Tarter, Clyde S | Bay City |
| Taylor, Ivan B | Detroit |
| Tellman, Henry C | Muskegon |
| Timmons John R | Detroit |
| White, Prosper D | Highland Park |
| Wiltberger Benjamin R | Detroit |
| Winfield, James M | Detroit |

### Minnesota

| | |
|---|---|
| Allen, Edgar V | Rochester |
| Freeman, Charles D Jr | St. Paul |
| Godwin, Bernard E | Minneapolis |
| Hagen, Kristofer | Minneapolis |
| Harper Samuel B | Rochester |
| Kauvar, Abraham J | Rochester |
| King Llewellyn H | St Cloud |
| Kuhlmann Lawrence B | Melrose |
| Murphy, Joseph E | Marshall |
| Musachio Nicholas F | Foley |
| Nelson, Carleton A | Minneapolis |
| Nelson Kenneth L | Montgomery |
| O'Brien William M | St Paul |
| Palmerton Ernest S | Albert Lea |
| Potek, David M | International Falls |
| Sevenants John J | Minneapolis |
| Sharpe Wendell S | Rochester |
| Stransky, Theodore W | Owatonna |
| Stroebel, Charles F | Rochester |
| Taylor, Edward S | Worthington |
| Thoun, Laurence G | Hibbing |
| Tudor Robert B | Hibbing |
| Weisel Wilson | Rochester |
| Wetzel Earl V Jr | Little Falls |
| Wulf, Robert F | Rochester |
| Wyant, Marcus E | Park Rapids |

### Mississippi

| | |
|---|---|
| Cooke, Games L | Coffeeville |
| Graves James A | Biloxi |
| Moseley, Thaddeus M | West Point |
| Mounger Samuel G | Yazoo City |
| Sheely, Wallace P | Gulfport |
| Smith Mason C | Meridian |
| Street Richard A Jr | Vicksburg |
| Sugg, Samuel C | Calhoun City |
| Swindoll Bryant S | Slate Springs |

### Missouri

| | |
|---|---|
| Berney Francis J | St Joseph |
| Cason Elbert H | St Louis |
| Catanzaro Anthony F | St. Louis |
| Edwards Ernest V | Kirkwood |
| Fitzgerald Leo P T | University City |
| Jessell Charles T | Higginsville |
| Kaminsky David | St. Louis |
| Malinowski Mitchell V | St Joseph |
| Martin, William R. Jr | Joplin |
| Mueller, Clarence E. | St. Louis |
| Park, Oakley K. Jr | St. Louis |
| Piekarski Anthony A | St. Louis |

# PHYSICIANS SEPARATED FROM SERVICE

### Missouri

| | |
|---|---|
| Porter Columbus H | Poplar Bluff |
| Robertson Robert B | Cabool |
| Smith Hugh Reinhardt | St Louis |
| Stapp Roth V | Kansas City |
| Summers, Joseph S Jr | Jefferson City |
| Tunney, Malcolm J | St Louis |
| Williams Pearl A | St Louis |
| Wissmath Frank S | Clayton |
| Wolf Jack W | Kansas City |

### Montana

| | |
|---|---|
| Hall Cecil M | Great Falls |
| Mitschke John J Jr | Helena |

### Nebraska

| | |
|---|---|
| Clarke Roger G | Seward |
| Cullen George Jr | Lincoln |
| Downing John E | Omaha |
| Dworak Henry L | Omaha |
| Podlesak James I | Lincoln |
| Sydow Henry | Omaha |
| Tushla Francis M | Auburn |
| Williams Martin P | Franklin |
| Wilson Donald J | Omaha |

### Nevada

| | |
|---|---|
| Nash Louis | Las Vegas |

### New Hampshire

| | |
|---|---|
| Mulvanity Richard T | Nashua |
| Parkinson Dwight | Hanover |
| Weinberg Julius | Concord |
| Wolff Max H | Manchester |

### New Jersey

| | |
|---|---|
| Baldini Charles F Jr | Union City |
| Balson Zachary D B | Newark |
| Brandman Otto | East Orange |
| Downs Louis S | Carteret |
| Franco Biagio | Palisade |
| Gehl Raymond H | Newark |
| Glaus Samuel D | Avon |
| Goldstein, Oscar E | Passaic |
| Gullord Edward G | Upper Montclair |
| Hendrickson Harold W | Audubon |
| Kibbe Milton H | Plainfield |
| Kimmel M Leonard | Jersey City |
| Kruger Alfred L | Jersey City |
| Kuperman Henry L | Newark |
| Lieberman Milton L | Rosell Park |
| McCracken Josiah C Jr | Ventnor |
| Marquise Albert T | Trenton |
| Martin Leonard J | Orange |
| Miller Nathan | Irvington |
| Ornaf Ignace E | Camden |
| Palazzo William L | Boonton |
| Pollock Theodore | Clifton |
| Raso Frank L | Union City |
| Reilly Christopher J | Newark |
| Rogers Richard M | East Orange |
| Roston Mark A | Newark |
| Rothgesser Jerome C. | Newark |
| Saunders George R | Maplewood |
| Schultz John M | West New York |
| Simon Julius J | Passaic |
| Sperling Irving L | Newark |
| Tocci Frank P | Verona |
| Weekes, Leroy R | Atlantic City |
| Whelan Vincent M | West End |
| Wollack Alfred R | Park Ridge |
| Wood Alfred E | Jersey City |

### New Mexico

| | |
|---|---|
| Barzune Benjamin | Eunice |
| Pavletich Louis M | Raton |
| Peacock Wendell H | Farmington |
| Tubbs William M | Silver City |

### New York

| | |
|---|---|
| Abrams Raymond M | Elmhurst |
| Abramson Harry | Brooklyn |
| Alsever William D | Syracuse |
| Anderson John V | Delevan |
| Baum Victor | Brooklyn |
| Bauman, Stewart | Syracuse |
| Bednarz Steven I | Welfare Island |
| Berkman William H | Brooklyn |
| Berlin, Irving | New York |
| Berman Samuel S | New York |
| Bickel Juda B | Brooklyn |
| Blanchard George C Jr | New York |
| Blaustein Irving H | Brooklyn |
| Carey Edward T | New York |
| Carotenuto Ralph J | Brooklyn |
| Chasen, William H | Brooklyn |
| Chipkin Irving | Brooklyn |
| Clark Bliss B | New York |
| Cohen Harry M | New York |
| Colella Michael A | Rome |
| Crouse Irving I | Buffalo |
| Dana Edward | Suffern |
| Dick Frederick S | New York |
| Dorf Victor | Brooklyn |
| Evers Thomas J Jr | Manhasset |
| Falsey Edward F | Brooklyn |
| Feldman Samuel L | Yonkers |
| Felmus Laurence B | New York |
| Ferrante Frank F | Brooklyn |
| Fimia Victor J | New York |
| Fine Bernard D | New York |
| Ford John R | Gloversville |
| Fraden William | Bronx New York |
| Fradkin Irvin M | Freeport L I |
| Fried Emery I | Bronx New York |
| Friedman Harry M | Utica |
| Gay Remo E | Brooklyn |
| Gellar Abraham | Brooklyn |
| Gentner George A | Buffalo |
| Gerbasi Michael J | Rochester |
| Getzlek Jack | Utica |
| Gingsberg Victor | Brooklyn |
| Gitman Leo | Brooklyn |
| Glashow Jules L | Atlantic Beach L I |
| Glass Ameil | New York |
| Glick Jacob J | Brooklyn |
| Goldfarb Walter | Forest Hills |
| Goodfried, Milton S | New York |
| Gottlieb Hugo | Forest Hills |
| Graceffo Frank A | Auburn |
| Graff Frederick L | New York |
| Green, Daniel M | Valley Stream L I |
| Green Marvin C | New York |
| Greenberg Louis | New York |
| Groeber Edward O | Brooklyn |
| Gross Arnold | Utica |
| Gross Reuben | Brooklyn |
| Haas Merrill P | New York |
| Hellman Sidney J | Bronx New York |
| Hendler Hyman B | Lynbrook L I |
| Herfort Robert A | New York |
| Howard Raime G | Lyons |
| Hyams Robert G | New York |
| Ireland, Corydon B | Buffalo |
| Jacobs John B | Brooklyn |
| Jarus William M | Canastota |
| Johnson Harry G | Buffalo |
| Kanner Morris | Brooklyn |
| Kaplan Mayer S | Brooklyn |
| Kass Albert | Bronx New York |
| Kaunitz Paul E | New York |
| Kornbluth Leon | Brooklyn |
| Kuhn Horace F | Machias |
| Kupferberg Julius D | Bronx New York |
| Lacey Warren W Jr | Brooklyn |
| Lacy Curtis R | Freehold |
| La Duca Paul | Angola |
| Landmann Heinz R. | New York |
| Laven Henry | Brooklyn |
| Lesnick Gerson J | New York |
| Letterese Anthony J | New York |
| Lichtenfeld George | Lake Ronkonkoma |
| Lieberman Jess J | Brooklyn |
| Lief Harold | Rockaway Beach |
| Linderman Nicholas | Buffalo |
| Lippman Richard W | New York |
| Lipschutz Paul C | Middletown |
| Livingston Herman H | New York |
| Lizzi Arthur J | Brooklyn |
| Looms Herbert E | Johnson City |
| Lopyan Milton | Brooklyn |
| McCarthy, Edwin E | Auburn |
| McCormack Richard R. C | New York |
| McMartin Daniel M | Johnstown |
| Mangels Martin Jr | Hollis L I |
| Margulies Bernard | Brooklyn |
| Margulies Charles | Brooklyn |
| Markel William M | New York |
| Marvin Joseph H | New York |
| Meisner Adolph | Brooklyn |
| Mele Dominick | Schenectady |
| Mendeloff Joseph | New York |
| Miller David B | Elmira |
| Mirsky Louis H | Brooklyn |
| Morris Abner | Hewlett |
| Musselman Martin L | Buffalo |
| Nayer Herman R | New York |
| Nightingale Michael M | New York |
| Oliver Samuel | Woodmere L I |
| Padwisocka, Louis K | New York |
| Pascucci Lucien M | New York |
| Pastore Lucien | Ballston Spa |
| Patt Jesse | Bronx |
| Pauncz Arpad | New York |
| Pearl Herbert | Brooklyn |
| Percival Robert T | Brooklyn |
| Peterson John W | Brooklyn |
| Phelps Joseph | Deposit |
| Portnoy Louis | New York |
| Povlin Sheppard S | New York |
| Preston Robert L | New York |
| Quandt Marshall W | Waterford |
| Queally Francis J | Yonkers |
| Rao Joseph A | Brooklyn |
| Raphael Murray | New York |
| Reed George F | Troy |
| Ridley James B | New York |
| Ritey Hector J | New York |
| Rivellese Julius C | Brooklyn |
| Rizzolo Alfred F | Wingdale |
| Rosenbluth Sidney B | New York |
| Rosenkrantz Jacob A | New York |
| Rosenthal Abraham | Brooklyn |
| Ross Harold G | St Johnsville |
| Rubin Gustav | New York |
| Runge Carl F | Schenectady |
| Rupert, Arthur W | Albany |
| Sager Bernard | Brooklyn |
| Sanford Donald B | Syracuse |
| Schaffeld Henry G | Brooklyn |
| Schisano Salvator A | Jackson Heights |
| Schoenfeld Irving | New York |
| Schopick Louis E | Bronx |
| Schrenk Felix A | Chestertown |
| Schwartz I Richard | Brooklyn |
| Schwartz, William A | Brooklyn |
| Scialabba Joseph | Brooklyn |
| Seley Gabriel P | New York |
| Selikoff Solomon J | Brooklyn |
| Shannon Thomas R | Glens Falls |
| Shapiro Howard E | Brooklyn |
| Sheintoch Hyman R | Brooklyn |
| Shenkman Samuel | New York |
| Sher Malcolm F | New York |
| Silverman, Isadore J | New York |
| Simon Jesse S | Brooklyn |
| Sklar Harry | Hempstead |
| Smith Philip H | New York |
| Sobol Jacob M | New York |
| Solomon Samuel L | Brooklyn |
| Spigelman Louis | Jamaica |
| Stahler Christopher Jr | Albany |
| Steckler Julius | New York |
| Stein Alexander | New York |
| Stephens Charles A L Jr | New York |
| Stern Seymour H | New York |
| Stevens George E | Hudson |
| Stickney John W | Elmhurst |
| Stillman Isadore W | Brooklyn |
| Stone, Melvin L | New York |
| Stumpf Winfield E | Forest Hills |
| Surtshin Adolph | New York |
| Svedlow Bernard D | Bronx |

# PHYSICIANS SEPARATED FROM SERVICE



### New York—Continued

| | |
|---|---|
| Taft Richard H | Yonkers |
| Tannenbaum Herman | New York |
| Taylor Charles W | Kings Park |
| Thorpe John J | New York |
| Thurrott John C | New York |
| Tibone, James J | Rockville Centre |
| Tillman Alvin J B | New York |
| Tobey Max | New York |
| Townsend Alden J | Dansville |
| Turney Miller F | Bronxville |
| Waldman Milton M | Bronx |
| Walsh Redmond B | Bronx |
| Ward George J | Cohoes |
| Weitzner Imre | New York |
| Wels Philip B | Buffalo |
| White Algird F | Brooklyn |
| White Edward L | Woodhaven |
| White Roger E | Brooklyn |
| Wiener Louis M | Long Island City |
| Wilkinson Joseph B | Bronx |
| Williams Mark H | Binghamton |
| Willner Victor | Woodmere L I |
| Willoughby Robert J | Rochester |
| Winston Thomas M | Sayville |
| Winter Alexander | New York |
| Winter Leonard | Bronx |
| Wolff Julian | Forest Hills L I |
| Woodin William G | Dunkirk |
| Wright, Kenneth B | New York |
| Yudell Milton H | Bronx |
| Zaia Anthony J | Oneida |
| Zankan, Leo | Brooklyn |
| Zavisca Ernest G | Endicott |
| Zobel Harold | Brooklyn |

### North Carolina

| | |
|---|---|
| Boney Elwood R | Kingston |
| Bruce William H | Winston-Salem |
| Corwin Warren C | Greensboro |
| Green Donarell R Jr | Durham |
| Haines Charles E Jr | Durham |
| Hardre Rene | Greensboro |
| Lambert Critz F | Spruce Pine |
| Lott William C | Asheville |
| Martin, Lester P | Mocksville |
| Moore Robert L | Hickory |
| Morey Milton B | Newport |
| Redwine James D | Lexington |
| Smith Opie N | Greensboro |
| Stauffer Charles C | Durham |
| Street John M | Durham |
| Teasdale Laurie R | Charlotte |
| Weinstein Morton H | Fairmont |
| Williams McChord | Charlotte |
| Wilson George D | Kernersville |

### North Dakota

| | |
|---|---|
| Rich George T | Grand Forks |

### Ohio

| | |
|---|---|
| Adelman Louis | Cleveland |
| Allison, Henry W | Oak Hill |
| Asahina Shoichi | Toledo |
| Barnhiser Von Bergen | Camden |
| Beeman Harry O | Port Clinton |
| Best Marshall M | Xenia |
| Bowman Brack M | Youngstown |
| Boyle Peter L | Youngstown |
| Braun Emery J | Akron |
| Brody Melvin | Canton |
| Brooks Louis H | Cleveland |
| Chazin Benjamin J | Dayton |
| Crum Louis J | Cincinnati |
| Finke Frederick C | Columbus |
| Floridis Gregory G | Dayton |
| Foertmeyer Charles H | Cincinnati |
| Freedman Eugene | Cleveland |
| Frush, Riley E | Lexington |
| Gillespie Emerson | Canton |
| Glorioso John A | Lima |
| Goldberg Morris | Columbus |
| Herman William W | Cleveland |
| Hillegass Victor E | Akron |
| Hochhausler Carl J | Cincinnati |

### Ohio—Continued

| | |
|---|---|
| Ipp Herman H | Youngstown |
| Jacques Richard H | Cleveland |
| Junkermann, Edgar B | Columbus |
| Kalina, Roger K | Cleveland Heights |
| Keys, Harry J Jr | Bexley |
| King James D | Columbus |
| Kunz Franklyn C | Akron |
| Lauer, Howard | Dayton |
| Markey, Oscar B | Shaker Heights |
| Maurer, Elmer P R | Cleveland |
| Moreland Marion T | Columbus |
| Mowry Robert S | Lima |
| Muckley James M | Akron |
| Needham Leslie E | Conneaut |
| Neiswander, Paul L | Ada |
| Niswander Floyd G | Pandora |
| Paisley Ralph C | Loudonville |
| Pillersdorf Louis | Cleveland |
| Piper Robert S | Cincinnati |
| Pitkin York N | Shaker Heights |
| Pokerr Leo A | Fremont |
| Pugh Luther S | Perrysburg |
| Raitz Roswell E | Cincinnati |
| Regan William L | Wilmington |
| Rosenblhett Sidney | Chillicothe |
| Sakler Allen M | Cincinnati |
| Schilling Albert H | Cincinnati |
| Schonberg Irving L | Cleveland |
| Shapiro, Jacob | Delphos |
| Shipley Thomas B | Canton |
| Shroder Luther N | Greenville |
| Sohngen William F | Cincinnati |
| Sternlieb Max | Wadsworth |
| Stinson Wilbur V | Dayton |
| Strauss, Victor M B | Cincinnati |
| Tapke Robert J | Cincinnati |
| Thomas James J | Alliance |
| Treece Harold K | Arlington |
| Turner Ray M | Springfield |
| Vinocur Joseph L | East Cleveland |
| Wahl Robert H | Dayton |
| Weinberg Herman C | Cleveland |
| Willoughby John R Jr | Warren |
| Yantes Edmond K | Reynoldsburg |
| Young John W | Empire |

### Oklahoma

| | |
|---|---|
| Martin, Howard C | Oklahoma City |
| Martin James D | Cushing |
| Paul Thomas O | Durant |
| Sutliff, Edward H | Lawton |
| White Manford S | Blackwell |

### Oregon

| | |
|---|---|
| Forster Donald E | Portland |
| Fox Thomas J | Portland |
| MacDaniels Laurence K | Portland |
| Sneeden Vinton D | Portland |
| Thompson Douglas Q | Pendleton |
| Tupker Eugene P | Salem |
| Ullmann Egon V | Portland |

### Pennsylvania

| | |
|---|---|
| Ambler Bruce | Abington |
| Barnhart, John W | Washington |
| Barra Sylvio J | Reading |
| Bausch Frederick R. Jr | Allentown |
| Benson Jacob M | Philadelphia |
| Boas Harry | Pittsburgh |
| Boland Francis P | Scranton |
| Brodsky William A | Philadelphia |
| Carberry Blaine E | Ford City |
| Carp Leon M | Philadelphia |
| Castelli Peter J | Bridgeville |
| Cherry Bernard J | Philadelphia |
| Clark, Thomas W | Chestnut Hill |
| Corey William T | Munhall |
| Deardorff John E | Gettysburg |
| Deblasio Silvio H | Dunbar |
| Decherney William | Philadelphia |
| Derickson George V | Womelsdorf |
| Duschas James J | Erie |
| Foertsch Jack H | Pittsburgh |
| Forse, David P Jr | Pittsburgh |

### Pennsylvania—Continued

| | |
|---|---|
| Furlong, Raymond J | Jenkintown |
| Glaudel, Stanley F | Philadelphia |
| Graham, Charles F | Library |
| Guarini, Pasquale B | Philadelphia |
| Hall, Collins F | Williamsport |
| Hofmann, Valentine A | Mars |
| Jacobs, Donald R | Waynesburg |
| Johnston David A | Colonial Park |
| Juele, Roosevelt R | Philadelphia |
| Kanofsky Abram | Philadelphia |
| Klitch George M | Harrisburg |
| Knox, Earl R | Claysville |
| Kochenderfer Thomas T | Arcola |
| Kramer, Saul X | Pittsburgh |
| Langford James G | Chester |
| Lavely, Horace T Jr | Harmonsburg |
| Lehman, Charles A, Jr | Williamsport |
| Lichstein, Jacob | Philadelphia |
| Lipinski, Joseph F | New Kensington |
| McAloose, Louis T | Hazleton |
| Maloney Milton C | Hanover |
| Manly James P | Scranton |
| Marquand Edgar A | Berwick |
| Marthouse Stephen J | Tyrone |
| Metzger Tom B | Lancaster |
| Miller, Samuel G | Pittsburgh |
| Mitchell, Howard F | Rochester |
| Moll George A | Jenkintown |
| Nicholas, Charles A | Easton |
| Nimoityn Benjamin S | Philadelphia |
| Novey, Peter J | Reading |
| Palkovitz Joseph | Pittsburgh |
| Park Felix R | Bala Cynwyd |
| Parkhurst, Leonard W | Merion Station |
| Pohowsky, Alex Jr | Scranton |
| Polischuk, Wasyl J | Lester |
| Poorman Sturgis S | Narberth |
| Potelunas, Clement B | Wilkes Barre |
| Potter Leonard L | Littlestown |
| Prescott, Henry F | Cressona |
| Prietsch, Bernard C | Pittsburgh |
| Raddin Joseph B | Drums |
| Reis, Paul B | Palmyra |
| Repman Harry J Jr | Charleroi |
| Ruben Joseph E | Pittsburgh |
| Schultz Merritt C | Johnstown |
| Schwartz Abraham I | Reading |
| Schwartz, Edward | Chester |
| Scott James V | Pittsburgh |
| Siberski Dominic B | Plymouth |
| Skwirut Frank A | Chester |
| Soltroff, Jack G | Philadelphia |
| Spano Anselmo V | Clifton Heights |
| Stanton, Edward V | Philadelphia |
| Stengel, Alfred Jr | Philadelphia |
| Sterling Julian A | Philadelphia |
| Straub Elmer L | Philadelphia |
| Streck Fletcher W | Phoenixville |
| Stricker Robert S | Wilkes-Barre |
| Strouse J W | Hulmeville |
| Thomas Arthur B | Pittsburgh |
| Thompson Charles W | Ford City |
| Trott Clinton W | Philadelphia |
| Urbaitis, John C | Philadelphia |
| Wagner Alfred W | Philadelphia |
| Waisbrot Edward L | Philadelphia |
| Waite Knighton V | Renton |
| Waring John Henry | Boyertown |
| Weddell James R | Elizabeth |
| White, George S | Uniontown |
| White John M Jr | Philadelphia |
| White Wesley R | Clarks Green |
| Wiest Philip R | Reading |
| Wilkinson James S | Philadelphia |
| Winters Albert H | Pittsburgh |
| Wood Charles R | Wesleyville |
| Worrell Ralph C | Springtown |
| Zulick Philip D | Orwigsburg |

### Vermont

| | |
|---|---|
| Bashaw Donald L | Wmooski |
| Woodruff John H Jr | Burlington |

### Canal Zone

| | |
|---|---|
| Struve, Edgar E. | Ancon |

# MEDICAL OFFICERS RELEASED BY THE NAVY

## NAVAL RESERVE MEDICAL OFFICERS RECOMMENDED FOR RELEASE FROM ACTIVE DUTY

### California

| | |
|---|---|
| Armbruster Albert C | Monterey Park |
| Bates, Gaylord S | Claremont |
| Beebe, S R | San Francisco |
| Belous, Leon P | Los Angeles |
| Bethard, William F | San Diego |
| Bethel Robert D | San Jose |
| Bromberg Walter | San Francisco |
| Bumpus Hermon C | San Marino |
| Burtness, Hildahl I | Santa Barbara |
| Bush Robert L | Glendale |
| Byrne, Ralph V | Los Angeles |
| Cameron Markley C | La Jolla |
| Campbell Alexander D | Claremont |
| Crail Howard W | San Francisco |
| Cummings Harold R | Oceanside |
| Dennis Robert L | San Francisco |
| Doyle Gerald F | San Francisco |
| Dumberth Henry L | San Francisco |
| Dykes, H Robert | Taft |
| Ellis John M | Berkeley |
| Ellis Orwyn H | Los Angeles |
| Faulkner Edward C | Stockton |
| Frick William O | Los Angeles |
| Gerstle Mark Lewis Jr | San Anselmo |
| Gibboney Lawrence J | Long Beach |
| Giovanazzi Joseph F | San Diego |
| Goldman, Theodore H | Los Angeles |
| Gunn Gordon A | Porterville |
| Gunther Lewis | Beverly Hills |
| Halley Edmund P | Stockton |
| Harrington Harrel L | San Francisco |
| Heard Wesley R | San Marino |
| Heinz Vernet H | Burlingame |
| Henderson Jesse L | Pasadena |
| Hodges Gordon W | San Bernardino |
| Holder Richard M | Pasadena |
| Holley William W | Los Angeles |
| Holmer Carl T R | San Leandro |
| Howard Francis E | San Francisco |
| Hughes Theodore J | Corona |
| Lasell Sidney L Jr | Pasadena |
| Kahlstrom Samuel C | Los Angeles |
| Kahn Julius | Los Angeles |
| Kearns Robert J Jr | San Diego |
| Larson John Adolph | Anaheim |
| Lastreto Emilio D | San Francisco |
| McCann William J | Kentfield |
| Macaulay Warren L | Long Beach |
| McCormick Bernard J | Ventura |
| MacKinnon Donald S | Los Angeles |
| Mathews Samuel S | Inglewood |
| Mershon Harry F | Los Angeles |
| Moffitt Herbert C Jr | San Francisco |
| Molony W R" Jr | Los Angeles |
| Morgan John E | San Francisco |
| Murrieta, Alfred J Jr | Los Angeles |
| Naiditch Morris J | Los Angeles |
| Newbarr Frederick D | Los Angeles |
| Noyes Franklin L | Los Angeles |
| Nunes Aubrey J | Cotati |
| Parks Ross V | Los Angeles |
| Partridge John W | Berkeley |
| Peacock Charles E | San Francisco |
| Pearson Seibert C | Long Beach |
| Pollock Ralph C Jr | Long Beach |
| Quinn Robert W | Eureka |
| Ransom Dow H Jr | San Jose |
| Reslock Conrad P | La Canada |
| Riskin Alexander M | Los Angeles |
| Ruby Saul | San Diego |
| Ruddy Lorenz W | Sacramento |
| Sumpson Joseph A | Agnew |
| Santini Henry | San Francisco |
| Scofield Dean S | Los Angeles |
| Sears Adrian R M | San Francisco |
| Simpson Russell L Jr | San Francisco |
| Smith Herbert G | Palo Alto |
| Smith James B | San Luis Obispo |
| Spidell Haydon I | Ventura |
| Staub John G Jr | Pomona |
| Stephens LaRele J | San Francisco |
| Stone Robert L | Los Angeles |
| Stout Gurn T | Los Angeles |
| Stuehler, Berthold R Jr | Daly City |
| Surber Alva C Jr | Arcadia |
| Swisher, Robert C | Vallejo |
| Treible Dale P | Inglewood |
| Walley Orval J | Long Beach |
| Wical, Alfred L | Loma Linda |

### Connecticut

| | |
|---|---|
| Ashcroft, Allan D | Stratford |
| Bannon Frederick M | Stamford |
| Burke Joseph F | Waterbury |
| Cacace, Vincent A | Bridgeport |
| Carpentiere Joseph | Hartford |
| Celentano Luca E | New Haven |
| Daniels Charles F | Greenwich |
| Dubois Robert L | Waterbury |
| Felder Davitt A | Norwich |
| Freedman Robert | Stamford |
| Gager John Jay | Norwichtown |
| Geetter Isidore S | New Britain |
| German William J | Woodbridge |
| Goodell Robert A | Wethersfield |
| Greenleaf Richard C II | Greenwich |
| Hazen Donald R | Hartford |
| Huyck James H | New Haven |
| Jenovese Joseph F | Hartford |
| Kramer, Harold M | Hartford |
| Littman Leon | New Haven |
| Monagan, Thomas M | Waterbury |
| Murphy Thomas B | Wallingford |
| Nelson Roger B | Waterbury |
| Nodelman Jacob | New Haven |
| Orlowski Andrew W | Torrington |
| Purney John Jr | New Britain |
| Raffa Joseph | Hartford |
| Roccopriore B A Jr | Middletown |
| Roch George E | Willimantic |
| Rosenbaum George J | Hartford |
| Schollhamer Charles F | New Haven |
| Smith Frank E. Jr | Kent |
| Smith, Stephen M | Green Farms |
| Slossberg David S | West Hartford |
| Solomon Charles I | Meriden |
| Spelman Phillip J | Hartford |
| Stevens John S | Bridgeport |
| Wilson Archibald C | W Hartford |
| Woodward Joseph C | New London |
| Zimmerman Harry M | New Haven |

### Idaho

| | |
|---|---|
| Woodward Ira R Jr | Payette |

### Illinois

| | |
|---|---|
| Agamy Glen N P | Wilmington |
| Allman Joseph F Jr | Monticello |
| Altman James S | Springfield |
| Annegers John H Jr | Galesburg |
| Bartels Carl C | Utica |
| Bateman Michael A | Belleville |
| Billings William W | Alton |
| Blanck Earl E | Chicago |
| Boland John D | Sterling |
| Bricker Oliver H | Downers Grove |
| Bridegroom Hugh G | Evanston |
| Brill Harold M | Chicago |
| Burski Chester C | Chicago |
| Carris James V | Moline |
| Carter Harry V | Chicago |
| Clark, Carl E | Sycamore |
| Cohen Morris H | Chicago |
| Coomber Ralph B | Chicago |
| Cowen Jack P | Highland Park |
| Danreiter Leroy | Sterling |
| Dereng Cornell L | Chicago |
| Derlacki Eugene L | Evanston |
| Dreese William C | Evanston |
| Dreyer Irving | Chicago |
| Dunseth, Roy C | Peoria |
| Dushane James W | Evanston |
| Fairweather William H | Chicago |
| Ferguson Edward V | Edwardsville |
| Fitzgerald Robert H | Chicago |
| Fleming James F | Chicago |
| Flynn John R | Chicago |
| Fox, Frederick G | Chicago |
| Frank Edward C | Chicago |
| Friedman Elmer A | Chicago |
| Gallati, Cyril M | Flossmoor |
| Geyser, Frederick P | Lake Forest |
| Gilbert Robert P | Oak Park |
| Glenn Clarence G | Chicago |
| Gordon Lourdes B | Oak Park |
| Hafer Russell L | Argo |
| Harris Ellis H | Northbrook |
| Hersey Max F | Chicago |
| Hurd Henry H | St Louis |
| Hurter Andrew J | Chicago |
| Jaskunas Stanley R | Cicero |
| Johnson Frank E | Chicago |
| Johnson Frank K | Winnetka |
| Kaplan Morris A | Chicago |
| Klabacha Thaddeus | Chicago |
| Lagorio Francis A Jr | Chicago |
| Lavin Michael J | Peoria |
| Lewison Matthew M | Chicago |
| Linden John M | Freeport |
| Marks Jacob L | Chicago |
| Matheson Abe | Chicago |
| Mazet Robert Jr | Springfield |
| Meyer, Norman C | Lombard |
| Morton John H | Chicago |
| Mueller Charles B | Carlinville |
| O'Donovan Edward J | Chicago |
| Perusse George L Jr | Oak Park |
| Petty Richard A | Mt Carroll |
| Potter Robert M | Winnetka |
| Pratt Alsey C Jr | Nashville |
| Requarth William H | Decatur |
| Skiles James H Jr | Oak Park |
| Sonenthal Israel R | Chicago |
| Stollar Clyde P | Chicago |
| Sweany Stanford K | Chicago |
| Swift William J | Chicago |
| Taymor Joseph | Chicago |
| Thumsen Udell S | E St Louis |
| Warfield Chester H | Monmouth |
| Weissman David | Chicago |
| Woodward Edward R | Chicago |
| Wuestenfeld Herman E | Wood River |
| Zelle Charles K | Springfield |

### Massachusetts

| | |
|---|---|
| Balch Franklin G Jr | Newton Center |
| Barnes John D | New Bedford |
| Bernhardt Henry M | Salem |
| Blute James F Jr | Watertown |
| Bolan Samuel | Medford |
| Braff Max M | Brookline |
| Brogan John J | Boston |
| Brown Francis H | Wellesley Hills |
| Cahill John E | Brockton |
| Cahill Robert F | Springfield |
| Carter Max G | Boston |
| Chace John F | Hudson |
| Cohen, Samuel C | Milton |
| Cross, James E | Walpole |
| Curtis Charles M | No Andover |
| Dunham Frederick A | Melrose |
| Durant Richard C | Dedham |
| Foley John M | Dorchester |
| Gardner George L | Belmont |
| Gately George L | Boston |
| Glazer Lewis | Walden |

# MEDICAL OFFICERS RELEASED BY THE NAVY

### Massachusetts—Continued

| | |
|---|---|
| Green William R | Lowell |
| Hedolin Cedric B | Brockton |
| Hill Leonard W | Attleboro |
| Hill Robert C | Brooklyn |
| Kiess Robert D | Brookline |
| Kingsland Lawrence C Jr | Boston |
| Khbanoff Samuel | Springfield |
| Koppel William | Brookline |
| Latham David A | Chalmsford |
| Lawler William S | Lowell |
| Leary John B | Boston |
| LeRoyer, Charles P | Winchester |
| L Esperance, Francis A | Northampton |
| Loughlin John F | Dorchester |
| Lozner Eugene L | Boston |
| McNamara Thomas J | Lowell |
| Mahoney Hugh F | Tewksbury |
| Milner Leo R | Brookline |
| Morris Albert E | Reading |
| Mountain David C | Pittsfield |
| Myerson Paul G | Brookline |
| Rattigan John P | Newton Center |
| Riley Conrad M | Worcester |
| Ripley, Frederick W Jr | Newtonville |

### Michigan

| | |
|---|---|
| Banting Oswald F | Richmond |
| Barss William A | Ypsilanti |
| Beaton, James H | Grand Rapids |
| Benson Rolar l R | Detroit |
| Brisson Joseph C | Detroit |
| Coggeshall Lowell T | Ann Arbor |
| Comstock Raymond C | Kalamazoo |
| Covill Ronald J | Battle Creek |
| Davidson Donald L | Shelby |
| Davis George H | Detroit |
| Dillon Thomas J | Owosso |
| Fastman Peter F | Ann Arbor |
| Eickhorst Thomas N | Flint |
| Emerick Robert W | Detroit |
| Fox Ralph M | Birmingham |
| Giese Frederick W | Detroit |
| Haking Leonard | Detroit |
| Harms Herman P | Holland |
| Hendricks Roger C | Detroit |
| Howlett Robert R | Caro |
| Husband Raymond C | Detroit |
| Jarvis Harold F | Detroit |
| Knutson George O | Negaunee |
| Kuiper Klaire V Z | Grand Rapids |
| Leslie Robert E | Detroit |
| Ling Kenneth C | Hemlock |
| Minnema Clarence | Grand Rapids |
| Munson Henry E E | Detroit |
| Newell Philip D | Dearborn |
| Pennington Harry C | White Pigeon |
| Rae James W Jr | Grosse Pointe |
| Ries Robert C | Detroit |
| Rossen Ralph | Hastings |
| Schaftenaar Richard H | Holland |
| Still Jacob A | Detroit |
| Ver Hey William B | Kalamazoo |
| Winter William G | Holland |

### Minnesota

| | |
|---|---|
| Baker Milton E | Minneapolis |
| Cain, James H | St Paul |
| Clay Lyman B | Minneapolis |
| Cronin Donald J | Minneapolis |
| Dworsky Samuel D | Minneapolis |
| Ehni George J | Owatonna |
| Ferguson William J Jr | Rochester |
| Friden, Frank J | St Paul |
| Huber Robert W | St Paul |
| Jacobs Douglas L | Willmer |
| Karon Irvine M | St Paul |
| Kirkeeng Melvin J | Lake Benton |
| Knights John A | Bemidji |
| Larson Kenneth R. | St Paul |
| Lindert, Merlyn C F | White Bear Lake |
| Mattison Percy A | Winona |
| Nelson Roy A | Fergus Falls |
| Norris Lewis D | Minneapolis |
| Odel Howard M | Rochester |
| O Reilly Bernard E. | St Paul |
| Pattison, Donald H | Rochester |
| Pedersen Roy C | Duluth |
| Rosendahl, Frederick G | St Paul |
| Rosenow John H | Rochester |
| Schweiger Theodore R | Chisholm |
| Sickels Edward W | St Paul |
| Smisek Frank M | Minneapolis |
| Svien Hendrik J | Dennison |
| Thomes Arthur B | Minneapolis |
| Thorsen David S | Minneapolis |
| Vail James B | Henning |
| Williams John A | Minneapolis |

### New Jersey

| | |
|---|---|
| Aitken Herbert M | Ogdensburg |
| Ambrose Robert R | Bound Brook |
| Anderson Richard D | Burlington |
| Apffel Philip R | Hawthorne |
| Averbach Jacob | Clifton |
| Bazilauskas Vytautas F | Union |
| Besson Franklin J | Short Hills |
| Block, Charles | Atlantic City |
| Chilton Forrest S Jr | Pompton Plains |
| Clifford Richard J | Hackensack |
| Czerny, Everett W | Westfield |
| DeYoe Leon E | Paterson |
| Dingman Peter Van Cleef | Paterson |
| Friedman Harry | Newark |
| Gasteyer, Theodore H | New Brunswick |
| Gindhart John H | Trenton |
| Graves Charles C Jr | Marlboro |
| Gulick James B | Orange |
| Hersh David H | Newark |
| Jones Herbert E | Elizabeth |
| Kline George L | Bloomfield |
| Lawyer Tiffany Jr | Upper Montclair |
| Lemay Albert T | Paterson |
| Lerman Samuel | Elizabeth |
| Lesse Solomon | East Orange |
| LoCastro Anthony M | Ridgewood |
| McGovern Patrick J | Jersey City |
| Markowitz Milton | Jersey City |
| Miller Bernard | Fords |
| Miller, Raymond | Trenton |
| Miller Walter | Bridgeton |
| Mimer Carl L | West Orange |
| Moore Condict | Essex Falls |
| Murray Clifford K | Ventnor |
| Musetto Carmelo A | Boonton |
| Halprin Harry | Caldwell |
| Klompus Irving | Bound Brook |
| Payne Guy Jr | Verona |
| Re Pass Paul E | West Orange |
| Ridgway William G | Bridgeton |
| Sheehan Daniel C | Newark |
| Shrechan, Hubert F | Newark |
| Smith Jarvis M | Verona |
| Stanley Thomas A | East Orange |
| Stewart Walter A | Gladstone |
| Tuly Ralph | South Orange |
| Tyler Charles O | Haddonfield |
| Williams William E | Rutherford |
| Zanni Anthony L | Newark |

### New York

| | |
|---|---|
| Amols William I | Great Neck L I |
| Aronson Allan R | Brooklyn |
| Auchinloss Hugh Jr | New York |
| Baldwin Charles H | New York |
| Battaglia Biagio | Brooklyn |
| Bell Julius W | New York |
| Berger Milton | New York |
| Blossom Dudley B | New York |
| Boyd Alden K | Bay Shore |
| Brosnan John J | Brooklyn |
| Bryant Robert B | Malone |
| Callin Lynn R | Rochester |
| Candel Samuel | Brooklyn |
| Carmer Myron E II | Lyons |
| Carvo Salvatore P | Brooklyn |
| Cetner John A | Albany |
| Childs Donald S Jr | Syracuse |
| Ciner Leonard F | New York |
| Clark, Harold E | New York |
| Clark, Philip J | Poughkeepsie |
| Cloonan John J Jr | New York |
| Cohan Morris H | Brooklyn |
| Cohen Henry | Flushing L I |
| Darmstaetter Armin A | New York |
| Davis Robert J | Rochester |
| Delaney, C J | Jackson Heights L I |
| DeLong John B | New York |
| Di Brienza Amergo W | Brooklyn |
| Dixon Thomas W | Brooklyn |
| Dodds, Harold H | Marcy |
| Dodge Edward F | Niagara Falls |
| English Howard A | New York |
| Engster Thomas P | Sag Harbor L. I |
| Esposito Albert A | Brooklyn |
| Falk Emil A | New York |
| Fishman Jack | Brooklyn |
| Fitz-Gerald Harvey B | Lockport |
| Gaines, Sidney | New York |
| Getty Ralph W | Congers |
| Gilbert Allan C | New York |
| Glusman Murray | New York |
| Goldberg Simon N | New York |
| Golden, George M | Brooklyn |
| Goldstein Harold M | New York |
| Goldstein Nathan A | Brooklyn |
| Goldstein R J | Richmond Hill L. I |
| Goodell James P B | Jamestown |
| Gordon Alvin J | New York |
| Gorman Vincent A | Kingston |
| Gewanter Aaron P | Brooklyn |
| Greenberg Charles | Wingdale |
| Greenwood John H | Syracuse |
| Guthrie Keith O Jr | Pleasantville |
| Halfman Howard W | New York |
| Harer George A | Geneva |
| Harris Charles R | E Rochester |
| Harwin Martin | Brooklyn |
| Heinrich Jacob F | Jackson Hgts L I |
| Hermayer Stephen | New York |
| Hickey Robert C | Fayette |
| Hillman Robert W | Brooklyn |
| Holstein Arthur | Brooklyn |
| Howes William E | Brooklyn |
| Hunter Francis R | Mamaroneck |
| Hyde Charles R | Brooklyn |
| Hyman Joseph | Brooklyn |
| Iserman Michael | New York |
| Jaffe Harry L | New York |
| Jeffries Charles N | Mamaroneck |
| Johnston William C | Beacon |
| Joseph Harry | Brooklyn |
| Katsampes Chris P | Rochester |
| Kelly Thomas A | Brooklyn |
| King Henry J | Binghamton |
| Kittell George H | Jamaica L I |
| Koch Caryl A | Orchard Park |
| Kramer Henry F Jr | Brooklyn |
| Laquidara Vincent T | Troy |
| Larsen Frank S | New York |
| Lee James P Jr | New York |
| LeFevre Ira D Jr | Schenectady |
| Lemboke Paul A | Rochester |
| Lichty John Alden Jr | Rochester |
| Lieber Hyman | New York |
| Lourie Reginald S | Brooklyn |
| Love Robert A | Goshen |
| Lovejoy Frank W Jr | Rochester |
| Lowe Frederick A | Niagara Falls |
| McCann John L | Rochester |
| McKee Frank Wray Jr | New York |
| Manfredi Daniel H | New York |
| Mansell Richard V | New York |
| Marks Robert G | New York |
| Matthews Ben L | Binghamton |
| May Justin H | Far Rockaway |
| Meacham Charles T | New York |
| Mearin Robert J | New York |
| Messinger W J | Kew Gardens L I |
| Montgomery James A | Watertown |

# MEDICAL OFFICERS RELEASED BY THE NAVY

### New York—Continued

| | |
|---|---|
| Morris, John M | New York |
| Mosher, William E Jr | Cortland |
| Muojo, Raphael A Jr | Sea Cliff |
| Mustard, Harry S Jr | New York |
| Nardiello Vincent A Jr | Bayside, L I |
| Neander David G | Saugerties |
| O'Donnell Hugh B | Newburgh |
| O Kane, George H | New York |
| Paley, Karl R | New York |
| Paul, Neil M | Jamesville |
| Pauley Gerald I | Bellerose |
| Pflum Francis A | New York |
| Poole Charles S | New York |
| Poppel, Maxwell H | New York |
| Porter Milton R | Garden City L I |
| Prenatt George J | Gardenville |
| Pritchard Dale B | Bronx |
| Pulito, Frank | Brooklyn |
| Reagan Lindley B | Poughkeepsie |
| Riley George J | Troy |
| Riley George T | Binghamton |
| Robbins Nathan | New York |
| Roberts, Lewis A | Bronx |
| Rocktaschel William G | Rochester |
| Rousseau Paul | Syracuse |
| Rubin Lionel C | New York |
| Ryan Robert J | Woodhaven L I |
| Scanlan William D Jr | Brooklyn |
| Schneider Ralph F | New York |
| Schrade, Joseph P | Bronx |
| Shapiro Abraham V | New York |
| Shulman Bernard H | Brooklyn |
| Siegel Louis | New York |
| Sim Robert P | Yonkers |
| Simon Stanley D | Brooklyn |
| Skeats John M | New York |
| Smiley, Leonard V | New York |
| Smith Oney P | Troy |
| Snider, John S | Floral Park L I |
| Stack, Donald E | Endicott |
| Stapleton, Thomas D | Auburn |
| Stoner, Lee H Jr | Delmar |
| Strully, Leonard V | New York |
| Sullivan Cornelius J P | Bronx |
| Sullivan, James F | Syracuse |
| Terwilliger William G | New York |
| Thompson Charles H Jr | Brooklyn |
| Tidaback Austin J | Brooklyn |
| Trichter Benjamin | Brooklyn |
| Tuthill, Percy J | Nattituck L I |
| Valente Louis A | Brooklyn |
| Vickers Harry D | Little Falls |
| Wahlig Alexander F | Bath |
| Walsh, John M | Bronx |
| Waters William J | Syracuse |
| Weber Charles E | Rochester |
| Weimber Clarence J | Mt Vernon |
| Weiss George | New York |
| Wells, Robert E | Schenectady |
| White Eugene A | New Rochelle |
| Wiedel Philip D | New York |
| Wilcox, Truman R | Manlius |
| Wilson Armine T | New York |
| Wilson, John E | Ticonderoga |
| Wittson Cecil L | Central Islip L I |
| Young Lawrence E | Rochester |
| Zucker Howard D | New York |

### North Carolina

| | |
|---|---|
| Causey Andrew J | Durham |
| Crispell Raymond S | Durham |
| Gatling Robert R | Gates |
| Hinkle Lawrence E Jr | Raleigh |
| Hitch, Joseph M | Raleigh |
| Lewis Robert E Jr | Kings Mountain |
| Meadows Joseph H | Oxford |
| Ownbey, Edwin K | Winston Salem |
| Prichard Robert W | Pink Hill |
| Sinclair, Louis G | Norwood |

### North Dakota

| | |
|---|---|
| Young Robert H | Fargo |

### Oklahoma

| | |
|---|---|
| Anderson, Ralph D | Tonkawa |
| Boyer, Harold L | Fort Towson |
| Branley Bernard L | Tulsa |
| Buchanan, Francis R | Canton |
| Bynum, William T | Chickasha |
| Chambers Evander E | Enid |
| Crawford Sterling T | Oklahoma City |
| Dodson, Harrell C Jr | Oklahoma City |
| Jenkins Henry B | Stillwater |
| McClure, William C | Oklahoma City |
| McQuown Albert L | Cherokee |
| Mench Robert M | Oklahoma City |
| Shearer Joseph M | Enid |
| Slabaugh Raymond M Jr | Sayre |
| Smith Wendell L | Oklahoma City |
| Tallant George A | Walters |
| Willard Delbert G | Norman |
| Winkelman, George W | Oklahoma City |
| Wynn, Noble F | Hollis |

### Oregon

| | |
|---|---|
| Armentrout, Herbert L | Portland |
| Bishop, Warren G | Medford |
| Cavanaugh William W | Portland |
| Day, Robert L | Portland |
| Gerow James H | Portland |
| Gius John A | Portland |
| Holcomb Roger | Portland |
| Holford William G Jr | Portland |
| Lindgren, Aarne J | Portland |
| Luehrs Robert O | Mollalla |
| McGovern John D | Portland |
| Marston, Chauncey E | Portland |
| Purvine, Ralph E | Salem |
| Rogers, Frederick P | Bend |
| Stefan Karl F | Portland |

### Rhode Island

| | |
|---|---|
| Allen, Reginald A | Providence |
| Cone Thomas E Jr | Edgewood |
| Feinberg Bamce | Providence |
| Fleischer, Walter E | Newport |
| Howe, Calderon | Newport |
| Lovering Edwin F | Lonsdale |
| Tully, William H Jr | Providence |

### South Carolina

| | |
|---|---|
| Bryan Leon S | Columbia |
| Feinberg Abraham | Charleston |
| Herbert, Thomas G Jr | Mt Pleasant |
| Horger, Richard C | Eutawville |
| Jenkins William J | Beaufort |
| Klauber William A Jr | St George |
| Paul John R Jr | Charleston |
| Phillips, John R | Charleston |
| Sellers William H | Charleston |
| Walker, Robert M | Sumter |
| Ward Simon V Jr | Timmonsville |

### South Dakota

| | |
|---|---|
| Hamm Joseph N | Deadwood |
| Hanson Otto L | Valley Springs |
| Myrabo Arnold K | Sioux Falls |
| Wessman Newton E | Sioux Falls |

### Tennessee

| | |
|---|---|
| Collins James H | Memphis |
| Cothren, Frederec B | Chattanooga |
| Dobbins Burns A Jr | Sweetwater |
| Gardner Joseph A Jr | Memphis |
| Gary Dan C | Memphis |
| Haile Kenneth L | Nashville |
| Hicks Howard K | Rockwood |
| Hicks Robert S | Rockwood |
| O'Neil Andrew W | Memphis |
| Patton Ernest W | Rockwood |
| Ross Kenneth G | Memphis |
| Tetlow, Frank N | Mt. Lebanon |
| Turner, Henry B | Memphis |
| Widdis, Patrick B | Memphis |
| Williamson, Charles R | Lebanon |

### Texas

| | |
|---|---|
| Ames, Frederick D | Houston |
| Baker, David M | Ballinger |
| Benson Martin H | Lubbock |
| Birdwell, James W | Tyler |
| Black, Ross P | Amarillo |
| Blewett Emerson K Jr | Austin |
| Coffelt Ralph L | Waco |
| Delambre Lorry C | Houston |
| Denham, Frank R | Houston |
| Donahue, Francis D | Corpus Christi |
| Donaldson J D Jr | Tahoka |
| Eberle Howard J | Madisonville |
| Evans, Howard L | Houston |
| Hall, Clifford R | Ft Worth |
| Hanes Lisburn C Jr | Austin |
| Hill, Joel M | Fort Worth |
| Hill Malone V | Alpine |
| Inmis, Emart R | Fort Worth |
| Jenkins, Marion T | Hughes Spring |
| Knolle, Robert L Jr | Seguin |
| Lea Austin W | Wichita Falls |
| Little Archibald A | Texarkana |
| Llewellyn John S | Liberty |
| McDonald Robert P | Fort Worth |
| Matlage William T Jr | Sugar Land |
| Miller, Sidney | Port Arthur |
| Mood George F | Houston |
| Much Joseph C | Houston |
| Muirhead Ernest E | Dallas |
| Neely Robert A | Galveston |
| Smith Travis | Temple |
| Stephenson George B | Beaumont |
| Stevenson, Murphy D | Houston |
| Stevenson Roger | San Antonio |
| Stringer, Charles F | Dallas |
| Wheelis Allen B' | Austin |
| Whittington James H C | Eastland |
| Wiggins James K | Munday |
| Williams Edward C | Houston |
| Williams Harold L | Texarkana |

### Utah

| | |
|---|---|
| Fowler Joseph B | Salt Lake City |
| Holebrook Boyd G | Salt Lake City |
| Imus Archie A | Ogden |
| Malouf, Raymond N | Richfield |

### Vermont

| | |
|---|---|
| Snay Albert F Jr | White River Junction |

### Washington

| | |
|---|---|
| Adatto Carl P | Seattle |
| Coddington Frederick L | Opportunity |
| Day, Charles W | Seattle |
| Hadfield Dale | Tacoma |
| Hall, Donald T | Seattle |
| Johnston Richard C | Ritzville |
| King Harold G | Seattle |
| Lynch Philip C | Olympia |
| Mayer Henry Jr | Seattle |
| Moore, Telford I | Spokane |
| Myhre, William N | Spokane |
| Palmer Rex B | Seattle |
| Rockwell Albert G Jr | Seattle |
| Snyder, Richard V | Seattle |
| Walz, John A | Vancouver |
| Wehman Fredlyn J | Spokane |
| Willis Park W Jr | Seattle |

### Wyoming

| | |
|---|---|
| Atwood John G Jr | Rawlins |
| Cerlani Ernest G | Rock Springs |
| Rowlett, Jack | Laramie |

### Hawaii

| | |
|---|---|
| Ecklung Archibald M | Koloa Kauai |
| Walsh, William M | Honolulu |

### Puerto Rico

| | |
|---|---|
| Bierley John R | Santurce |
| Diaz Atiles Alberto | Santurce |
| Godinez, Marcos A | Rio Piedras |

# ORGANIZATION SECTION

## THE PRESIDENT'S REORGANIZATION PLAN

**A Statement from the American Medical Association on President Truman's Reorganization Plan No 2 of 1946, Submitted by R L Sensenich, M D, Chairman of the Board of Trustees, to the House Committee on Expenditures in the Executive Departments, June 11, 1946, in Connection with Hearings on H Con. Res 151**

*(As indicated in an editorial in* THE JOURNAL *May 25, President Truman's Reorganization Plan No 2 proposes among other things to transfer to the Federal Security Agency (1) the Children's Bureau exclusive of its Industrial Division from the Department of Labor, (2) the functions of the Secretary of Commerce, the Bureau of the Census and the Director of the Bureau of the Census, with respect to vital statistics, including statistics on births deaths marriages divorces and annulments and (3) the functions of the United States Employees Compensation Commission The plan will become effective sixty days after the date on which it was submitted to the Congress (May 16) unless the Congress sooner rejects it by a concurrent resolution H Con Res 151, submitted by Representative Pittenger, Minnesota proposes to reject the Plan)*

The American Medical Association is interested in the changes proposed in Reorganization Plan No 2 of 1946 The physician is of necessity, interested in anything that may affect the health or provision of good medical care to patients individually and collectively in groups These groups may vary in number from small geographic divisions or those suffering from certain diseases to the entire population of the nation

Governmental public health measures are especially directed to those health problems which because of their nature or extent cannot be met successfully by the individual and must be dealt with by systematized social means The major portion of public health activity is therefore directed to disease prevention In more recent years however there have been government grants-in-aid to provide help or to stimulate interest in meeting special health needs As pointed out in the message from the President these activities have been widely scattered in the governmental machinery

The American Medical Association has repeatedly recommended concentration of governmental medical activities under a single administrative agency The American Medical Association has constantly emphasized the fact that the level of the health of the public is dependent on biologic conditions i e the human body, its functions and diseases and also on sociological conditions of living, food housing sanitation education and research and available facilities for normal physical and mental development. Physicians are therefore interested in all the divisions discussed in the proposed reorganization

The American Medical Association has through its House of Delegates, adopted a National Health Program in which local government agencies, state governmental agencies, the federal government, educational and research institutions and voluntary groups and philanthropic health agencies may cooperate within their proper spheres in striving for a level still higher than our present attainment of the best health in the world.

[A copy of the National Health Program of the American Medical Association was introduced into the record.]

The American Medical Association has been in almost constant contact with most of the governmental agencies having to do with health activities and has cooperated fully within the scope of policies agreed on

The evident advantages of consolidation of widely scattered activities prompted the Board of Trustees in January 1937 to make the following recommendation

'The Board of Trustees of the American Medical Association would recommend that such health activities as now exist be so consolidated in a single department which would not however be subservient to any charitable, conservatory or other governmental interest

"It has been repeatedly said that public health work is the first problem of the state It is the opinion of the Board of Trustees that health activities of the government except those concerned with the military establishments, should not be subservient to any other departmental interests This reorganization and consolidation of medical departments need not under present circumstances, involve any expansion or extension of governmental health activities but should serve actually to consolidate and thus to eliminate such duplications as exist. It is also the view of the Board of Trustees that the supervision and direction of such medical or health department should be in the hands of a competently trained physician, experienced in executive administration

The House of Delegates of the Association approved the action of the Board of Trustees The House of Delegates in 1938 reiterated its demand for a federal executive department to be designated as the Department of Health, with a doctor of medicine at its head who shall have general supervision and direction of the affairs of the federal government pertaining to the health of the people

In 1944 the House of Delegates approved a resolution recommending that the functions of the Children's Bureau of the Department of Labor be transferred to the United States Public Health Service

In the same session of the House of Delegates a resolution was adopted requesting 'the Congress of the United States to create a Department of Public Health the head of which department shall be a cabinet officer and to assign to such department all health activities of the federal government' This action was recommended in that it would result in greater efficiency and in increased benefit to the American people.'

In 1945 a resolution before the House of Delegates pointed out that the United States Public Health Service carries out its activities in prevention of disease and protection of the public health through state departments of health and other state agencies It was stated that the health services now conducted by the Children's Bureau of the Department of Labor parallel, and in many instances overlap the responsibilities of the Public Health Service and require duplication of district facilities and personnel and a confusing duplication of federal relationship with state health departments and other agencies in the field of public health

It further stated that "it would be more logical, more effective and more economical to have all public health responsibilities concentrated in one federal agency and establish one direct channel of relationship with state health departments"

The resolution as approved recommended that the health services of the "Children's Bureau of the United States Department of Labor should be transferred to the federal Security Agency until such time as the Congress creates a National Department of Health with a qualified physician as its director, with cabinet status

The transfer of the vital statistics functions of the Census Bureau to the Federal Security Agency would seem to be logical and make for greater usefulness of that service, as it is of more importance to the agencies of health and welfare than to the Bureau of the Census to which it is now attached

The repeated resolutions of the House of Delegates leave no doubt that the medical profession represented in the American Medical Association favors the concentration of all medical activities of the federal government in one governmental agency with a qualified doctor of medicine at its head, this administrator to have the general supervision and direction of the affairs of the federal government as they pertain to the public health The administrator should have cabinet status or if this is not possible at this time, he should have direct access to the cabinet level and should not be subordinate to another agency The health of the people is too important in maintaining the 'strength of the nation' as it was referred to in the message of the President to be subject to economic restrictions administrative limitations or policies developed by other agencies

With the average life expectancy practically at 65 years agencies primarily engaged in providing nonmedical benefits, aid and old age insurance will be involved in such enormously large administrative and financial volume that it would be extremely difficult to keep the more individualized problems of health in proper perspective

The American Medical Association has directed its efforts for nearly one hundred years toward making the best possible medical service available to all the people and cooperates with governmental and other agencies toward that end

It has been intimated that the proposed changes in organization are planned as the initial step in establishing a regimented government controlled system of medical care. We are inclined to accredit to this effort the honesty of purpose that has activated the efforts of the American Medical Association in supporting or opposing other legislative proposals

Should it be apparent that efforts are directed to the establishment of governmental regimentation or measures that would be harmful to the quality of medical care the American Medical Association will oppose those efforts with all the means at its command

---

## Washington Letter

*(From a Special Correspondent)*

June 17, 1946

### Graduate Training and Medical Research Center Planned by Army

Major Gen Norman T Kirk surgeon general of the Army has announced plans for the erection of a vast graduate training and medical research center at Forest Glen Md The center will be at National Park College which served as a convalescent home during the war for Walter Reed hospital patients A request for funds will be included in the 1947 budget but as yet no estimate of cost has been announced. General Kirk believes the project will take about twelve years to complete Tentative plans call for inclusion in the center of a 1 000 bed clinical hospital the institute of pathology the Army Medical Museum institutes of research medicine and dentistry and of research and radiation therapy and a 250 000 volume library General Kirk has also revealed that the 1 000 000 volume Surgeon General's Library will occupy a building to be started soon near the Capitol The 1 000 bed hospital and the institute of pathology will be started first. General Kirk made the announcement at a press preview of the exhibit covering all war developments and service which will be shown in San Francisco at the annual session of the American Medical Association

### Witnesses Criticize Provisions of Maternal and Child Welfare Act

Witnesses appearing before the House Subcommittee on Aid to the Physically Handicapped criticized provisions of the Maternal and Child Welfare Act Mrs Eugene Meyer, wife of the publisher of the Washington *Post* said the bill would defeat a coordinated national health and welfare program and cut across the President's reorganization plan Dr Joseph S Wall, chairman of the medical staff of Children's Hospital spoke on behalf of the American Academy of Pediatrics and declared that the bill merits the unanimous disapproval of the medical profession He said the measure has the potentiality of wreaking destruction on the teaching and practice of obstetrics and pediatrics and the possible obliteration from the practice of medicine of their adherents, with the consequent evil influence on the welfare of the mothers and the children of our country" Dr Joseph H Howard of the American Medical Association said 'We do not believe that services and facilities should be available to all who elect to participate regardless of economic status We do not believe that authority for such a vast program should be vested in the chief of the Children's Bureau who would have power to veto any state program and cut off federal aid force adoption of Children's Bureau standards of medical care and administration and establish maximum remuneration for all professional participants We do not believe that enactment of this bill will improve the quality of maternal care'

### Request for Jury Investigation of Abuse of Veteran Patients

The Veterans Administration and the Department of Justice have asked for a federal grand jury investigation into alleged abuse of patients in three Veterans Administration mental hospitals United States attorneys have been instructed to proceed with criminal prosecution of attendants at Veterans Administration hospitals in Togus Maine Northampton Mass and Marion Ind accused of brutal and bullying conduct All cases were first investigated by special undercover agents of the medical department of the Veterans Administration and their reports prompted an appeal to the Department of Justice

### Sixth Science Bill Introduced in Congress

Representative Wilbur Mills Democrat of Arkansas, has introduced the sixth bill on scientific research to be presented to Congress reportedly for the purpose of heading off enactment of the joint Kilgore Magnuson bill which was worked out as a compromise after a long trip through Senate committees The original Science Foundation bill was introduced by Kilgore and a more conservative measure incorporating ideas of Dr Vannevar Bush of the office of Scientific Research and Development was submitted by Magnuson Later they reached a compromise, which was endorsed by five thousand scientists Slated for consideration in May the joint measure was sidetracked by strike troubles The new Mills bill is described as much closer to the original Magnuson bill It would eliminate research in the social sciences and cut out a provision for appropriating 25 per cent of government funds for research among states with the cash to be spent in land grant and tax supported colleges It would also eliminate the proposal that patents developed in government financed research remain the property of the government available without charge to any one

### Former Presidential Physician Surveys Mine Health

Rear Admiral Joel T Boone of the Navy Medical Corps was named by Interior Secretary Krug to direct the survey of hospital medical sanitary and housing facilities in the coal mining areas covered by the contract recently granted the United Mine Workers union. Admiral Boone was formerly personal physician to Presidents Harding Coolidge and Hoover Under the agreement signed by Mr Krug as coal administrator and John L Lewis chief of the United Mine Workers a health and welfare fund is to be under the joint direction of the union and the employer

### Service Hospitals Require Blood for Surgical and Medical Cases

The American Red Cross has announced that service hospitals particularly the Walter Reed General Hospital, require whole blood for surgical and medical cases The public is reported to have lost interest in giving blood since the end of the war which has resulted in a shortage of blood for army and veteran hospitals An appeal has been issued for donations of blood

### Veterans Administration Clearing Up Hospital Cases

As an illustration of how the Veterans Administration is speeding up its work the Washington Regional Office reports that last month all 151 hospital or domiciliary care applica-

tions received were disposed of before May 31 The board had 2434 disability pension or compensation cases pending at the end of the month, while 19,524 running awards were being made

### Lieutenant Colonel Frank E Hamilton Heads Walter Reed Hospital Staff

Brigadier Gen George C Beach Jr, commandant of Walter Reed Medical Center, announces that Lieut Col Frank E Hamilton of Columbus, Ohio has been named chief of staff of Walter Reed General Hospital here succeeding Col Reed Bowers of Frederick Md, who is returning to inactive duty to resume teaching at Cornell University Medical College Colonel Hamilton is a former assistant professor of surgery at Ohio State University College of Medicine and is a veteran of the Normandy campaign He comes here from the England General Hospital, Atlantic City

### Work Started by Hospital Council

The newly formed National Capital Area Hospital Council has started operations with William R Castle president of Garfield Hospital, elected president By laws have been adopted Formation of the unit was completed just prior to the final report of the Metropolitan Health Council of the Council of Social Agencies which reiterated its criticism of Washington hospital facilities

## Medical Legislation

### STATE LEGISLATION

#### Louisiana

*Bills Introduced*—H 614 proposes an appropriation to the department of institutions for the purpose of providing for the care and treatment in privately owned hospitals, of indigent or destitute sick persons in areas throughout the state wherein no state hospital is maintained or operated for such purpose. S 162 proposes to require the Louisiana State University to make available medical care and hospitalization to each member of its teaching staff on payment of surgeons and medicine and hospital fees at the same rate charged to students of said institution S 185 is similar to H 688 previously reported It proposes to authorize any state board commission or board of governors to proceed by injunction to enjoin and prohibit any person from the practice of any profession required to be licensed by said board commission or board of governors when such person is practicing such profession and has not been granted a license S 234 is similar to H 672 previously reported It proposes to require all persons applying for a license to marry to file a certificate signed by a physician duly licensed to practice by the Louisiana State Board of Medical Examiners which certificate shall state that the applicant has been given an examination including a standard serologic test for syphilis made not more than fifteen days prior to the date of issuance of such license, and that in the opinion of said physician, the person either is not infected with syphilis or if so infected, is not in a stage of such disease which is or may become communicable to the marital partner

*Bills Passed*—S 126 passed the senate June 11 It is similar to H 644 previously reported To amend the law relating to the practice of pharmacy, it proposes among other things, to define the term "prescription' as including orders for a drug or drugs or a chemical or chemicals or medicines or combinations or mixtures thereof transmitted to pharmacists through word of mouth, telephone telegraph or other means of communication by a duly licensed physician, dentist veterinarian or other medical practitioner licensed to write prescriptions intended for the treatment or prevention of disease in man or animals, and such prescriptions received by word of mouth, telephone telegraph or other means of communication shall be recorded in writing by the pharmacist and the record so made by the pharmacist shall constitute the original prescription to be filled by the pharmacist"

#### Massachusetts

*Bills Passed*—H 1898 passed the house June 5 It proposes the creation of a board of registration of opticians and defines an optician as 'a person engaged in the filling, compounding or reproducing of prescriptions of physicians or optometrists for ophthalmic lenses, eyeglasses or other optical appliances prescribed for the correction of defective vision or ocular anomalies of the human eye, and the mounting and fitting of the same to frames or supporting materials, and the adjusting of such lenses, eyeglasses and appliances to the use of the wearer" Exempted from this proposal would be licensed physicians and optometrists H 2001 passed the house June 3 It increases the scope of a special commission investigating certain matters relating to public education, relative to changing the name of the Massachusetts State College to the University of Massachusetts and to establishing a medical school at such institution. H 2029 passed the house June 5 and the senate June 6 This bill is similar to H 1899 previously reported It proposes that any container containing DDT be labeled in certain ways so as to protect the purchaser from being poisoned thereby S 29 passed the senate May 20 To amend the law relating to the furnishing of medical care to recipients of old age assistance it proposes that no board of public welfare or old age assistance bureau shall set a rate of payment for medical services to recipients of old age assistance that is less than the accepted rate for medical services in the community in which the recipient lives unless the physician is willing to accept a payment for his services less than the accepted rate S 533 passed the house June 10 It proposes to provide for a departmental study relative to the regulation of certain hospitals, sanatoriums, convalescent homes and nursing homes by the department of public health

*Bills Enacted*—H 66 has become chapter 51, resolves of 1946. It extends to December 1946 the life of an investigation being made by the department of public health for the purpose of studying the decay of teeth resulting from a lack of fluorine. H 1317 has become chapter 390 of the Laws of 1946 It provides that all medical records and reports of hospitals, clinics and physicians of either the insurer or the employee shall be filed with the Industrial Accident Board and shall be open to the inspection of any party

## Medical Economics

### SCHOOLS TO DEBATE MEDICAL CARE PROGRAMS

The Committee on Debate Materials and Interstate Cooperation of the National University Extension Association has just announced that the proposition to be debated in the high schools throughout the country next year has been selected as follows

*Resolved* That the federal government should provide a system of complete medical care available to all citizens at public expense

This proposition was chosen in a nationwide referendum of debating leagues out of more than eighty topics submitted by high school and college students and teachers The selection was finally narrowed to three topics Medical Care, Labor Legislation and World Government Of these three the Medical Care proposition was chosen by a wide margin

The selection of the Medical Care question as the official proposition for debate next year means that it will be debated and discussed in every state in the Union both by high school and by college students from the public platform as well as over the air It will be the subject of extensive study by thousands of young people who will take both the affirmative and negative side of the proposition

Professor Bower Aly of the University of Missouri has been appointed to edit *Medical Care The Twentieth Annual Debate Handbook* for the use of students engaged in the debates The *Debate Handbook* will be available on or about the first of September

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*—ED.)

*(Continued from page 617)*

United States Senate Committee on Education and Labor

MAY 2, 1946

THE HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Smith and Donnell

*(Senator Murray introduced a statement from the California C I O Council about the California Physicians Service Plan.)*

### Statement of James B Carey Secretary-Treasurer, Congress of Industrial Organizations Accompanied by Robert K Lamb, Legislative Representative of the United Steel Workers of America

*(Mr Carey restated most of the points made by the Physicians Forum.)*

MR CAREY As your committee appreciates the testimony we are presenting will be made available to our members and it is for that reason that we are doubly glad to be able to make the foregoing quotations from the Physicians Forum We want our members to know that a group of leading physicians agree with us that this legislation is not only desirable in principle but on the whole well drafted to achieve its purposes

In the face of the general nationwide demand for passage of this bill we cannot believe that efforts of certain entrenched individuals at the top of a few organizations can block its passage The broadcasting of misrepresentations over the last several years has begun to boomerang and the groups these individuals influence are talking compromise. There should be no compromise short of an adequate federal compulsory health insurance act

SENATOR DONNELL Had you personally had anything to do with the preparation of this testimony to be given by Mr Murray? MR. CAREY Not in the actual writing but in the policy determinations yes And I participated in the discussions that took place in the policy meetings

SENATOR DONNELL Who actually prepared this? MR CAREY Mr Murray with the assistance of Bob Lamb who is beside me this morning

SENATOR DONNELL Mr Lamb is an attorney, is he not? MR LAMB I am an economist

*(Senator Donnell questioned Mr Carey's evidence to support his statement that the American people want S 1606 Mr Carey said he based it on the actions of C I O membership.)*

SENATOR DONNELL Have you taken a poll of the American people? MR. CAREY May I first finish my answer?

SENATOR DONNELL On the question of whether or not they believe they can get better medical care under S 1606? MR CAREY Certainly

SENATOR DONNELL When did you take that poll? MR CAREY In our political action work.

SENATOR DONNELL That is the Political Action Committee? MR. CAREY That is our political action work Senator

SENATOR DONNELL That is the Political Action Committee of the C I O? MR CAREY That is a small part of our political action work Senator

*(Senator Donnell continued to question about a poll and Mr Carey continued to evade the answer.)*

SENATOR DONNELL Mr Carey I think perhaps now the meaning of this question is at least permeating your brain The question I am asking you is have you taken a poll p-o l l poll Have you taken a poll of the people of the United States on this question? MR. CAREY Yes sir

SENATOR DONNELL When did you take it? MR CAREY We take it constantly, day in and day out, through the channels of our organization

SENATOR DONNELL Have you sent out any questionnaire of any kind? MR CAREY Now you are getting down to something

SENATOR DONNELL You did not have any idea of what I meant? Is this the first time you had any idea of what I meant? MR CAREY Is that your definition of a poll Senator?

SENATOR DONNELL Mr Carey— MR CAREY You asked me a question I asked you to define what you said

SENATOR DONNELL I will put my question— MR CAREY You know that Gallup takes a poll and Crosley takes a poll The C I O has no poll of that type As to your questioning my credentials representing the C I O I say we know the thinking of our people that authorized us to support this legislation

SENATOR DONNELL I want to say this Mr Carey You may have credentials I do not know what they are or what is their nature but I want to say to you you do not have any credential to act for me and I am one of the members of the American people MR CAREY Are you a member of the C I O?

SENATOR DONNELL I am not MR CAREY I will modify my testimony

SENATOR DONNELL Just a minute MR CAREY And I will say that the American people with the exception of one single solitary Senator wants better medical care

SENATOR DONNELL That is not the question I asked you Of course I want better medical care MR CAREY Senator you do not happen to be the American people

SENATOR DONNELL I think I am one of them MR CAREY You are no more the American people than I am

SENATOR DONNELL I want to say to you Mr Carey that my question is perfectly simple and you have understood it all along Have you sent out a questionnaire? If you cannot understand the meaning of the word poll have you sent out a questionnaire to the American people as such to ascertain whether or not they believe they can get better medical care under S 1606? Have you sent it out? MR CAREY May I—

SENATOR DONNELL Have you sent out such a questionnaire? Just answer that question please sir MR CAREY Are you trying to harass me Senator

SENATOR DONNELL I am asking a question MR CAREY Are you trying to frighten me?

SENATOR MURRAY Gentlemen I do not think we are making any progress here

SENATOR DONNELL Apparently not

*(Senator Donnell continued to question and Mr Carey continued evasively.)*

MR LAMB I am legislative representative for the United Steel Workers of America of which Mr Philip Murray is president

SENATOR DONNELL Were you with a government department before you worked for the C I O? MR. LAMB I worked for the Senate and the House of Representatives but I never worked for an executive agency of the government

SENATOR DONNELL You worked for the Senate and the House of Representatives and now you are a member of the C I O? MR LAMB That is right.

*(Senator Donnell questioned Mr Lamb about voluntary insurance plans.)*

MR. LAMB Well, Senator, the two outstanding ones of which I have any knowledge are the California Physicians Service and then one in Michigan and I do not profess to know much about the one in Michigan As to the general coverage that is to say, the 5 million or so, and perhaps it is as high as 7

as I understand it the state and local medical societies are responsible for about one million and between five and eight hundred thousand at the present time of the people covered.

SENATOR DONNELL Yes? MR LAMB Under special plans, as I am describing, and that includes I believe, the California Physicians Service

SENATOR DONNELL Very well May I ask you this Do you know whether or not the California Physicians Service recently entered into an arrangement, whether final or not I am not informed with the Grange, whereby approximately 100 000 members of the Grange are to come in under the operation of that plan? Do you know whether or not that has been tentatively or perhaps finally arranged? MR LAMB I do not know sir

*(Senator Donnell questioned Mr Carey on the provisions of the bill relating to the advisory council and free choice of physicians and specialists)*

*(Senator Donnell also questioned Mr Carey and Mr Lamb on the cost of operation of S 1606)*

*(Senator Donnell questioned Mr Carey about the Physicians Forum The only one he knew was Dr Boas)*

*(Mr Carey indicated his belief that doctors have been misled about S 1606 and said that he felt eventually they would come to support it)*

SENATOR DONNELL May I ask you this This is a matter of curiosity which perhaps has no bearing on the bill Does the C. I O have not only organizations among government workers, federal government workers, but does it also have them among state government workers? MR CAREY Yes, sir

SENATOR DONNELL And does it also have them in some of the banks of the country? MR CAREY Yes sir

SENATOR DONNELL You have local C I O organizations in banks? MR CAREY We have now an international union covering public employees federal state city county and so forth We have the organization of the United Office and Professional Workers which covers white collar workers in that particular field That includes bank clerks and others

SENATOR DONNELL You conclude your statement with a paragraph the second sentence of which reads The sums now spent annually for the medical care of the American people today would amply cover the benefits provided in this bill" Who is it that has made the requisite computations on which that statement was based in your organization? MR CAREY We sought information regarding the present health bill of the system and the services rendered and the payment of that amount of money We also compared with that the cost of the operations under the principles contained in this bill if enacted, the estimated costs and we find that the people of this country will be eligible for greater benefits with less money than they are at the present time

SENATOR SMITH Do you think there is any country that provides medical service comparable to the medical service that we give to the people in this country? MR CAREY There is no country in the world that can compare with this country in any of these questions whether it is housing or clothing or medical care or whether it be education or production or any of those other features But I do not think any other country in the world makes expenditures in this field of health to the extent of our own country and no other country to my knowledge wastes so much in failing to bring about a better relationship between doctor and patient

SENATOR SMITH That of course is a matter of opinion. We can be dogmatic in drawing such a conclusion MR CAREY I would think that the experiences we have had in these important fields such as education and health could well be used and that is where we get our experience and that is why we so vigorously support this bill We recognize it as a present step in the right direction There can be no question anywhere in the world but that under our system of government and the flexibility we have in meeting the problems of the people we can do this job I would have liked to use in the testimony some of the information that was brought about as a result of our participation in the last war the great number of rejects the tremendous costs I would not attempt to measure what the price was in terms of life or even in dollars, but certainly there is indication here that we do not have as good a balance as we could have Some areas are more depressed than others in terms of having medical care available to the people

SENATOR SMITH Your conclusion is that you think we can do it better by centralized experiments than by continuing our state experiments, as we have during the years, and decentralizing our operations MR CAREY I would say the system suggested here as to the overall policies is the only thing that is actually determined by the federal government

SENATOR SMITH And you do not take cognizance of the experiment in Minnesota, which I am told has made great progress, and the experiment in California, a system whereby we are getting combined judgment of different areas trying different things to move toward perfection as fast as we can. Is that not the best way to do it? MR CAREY That is the best way to gain experience, and as a result of that experience in the systems we have had operating, such as that in St Louis operating under the direction of the labor organizations, the people have better medical services now than they had before But still we think that experience itself is good argument in support of Senate bill 1606

SENATOR SMITH So you think we have got to the end of the experimental stage We have got to perfection now and we can write the blueprint here in the central government rather than encourage these different states and medical societies and boards of health to go on trying to perfect it in their own areas? MR CAREY The enactment of this bill would in no way put a stop to experimentation and further development

SENATOR SMITH That is where I disagree with you MR CAREY Senator I would say, if we refused to enact this legislation, that in itself would be an indication that we believe the present situation is a perfect one

SENATOR SMITH Let me correct you on that As to my thinking along the line of grants-in aid to your states, I am for that I think the first part of this bill contemplating grants in aid proceeds along the right line I would like to see it perfected in certain respects But when you get into part 2 you are in a totally different philosophy, and that is where I have difficulty in following you But I am glad to hear you say that that is your opinion We want to get the opinion of the C I O MR CAREY The American Medical Association and others operate on that central basis as we do because they find in many cases you can best render service in that way

SENATOR SMITH It is a matter of degree how far you can decentralize administrative powers To my mind that is the issue we have here, that of determining the right kind of a bill to report out

MR LAMB I would like to refer Senator Smith to the letter which Mr Carey put into the record, because I recognize it as being a copy of one I have here which came to us a day or so ago from the secretary treasurer of the California C I O council in which he has reference to the California Physicians Service and he has this to say with respect to their experience And our California C I O as you know, has been among the pioneers in the C I O in its interest in medical care our California C I O and the American Federation of Labor out there have worked together in the recent past on this He says The C I O in California has had considerable experience with voluntary plans We have studied with particular care the statewide plan of the doctors California Physicians Service We are completely convinced that this type of plan can never bring good medical care to those who need it most, the middle and lower income groups I am listing below the principal reasons which have led us to this conclusion Many of these faults are inherent in all voluntary plans Of course this does not have reference to the state plans but to the California Physicians Service, which I believe you mentioned a moment ago, which has been in force for some time

SENATOR SMITH I mentioned it, Mr Lamb as one of the experiments which is going on today I would have no objection if some state wanted to try a compulsory plan to see whether it would work better than the voluntary plan

MR LAMB I would like to list these points first, Senator

1 C P S costs too much for the service given Administrative and acquisition costs are very high and are not subject to control by the membership or any public body The tremendous turnover in voluntary membership destroys the actuarial integrity of the plan The cost of selling the plan is tremendous These two factors negate the advantage of the insurance principle of spreading the risk According to C P S figures in the months of October and November a total of 27 489 new members were acquired The net gain in membership however was only 2 349

2 The coverage is too limited C P S offers only surgical and hospital coverage to the majority of members Medical care is not offered to families The day to day medical and dental expenses of the average family are not met Many members of C P S report annual medical expenses of hundreds of dollars despite their C P S coverage Preventive medicine has not any part in the C P S plan

3 The quality of care is poor C P S physicians tend to treat C P S patients with less care than private ones C P S is totally unable to control professional standards and practices of its physicians In the C P S housing projects program completely controlled by the doctors the average quality of care was so poor as to be scandalous The large turnover in membership is largely due to dissatisfaction with the service

4 C P S cannot control overcharges by member physicians These doctors are not satisfied with C P S fees and attempt to collect additional fees from the patient Hundreds of complaints on this score have reached us from members of the C P S

5 C P S does not encourage the growth of group practice The benefits of pooling skills reducing costs etc which make a group practice desirable are lost to C P S members

6 C P S does not seek bona fide consumer representation on its controlling board The plan is completely dominated by physicians Members have nothing to say about dues medical coverage or administration C P S seeks to perform a vital public function while controlled by a very small minority the physicians Unlike a government body C P S has no responsibility to the people and cannot be controlled by them

7 C P S has not shown good faith in an honest attempt to devise means to make medical care available to all It is openly admitted by the California Medical Association that C P S was created and is maintained in an attempt to prevent the enactment of health insurance legislation This very attempt is proof that the physicians are aware of the need for health insurance and the desire of the people to have it

8 C P S failed utterly to prove its soundness in the largest mass attempt to provide care on a prepaid basis In the housing project program C P S demonstrated that voluntary enrolments are doomed to failure C P S and the California Medical Association officially demanded of the government that membership of public housing tenants in C P S be made compulsory Their contention was that only thus would the plan succeed

SENATOR SMITH If I may just suggest this at that point I see those defects but I am not convinced that the plan which you are advocating here S 1606 would cure those defects better than if we did try to experiment with those things as we met them in different parts of the country

SENATOR MURRAY We may concede that the states have rights and will continue to have them but I think too that a program of this kind can be more effectively administered under a national law We find often that while states have rights, they do not always exercise them in the interest and welfare of the people For instance states have rights to set up utility commissions to control utilities in various states of the Union and yet because of the power and influence of the interests in those states those rights are not honestly and fairly administered in the welfare of the people So it seems to me that we should not brag too much about states rights because they have not always been administered in the interests of the welfare of the people.

SENATOR DONNELL I want to place myself on record as recognizing and thoroughly rejoicing in the fact that we do have states rights under the Constitution of the United States and the Tenth Amendment thereto

SENATOR SMITH Mr Chairman I think we have expressed a difference in philosophy here that is legitimate as a part of this whole question Can this best be done through federal control or through decentralization to the states? If we differ on that I want to say that I appreciate Mr Carey s testimony and that of Mr Lamb I have had contact with Mr Lamb before and I have the highest regard for him in the work he is doing for his cause I disagree with him but respect his judgment

SENATOR MURRAY I think such discussions will be helpful in studying this question when we go into executive sessions

SENATOR PEPPER This bill owing to the fact that the Senate cannot initiate tax measures contemplates the plan assuming the existence of the money but I think everybody has contemplated that a payroll tax is the basic method by which the funds that will provide this in an insurance shall be provided

SENATOR SMITH It is your theory then that there would be such legislation? SENATOR PEPPER Yes I have always understood that this bill is generally predicated on there being a payroll tax of 1 5 per cent required to be paid by the employees and 1 5 per cent being required to be paid by the employer, which would be analogous to the payroll tax which is today collected of employer and employee to provide for a national fund

SENATOR DONNELL Does the Senator understand that it is contemplated that this 1 5 per cent on the employer and employee would pay all the expenses of the fund or that there would be a federal subsidy in addition? SENATOR PEPPER Senator the only way we could answer that would be by experience It might be that with this fund the preventive health services the general health care that might become available the clinical diagnosis that might become possible for people so that illness might be nipped at its beginning or may be prevented from beginning might so reduce the medical bill of the country that 1 5 per cent by employer and employee would prove to be enough If it were not enough we in the Congress would have to decide whether we would wish to raise the amount of the payroll tax or make up the difference by a federal subsidy That is just a mere matter of policy But what I wanted to emphasize is this We all have good doctor friends whom we highly respect and admire whose professional skill we esteem Some people seem to take this bill and our advocacy of it as a personal affront to them as a sort of trespass on their prerogatives an invasion of their sacred precincts Now, what I have been trying to get into my mind is the essential and basic character of this bill What I am asking you is Do you people not regard that it will do if it is financed as I have said by the sort of payroll tax I have described as a national compulsory insurance program whereby the people may, with one another provide funds through which they may procure medical services And is it not essentially a tax and compulsory insurance program? MR CAREY I stated that in my testimony Senator

*(Senator Pepper by his questions indicated that the people would be taxed compulsorily but that doctors could participate voluntarily )*

SENATOR SMITH May I ask you a question there with relation to your observation? Supposing you put through the compulsory plan and then are short on doctors what is your solution? How are we going to handle that? SENATOR PEPPER There are two answers, Senator One is that this bill encourages the training of more doctors

SENATOR SMITH That is very worthy SENATOR PEPPER Right that is very worthy In the second place, do you not think that if doctors have an opportunity for a fair fee under favorable surroundings such as adequate equipment and assistance and that sort of thing and to render a good quality of medical care do you not think with regard to the law of demand and the desire to make money as well as to render humanitarian service that is going to provide the doctors needed? SENATOR SMITH I think so but I think that comes back to the point you made I think unless you have the profession with you you will not get the cooperation you need

SENATOR PEPPER I am only asking the question Senator as to whether when the burden of this thing is to be paid for by the people and the people are the ones whose lives and whose health and whose dear ones are involved and when the people feel that they want to pay this money whether we ought to let a little handful of doctors who are not directly affected deter us from serving the people or permitting them to save and to serve themselves? SENATOR SMITH This is where I disagree with you on your thesis Assuming you are going to have the doctors available to handle this matter that you have persuaded the people to pay for

SENATOR PEPPER Well is it the case that these doctors are going to refuse to render medical service to the people when they are paid for it that they are going to strike? SENATOR SMITH I think they are going to suggest it can be worked out through your state boards more effectively than through a federal plan That comes back to the basic philosophy I am just raising some of the difficulties I see, and I think you will agree there are difficulties

SENATOR MURRAY There is one organization of doctors who have had a representative here before the hearing a short time ago who had as one of their objects the idea of organizing the doctors not to enter this system In other words they are proposing a sitdown strike on the part of the medical profession against the effect of enforcement of this law in case it becomes a law I do not know whether they will abandon that idea or not but they have sent out literature

to that effect and the doctors that are joining that organization are joining it with the understanding that that is one of the objects that they have in view

SENATOR PEPPER Mr Chairman lest some one might misunderstand my attitude, I want to say that I do not have the slightest idea that a handful of doctors in this country would ever think of doing such a thing as that There may be a few people that are excited now, whose emotions are stirred up now, who are deeply moved by this matter, largely because they misunderstood it.

SENATOR MURRAY I think it is largely misunderstanding

SENATOR PEPPER Right They have been made to misunderstand it, most of them I do not have the slightest misgiving about the doctors giving hearty cooperation, and what will happen is that once we get this thing under way administratively there will be difficulties that will develop and when we pass this bill we may find there are things which should not have been put in there But experience will teach us how we can perfect the bill You need have no worry about what will happen. As we go along we will learn and the doctors will become our counselors you mean ours but they will become the counsel of the administrative agencies that are running it In a little while you could not any more repeal it, once it becomes law, than you could repeal the Unemployment Compensation Law or the Social Security Law or any other

SENATOR MURRAY I think that is a correct statement. Mr William Green of the American Federation of Labor testified a short while ago and he called attention to the Workmen's compensation law, which was bitterly fought by the medical profession at the time it was proposed, and they argued then that that would destroy the medical profession But since that time they have come to recognize the value of that law and now would not think of recommending its repeal

SENATOR DONNELL Mr Chairman, it was mentioned by Senator Pepper that this bill does not require physicians to come in under it I think that is quite true I want to mention this however that obviously in order that this plan may succeed it would be essential that the great majority of the physicians in our country did come under it. Therefore, we are going to be as a practical matter confronted with the situation that if the people that pay in these taxes are to get their money's worth out of it the great majority of the doctors must come in—I do not mean legally they are not compelled to legally—and then we are going to be confronted with the economic question which worries many people as to whether the great majority of the profession that will come in under this system will discourage personal advancement and initiative or whether it will bring about deterioration of service I think all of those problems are involved I take it this is not the time and place to argue those questions, but that is involved

## Statement of Martin H Miller, National Legislative Representative, Brotherhood of Railroad Trainmen

I am Martin H Miller National Legislative Representative of the Brotherhood of Railroad Trainmen

MR. MILLER The Brotherhood of Railroad Trainmen is the largest of the railroad train service labor organizations and represents conductors and brakemen road, passenger freight and yard—train baggagemen yardmasters dining car stewards, switchtenders, car retarder operators and operators of intercity busses

*(Mr Miller described the development of the health plan of the brotherhood)*

SENATOR MURRAY Well, now you will notice that this is a very extensive piece of legislation and has many provisions in it Are you able to analyze these and discuss them or do you wish merely to confine your testimony to the overall problem of the need of the National Health System to provide better care, better medical care for the people of this country on a reasonable cost? MR MILLER Senator, I am not prepared to go into detailed discussion as to the several provisions in the bill In preparing my statement I prepared it generally

*(Mr Miller, in reply to Senator Donnell felt that government should provide food full employment etc)*

SENATOR MURRAY Now, with reference to this problem of food you do not mean that the obligation is on the government to furnish everybody directly with food but your idea is that with reference to the children who are unable or whose parents are unable to feed them properly in the tender years when they are going to school the government should provide some plan for additional feeding for them in the schools? MR. MILLER That is right. Certainly

SENATOR MURRAY In reference to this health program, you believe also that people should be required to pay for medical care and hospitalization when they are able to do it, but it should be supplied to them at reasonable cost so that they may be able to avail themselves of it without too much hard ship? MR MILLER That is correct. Certainly

SENATOR DONNELL Mr Miller, so that I understand just your theory in view of the examination by the chairman, this matter of full employment it was the President's program with respect to full employment that you feel Congress responded to in a very feeble way MR MILLER That is right

SENATOR DONNELL Do you personally favor the government guaranteeing to each person in the country that if that person desires to work he shall have a job or, failing a job shall be paid some type of unemployment compensation by the government? Is that your position? MR. MILLER Yes Definitely I think that each individual has a right to live.

SENATOR DONNELL And you feel that that is a governmental obligation, as I have outlined either to furnish the person with a job or give him unemployment compensation if the job is not at hand? MR MILLER I would say it just a little differently That it would so direct the economy of the country that work—either private or government work—would be available, or, in the absence of both, then unemployment compensation to tide them over

SENATOR DONNELL And you think that should be a national function emanating from the national government? MR. MILLER Well, naturally, I would think it should be a national function. We found out on the railroads that you just could not operate the state unemployment laws to take care of railroad employees adequately You see, members of the Brotherhood of Railroad Trainmen oftentimes run into and through four states

SENATOR DONNELL Yes? MR. MILLER In the course of their tour of duty, so you see you just cannot recognize those imaginary state lines because they cross them The same thing is true of highway workers It is true of operators of airplanes and we just have some places that we cannot recognize state lines

SENATOR DONNELL So you feel that this is a federal governmental function? MR. MILLER Yes, I think it is a federal responsibility

SENATOR DONNELL Yes? And in this matter of insufficient food, the chairman, Chairman Murray mentioned food in the schools. Now, if a child should not have sufficient food in his home, as distinguished from the school, because he does not do nearly all of his eating at school if he did not have sufficient food in his home, would you advocate that the government should see that food should be provided to him in his home? MR MILLER I think it is an obligation of the government to see that that child grows up to be a normal human being just as mentioned in the President's state of the Union message, and as we all know, it proved to be costly to the federal government to have so many millions of young men rejected and it certainly becomes an obligation of the federal government, because, after all, the federal government, when it leans back on the people in national defense, if it does not have healthy people it does not have much to lean back on.

SENATOR DONNELL So you regard it as an obligation of the federal government to see that the child is sufficiently fed to grow up to be a useful citizen of the country? MR. MILLER That is right

SENATOR DONNELL And if that food is not furnished at home or in school or wherever it may be, you feel it is the obligation of the federal government to see that the food is furnished? MR MILLER That the child grows up to be a normal healthy human being

## Statement of Edward F Poss, Grand Worthy President, Fraternal Order of Eagles

*(Mr Poss said the Eagles had always favored a complete security program)*

MR POSS In making an alternative suggestion to federalized prepayment of medical care I am not labeling the method proposed in Senate bill 1606 as "socialized medicine." For years local lodges of the Fraternal Order of Eagles have provided free medical services to members and their families just as many industrial establishments now do

Some Eagle aeries have maintained a panel of prepaid physicians for over forty years Many Eagles have received medical

attention for themselves their wives and youngsters that otherwise they might not have had or been able to afford But we would have to admit that, even when there is a panel of several outstanding medical men in the community serving the local aerie a majority of our members in any lodge seemed to prefer to have their own family doctor They may be the better off members, from a financial or income standpoint, but the idea of selecting their own doctor and themselves paying for his services appeals to them

Insurance social or private to an average American still means reimbursement for a loss or expense protection against an uneven and unpredictable risk

In asking amendment of Senate bill 1606 to provide some alternative method of cushioning the economic shock of paying for needed preventive and curative services and hospital care we are not placing our reliance on voluntary systems They are fine But those who need them least are most likely to take out the policies Those who need the protection most are the least likely to have it

SENATOR DONNELL In what respects do you think that this bill S 1606 should be amended so as to guarantee the independence of the medical profession MR POSS Well in the opinion of the Fraternal Order of Eagles and mine I feel that the average independence of the man is in knowing that he can pay his own bill In other words that the money should be paid to the insured policyholder For instance, if I carry a sickness and accident insurance policy the check is sent to me. It is not sent to the doctor Then I pay the doctor We feel that in order to make any bill work especially this particular type of bill you must have a cooperative feeling and a spirit on the part of the doctors and by placing him directly or indirectly on the federal payroll you eliminate his independence SENATOR DONNELL You think the bill should be amended? MR. POSS That is right In the opinion of the Eagles, we feel that the money should be paid to the man who is sick, he, in turn to pay the doctor

SENATOR MURRAY Well let me ask you there How would that have the effect of guaranteeing the independence of the physician? MR. POSS Well Senator Murray in that case the man who is ill is going to receive the check and he could choose any doctor out of the 5 000 or 6 000 we have in Toledo I have learned down through the years that when we have doctors in our home it is a pretty sacred thing with a child and a wife. We have pretty close association with the family doctor

SENATOR MURRAY But this bill provides in every community where it is put into operation a panel of the physicians and surgeons who agree to come under the plan and who will have their names listed then the people in the community would have the right to elect to go under the care of any member of that panel MR. POSS That is right

SENATOR MURRAY And when he becomes sick, it provides that the doctor that he selects will take care of him and he will be paid out of the fund. A fund will be created and set aside out of the wages of the workers and sent in to a separate fund, and out of that fund the doctor will be paid. Now if you require that fund to pay it to the individual and then the individual to pay it to the doctor you are going to create a lot of more bookkeeping, which does not serve any purpose as far as I am able to see. MR. POSS Well of course, that is a debatable question.

SENATOR DONNELL You say on page 5 but I doubt that the average Eagle or average American is equally enthusiastic about having doctors and nurses become direct or indirect federal employees, paid by the government. I understand from that that your interpretation whether it is correct or not your interpretation of this bill as it is now written is that inasmuch as the money is collected and the person goes to the panel and gets the doctor and the government pays the doctor, your interpretation is either directly or indirectly that these doctors and nurses are federal employees MR. POSS That is correct

SENATOR DONNELL And you think the bill S 1606 should be remedied and amended so that the payments should be made direct to the patient and then the patient go and select whatever doctor he or she may want That is your thought? MR POSS That is my thought.

SENATOR MURRAY Regardless of what his fees would be? MR POSS I am wondering if we can place a price on our responsibility to our fellow men

MAY 3 AND 4 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray, Ellender and Donnell

## Statement of General Omar N Bradley Administrator, Veterans' Affairs

GENERAL BRADLEY The bill imposes no duties on the Veterans Administration Therefore I think I can be more helpful to the committee by outlining the program and experience of the Veterans Administration in the field of medical care Veterans have reason to take pride in the hospital program established for them While the proposals contained in S 1606 would not appear to be designed to impair in any way the hospitalization benefits now administered by the Veterans Administration I wish to state clearly that in my opinion it is important that nothing be done which will impair it I also believe that this veterans' benefit should continue to be under the exclusive jurisdiction of the Veterans Administration

The bill does not specify any particular method of financing the program By use of the term prepaid personal health service benefits it would appear that contribution by the employed person is anticipated. This would require the veteran to contribute toward a benefit to which he is already entitled without charge under existing law in that he is entitled without cost to himself to hospital or outpatient treatment of service connected disability and to hospital treatment of non-service connected disability when bed is available This effect bearing in mind possible impairment of the existing program should be considered carefully at such time as the financing procedures are worked out.

In passing it is noted also that the bill would limit the period of hospitalization whereas under the laws administered by the Veterans Administration there is no such limitation The period of hospitalization is determined by application of medical principles

Since March 3 1919 when the acquisition of government hospitals was first authorized for the treatment of veterans of World War I to Dec 31 1945 there have been 3 315 780 admissions to hospitals of United States veterans The average period of hospitalization for a general medical and surgical patient was 38 6 days for a tuberculous patient 173 9 days for a neuropsychiatric patient 54 7 days for a psychiatric or mental patient 370 4 days During March 1946 54 464 applications for hospital or domiciliary care were received The total number of patients remaining in all hospitals the last Thursday of March was 84 730

As of March 31 1946 the Veterans Administration had 101 hospitals There is a Veterans Administration hospital in every state in the Union except three—New Hampshire Rhode Island and Delaware The construction of hospitals in each of these three states has been authorized

By the enactment of Public Law 293 79th Congress approved Jan 3 1946 the Congress authorized the establishment of a Department of Medicine and Surgery in the Veterans Administration. With the authority of this law we have made a complete and drastic reorganization of the Veterans Administration medical service The selection of personnel to staff Veterans Administration hospitals has been greatly expedited and the medical service is attracting outstanding specialists and medical personnel of the highest quality

The Veterans Administration is currently authorized to spend over 400 million dollars in the next two years in hospital construction The vastness of this program is understood more readily when it is stated that more money will be spent for veterans hospital construction in the next two years than was spent in the entire preceding twenty-six years In connection with the hospital construction program of the Veterans Administration I wish to refer to the problem of staffing our hospitals A hospital without a staff obviously is utterly worthless In order to secure suitable professional personnel to staff a hospital a general medical hospital must present a sufficient variety of problems in medical treatment to attract the best quality of medical personnel and to interest younger medical personnel For this among other reasons the program of medical care for non-service connected disabilities is an important factor in the Veterans Administration hospital program Furthermore, a medical staff must be maintained to the highest efficiency and in the maintenance of high professional efficiency the variety of disabilities among the patients is again an essential factor

The Department of Medicine and Surgery in the Veterans Administration is initiating new and greatly expanded programs Arrangements have been made with medical and research centers to provide the Veterans Administration with

consultants visiting staffs and residents in hospitals located near these centers A staff of nationally known specialists has been appointed to serve as Veterans' Administration consultants A special program has been instituted for the rehabilitation of blind veterans and for those with impaired hearing An extensive program of research in prosthetic appliances is under way A committee of outstanding citizens has been appointed to advise the staff personnel in charge of this program, and it is expected that the Veterans Administration will soon assume leadership in this highly important field

The Veterans Administration is giving serious thought to the care and rehabilitation of veterans with neuropsychiatric and mental disabilities It is planned to bring nationally and internationally known psychiatrists into Veterans Administration neuropsychiatric hospitals on temporary duty As most of the Veterans Administration neuropsychiatric hospitals are remote for medical schools, it is proposed to obtain outstanding psychiatrists for a few days or a week at a time who will lecture to the hospital staff and bring members of the staff up to date in the latest developments in the field As an extension of the Veterans Administration program of outpatient care, mental clinics are being established throughout the country Sixteen have already been organized thirty two have been authorized and plans are under way for the eventual establishment of two hundred mental hygiene clinics.

It is noted that S 1606 makes provision for medical research The Veterans Administration is also interested in developing an extensive research program As an agency which has access to the health records of millions of veterans over a long period of years it should be able to render great service in the field of medical research The Tumor Research Unit at the Edward Hines Junior Memorial Hospital, Hines Ill, has made elaborate studies in this field and has some of the finest equipment in the world

In view of the large number of troops stationed in tropical areas special research is being done in tropical diseases Centers for this purpose have been established in the Bronx, New York Biloxi, Miss San Francisco and Washington D C. A system of resident training is being instituted which together with plans for graduate work and special training for members of the staff will greatly increase the proficiency of the staff

In passing I may say that the program of education and vocational rehabilitation authorized by Public Laws 16 and 346, 78th Congress will enable veterans who desire to enter the medical profession to take such training at government expense

Another part of the Veterans Administration medical program has to do with outpatient treatment The law provides that veterans with service connected disabilities shall be given outpatient treatment for such disabilities During February 1946 outpatient medical care was provided 152 381 persons Of this number 62 107 received treatment and 90 274 were examined It became clear that new measures must be resorted to if the demand for outpatient treatment and examination was to be handled adequately The Veterans Administration therefore has developed a plan whereby contractual agreements may be entered into through the cooperation of state medical societies for services of physician members to furnish medical care on a fee basis

I will refer only briefly to the domiciliary care afforded by the Veterans Administration To be eligible for admission to a home in addition to other requirements unnecessary to mention here a veteran must be suffering with a permanent disability tuberculosis or neuropsychiatric ailment be incapacitated from earning a living and have no adequate means of support. This benefit will become more important as veterans become older and undoubtedly it will be in the future, as it has been in the past, a refuge for many veterans in periods of economic distress On June 30 1945 there were 8 779 veterans in domiciliary status Of this number 4 10 per cent were veterans of World War II As of March 28 1946 there were 11 682 veterans receiving domiciliary care

The program of medical care administered by the Veterans Administration is designed for a special group of citizens and is subject to certain specific limitations I feel that it is a program in which the country takes great pride and one that has been beneficial to all the people of the country, as veterans form a considerable portion of the population Great progress is being made in improving medical service extended to veterans and the American people can well take satisfaction in this program

SENATOR MURRAY I believe that you know that the President recently sent a letter to me in connection with this matter I think it would be appropriate for me to read it at this time, it is as follows

Dear Senator Murray

It has been most gratifying to observe the deep interest displayed and the progress made by the Senate Education and Labor Committee under your chairmanship in the conduct of the hearings on S 1606 the bill designed to give legislative effect to a large part of the national health message which I submitted to the Congress on Nov 9 1945

In providing generally for medical and hospital services under S 1606 it is intended that these most essential and valuable benefits be within the reach of those persons who are not eligible for medical and hospital services under existing laws and be afforded to some persons already eligible therefor in whole or in part who for various practical reasons do not have such services made readily available The latter aspect of the program is deserving of special attention to remove any doubts as to the real effects intended by the proposed legislation.

It is not intended that existing programs of medical and hospital services are to be supplanted For example it is not intended that our obligations to veterans for medical and hospital care shall be changed or impaired in either service connected or non service connected cases The special provisions for veterans under laws administered by the Veterans Administration reflect our nation s gratitude for their services and I urge that when the bill emerges from your committee it provide in explicit terms for the preservation of medical and hospital services under laws administered by the Veterans Administration

A national health program such as I have recommended and as envisaged in S 1606 would make it possible for persons to get complete medical and hospital services locally As to veterans the program would merely provide additional means of securing medical and hospital care. Veterans with non service connected disability in common with others, would become entitled to outpatient treatment As to persons eligible under other laws particularly veterans the program under S 1606 would include the families of such persons for complete medical and hospital services which benefit is not now available to them

I have conferred with the administrator of veterans affairs and the federal security administrator and they share in my convictions.

HARRY TRUMAN
President of the United States

In view of that recommendation on the part of the President, could you propose to us some amendment which would make it possible to achieve the purpose that the President has in mind there in protecting the veterans' program? GENERAL BRADLEY We have not one prepared at this time We will work on it.

SENATOR MURRAY Now under the existing conditions, it is not possible for the Veterans Administration to provide medical care adequately for the veterans all over the country, is it? GENERAL BRADLEY We are able to take care of all service connected cases and a limited number of non service connected cases At present about 85 per cent of those in general medical and surgical hospitals are non service connected and about 15 per cent are service connected We have a waiting list at the present time of approximately 26 000 I believe

SENATOR MURRAY So that a national program of health care in the country which would be open to the veterans and to their families would be a great help GENERAL BRADLEY It would certainly furnish an additional means of veterans getting medical service.

SENATOR MURRAY And the important matter would be to prevent it from supplanting or in any manner interfering with the existing veterans program? GENERAL BRADLEY Yes, sir The point we are trying to make here is at the present time particularly the disabled veterans They are entitled to hospital care without contribution THE CHAIRMAN Yes GENERAL BRADLEY And we feel that while a contributory system such as outlined here, although it is not outlined as to how he will pay while it would provide medical care for his family, he himself would not be getting any additional service by contributing to the system

SENATOR MURRAY In other words he is already entitled himself to the care that the bill would provide? GENERAL BRADLEY Yes and to unlimited hospitalization for whatever length of period his sickness requires

SENATOR MURRAY So that you believe that it would be appropriate to provide some amendment which might protect the veterans in that right and not in any manner undermine the veterans program? GENERAL BRADLEY I do not know enough about it to know whether or not an amendment to this bill is necessary but when it comes down to setting up the machinery for these people to pay, then is the time, I think, you must be careful you do not charge, particularly a disabled veteran for something he is entitled to In fact all veterans are entitled to a certain amount of hospitalization

SENATOR MURRAY I see Then some program outside the veterans program would be a great help to the family of the veterans in the way of providing medical care and hospitalization for them? GENERAL BRADLEY Well, I should think so I am not qualified to pass on the benefits of the hospitalization of the whole population, I am afraid. I have been studying it only from the point of view of the veteran himself

SENATOR ELLENDER How would you suggest that we take care of the family of the veteran? GENERAL BRADLEY Well, that is a thing, I think, you would have to work out as I understand, in some second part of this bill, where you are going to set up the machinery and the method of financing it I think it has to be considered very carefully

SENATOR ELLENDER I am just wondering how it would be possible to separate the veteran himself from his family, if it is the desire to aid the family You would have to do it possibly on the basis of charging a veteran less than you would the individual who is not entitled to the services under the veterans program? GENERAL BRADLEY Either that or you may make this contribution dependent on the number in the family, in which case he would be excluded, possibly as one of the family

SENATOR DONNELL General, would you prefer that medical and surgical services for dependents of veterans should be administered under the facilities of the Veterans Administration rather than some other facilities? GENERAL BRADLEY No sir

SENATOR DONNELL You would rather not have them? GENERAL BRADLEY We would rather not because we do not believe we can take care of that large a load

SENATOR DONNELL General by the use of the term 'program" as contained in the chairman s question, there might be an ambiguity I understand, as I think the chairman indicated, in the first place you are in favor of the general desire of the President to see that adequate measures of some kind be taken for the public health? GENERAL BRADLEY That is right

SENATOR DONNELL But as to whether or not S 1606, this bill would accomplish those results satisfactorily you are not undertaking to testify? GENERAL BRADLEY I do not feel qualified to say

SENATOR DONNELL General going back for just a moment to the veterans do you feel that it is wise that the Veterans Administration itself shall provide complete medical care for veterans including non-service connected disabilities? GENERAL BRADLEY The question of furnishing complete medical service is dependent on two things SENATOR DONNELL Yes, sir? GENERAL BRADLEY First the desire of Congress to build that many hospitals and pay that much for it. Second on whether or not you will ever be able to get enough doctors for full time service with the government to staff that many hospitals

SENATOR DONNELL Would you regard it as desirable, General that a veteran receive medical care under two different programs, as for illustration have his military wound cared for in a veterans hospital and his treatment for some other disability of a lung nature, for instance cared for in another hospital? Would you favor that? GENERAL BRADLEY I do not think that would be necessary, because a man with a service connected disability is entitled to both hospitalization and outpatient service and with the program we are working on now we would be able to furnish that outpatient service reasonably near his home. In a serious ailment, or periods when he has to have hospital care, that would be furnished in a veterans' hospital not too far away, after we have these new hospitals constructed We believe in general he would prefer to have that outpatient service furnished by us in his own community or in one of our hospitals At least we believe we can make that hospital service second to none and one a man would be proud of

SENATOR DONNELL And I take it you would favor the idea of the veteran following through and having his treatment under the Veterans Administration and this outpatient service, if sufficient funds are granted by Congress, to bring that about. GENERAL BRADLEY That is right

*(General Bradley described the arrangements made with various medical societies)*

SENATOR DONNELL General, in reference to the fact that the Veterans Administration has developed a plan whereby contractual arrangements may be entered into through the cooperation of the state medical society for services of physician members, medical care on a fee basis have you generally speaking, found the state medical societies to be cooperative in affording the services to be of help and assistance in these matters? GENERAL BRADLEY As far as I know we have run into no difficulty on it There may be difficulties I have not heard about yet, because we have arranged it in only a few states so far It takes time. We can furnish that for the record if you would like the number of states we have arranged this with, and there are any number of states that may have refused to do so

SENATOR MURRAY Have some states refused to do it? GENERAL BRADLEY I say if they have Mr Birdsall tells me there are seven that have already signed up

SENATOR MURRAY In your negotiations with the various medical societies you find that each society has proposals of its own and it is necessary for you to carry on negotiations with them to work out a program In other words you do not submit one single program to the medical societies and ask them to accept it, but you negotiate independently with each medical society in each state? GENERAL BRADLEY Yes

SENATOR MURRAY For the service that is to be rendered? GENERAL BRADLEY And, as I understand it and this is all done by the medical section, and I have not gone into many of the details, but I have talked with them and as I understand it the fees vary in different parts of the country and different states for different methods of control, so it is necessary to deal with each state separately

SENATOR MURRAY Who is in charge of those negotiations that you mention in your setup? GENERAL BRADLEY I believe Dr Harding is in charge

SENATOR MURRAY Dr Harding Who is the head of the medical staff? GENERAL BRADLEY Dr Hawley

SENATOR MURRAY They are both members of the American Medical Association? GENERAL BRADLEY Yes, sir

SENATOR MURRAY Have you encountered any resistance from these medical societies in any states against this program whereby you negotiate with them for service on the veterans fee schedule? GENERAL BRADLEY It has not been called to my attention

### Statement of Fred Bailey, Legislative Counsel, the National Grange, Accompanied by Mr Lloyd C Halvorson

*(Mr Bailey described the resolutions of the Grange in behalf of extending medical services It included grants-in-aid to help where need could be shown)*

MR BAILEY Title II of S 1606 goes considerably beyond anything proposed or approved by the National Grange Moreover it is a proposed extension of federal authority and activity on which there has been no opportunity for an expression of opinion by the public generally Most of us will agree with the objectives of title II but possibly not the methods The objectives as we understand health insurance are a wider distribution of medical services universal participation as far as possible in health insurance programs provision of medical treatment for indigent groups and promotion of national health and efficiency This bill provides one approach to that problem. That approach is not in conformity with our concept of the scope of the federal government We are not at all certain that the objectives expressed in the bill would best be attained by that method Basically there are two approaches We need to choose between them One is through a continuation of our slow but steady growth of the voluntary system including the increasingly popular cooperative or group insurance. The other is through the type of a program proposed in this bill—compulsory insurance We should weigh carefully both the advantages and the disadvantages of each system—we need to choose the one which will best meet our needs It is difficult to say which is the cause and which is the result—poor health and low income If we take sound measures to improve rural health there would be a resultant economic improvement Likewise if we take proper steps to improve the income of farmers the result would be to obtain improved medical care. Probably we need to attack the problem from two directions—increased productivity and income and improved medical facilities

From the strictly medical direction which is the only one before this committee, we suggest five objectives

1 We must do something to ease the financial burden of illness so that medical and dental services are within the purse limitation of all

2 Facilities, like hospitals and health centers have to be constructed and sanitation must be improved

3 More doctors dentists and nurses must be attracted to rural areas

4 Good preventive public health services must be organized, and people must be better educated about health and disease

5 The scientific quality of rural medicine and related services must be elevated.

We are reasonably certain that if we assign this problem to the sphere of governmental responsibility it will mean probably the greatest expansion of federal bureaucracy that we have ever witnessed in peacetimes It would be difficult to estimate the number of government employees required to administer such a system It would add enormously to the cost of maintaining national health—without assurance that it would in the long run do a better job than under our present democratic system of free enterprise

Records and estimates available indicate that the number of persons directly included in such a national health insurance plan would be more than 125 000 000 All of these cases would have to go through the processes of certification filing inspection payment complaints and adjustments If an adequate staff and organization were provided it would mean an army of government employees

Under our spoils' system such an expansion in the number of federal employees could mean patronage—patronage for whatever political party was in power, patronage beyond anything dreamed of in the past patronage down into every local community in the United States

This does not necessarily condemn the proposed experiment in compulsory medical insurance but it is a factor that must be considered If we bring our doctors under federal control farmers, lawyers veterinarians and others serving the public interest may well wonder if they will be next

It is possible to expand the federal government to a point where states become merely administrative districts under direction from Washington We have traveled so far in the direction of national control over our economic life that further steps in this direction must necessarily be considered in relation to the distance we already have come

Whether it would be wise to embark on a further expansion in federal control of such magnitude with the attendant growth in patronage, is a question to which we should at least give thoughtful consideration We question whether one in a hundred persons understands the implications of this proposed expansion of federal authority into their very homes

In the ordinary relationship between patient and physician the patient of average means is anxious to shorten the period of treatment and he avoids unnecessary claims on the physician's time The physician likewise is anxious to effect a cure as speedily as possible, retain the patient's good will and build up his own professional reputation Under compulsory insurance those conditions are subject to some strange inversions There is a tendency on the part of too many people to enjoy a long illness, to run to a physician with every small or imaginary illness Some physicians, with fees based on the number of calls or patients seen, would yield to the temptation to profiteer, both at the public expense and at the expense of other patients, who might have a more legitimate claim on their time

This bill has been, mistakenly we believe, castigated as "socialized medicine" Yet it undeniably is a step in that direction. It is the natural tendency of a strong central government to seek to expand and enlarge its authority That fact is amply illustrated today in economic controls Those who seek constantly to enlarge central authority over states cities, communities and individuals do not follow the original concepts of our democracy

Compulsory health insurance is not a cure-all It is not a magic elixir for our ills A number of labor unions for example, have tried compulsory health insurance for their members and have abandoned it as ineffective expensive and unworkable There are no factual data to prove it would work on a national scale

Compulsory medical insurance is incompatible with the preservation of private medical practice The government would establish the fees and other rules and regulations governing the relations between physicians and patients Physicians books recording confidential information relating to their patients could be opened to government inspection

Compulsory medical insurance is as un-American as the Gestapo Theoretically, each physician could refuse to participate in the plan Actually, because few people would refuse to avail themselves of services already paid for in taxes the clientele left to nonparticipating physicians would be negligible.

Available experience shows that current individualistic fee for-service medical practice and tax supported medicine are incompatible It is one thing to have a patient pay a doctor for each visit or service rendered and a far different thing to have a third party make the payment

There is a parallel between public medicine through taxation and food subsidies Today we are taxing—or piling up debt to be paid out of future taxation—at the rate of two billion dollars a year to pay a part of the food bill of every American family

For tomorrow it is proposed in S 1606 we shall levy still more taxes out of which we are to build another huge federal bureaucracy to administer federal payment of medical and dental bills If we do that, where are we to stop short of taxing to meet all the needs of all the people, to make certain that every one has the same sort of a car the same sort of a house the same sort of clothes and gets to see the same movies?

It is not to be inferred from that that we oppose cooperative medicine and hospital insurance—we do however seriously question the use of compulsion Compulsion is justifiable only when it can be clearly shown—as in the case of contagious diseases—that the public interest is best served by that approach.

There has been a healthy and commendable growth in recent years of voluntary medical and hospital insurance—group insurance for those who want it There is every reason to believe that voluntary insurance of that type is in many ways more desirable and economical than the compulsory type suggested under title II of this bill

It would seem to us to be more desirable for the federal state and local governments to offer financial assistance where necessary in development of voluntary consumer cooperative insurance The financial resources of some communities undeniably are insufficient to provide adequate medical services either on a cooperative or on a fee for service basis Other communities have built up cooperative health insurance plans which they like can afford and want to keep

There is I believe too much of a tendency in Washington to want to manage the lives and activities of every one whether or not all want or need such federal supervision We believe that at this time the disadvantages outweigh the advantages Federalized medicine seems to us to be another step in the wrong direction that is, toward surrender of more state local and personal rights to a centralized federal authority There is no conclusive evidence that Washington officials have a monopoly or even a preponderance of wisdom in the nation. Yet the spread of federal authority over the past generation has occurred at a rate which should give us cause for grave concern Today one out of every seven employed persons is on the public payroll There are more people who want the federal government to support them than there are who want to support the federal government

*(Senator Murray questioned Mr Bailey and Dr Halvorson on current activities of the Grange in the field of health care)*

SENATOR MURRAY You are familiar with the reports of the Selective Service Administration which showed that as the result of ill health and defects which were found in the young men coming from the farm areas it was necessary to reject a very high proportion? MR BAILEY I believe the records on that will show a very high number were rejected for medical reasons, but a great number were also rejected for illiteracy, but the record does not distinguish between the two and psychiatric cases, where also it is questionable whether medical aid would have prevented it

SENATOR MURRAY Did you have any assistance from medical men in the preparation of the statement you presented here? Mr BAILEY I did not consult any medical men

SENATOR MURRAY Who assisted you in the preparation of your statement MR. BAILEY *Dr Halvorson* and I prepared it.

SENATOR MURRAY He is a member of the medical profession? MR BAILEY He is an economist

SENATOR MURRAY The compulsion here is the compulsion which would require everybody in the country to participate

in the national insurance program and make contributions to it for the purpose of lowering the cost to the people as a whole. MR BAILEY That is true

SENATOR MURRAY What objections have you to that kind of compulsion? That is not a compulsion that is going to injure anybody MR. BAILEY It is another form of federal control, putting another tax load on the federal government If, as intended, the tax collected from this would go, all of it, to medical care then the objection would be less A portion of that tax to be collected will go to maintain an army, practically of federal agents federal bureaus that would have to take all these cases put them through the process of certification filing, inspection, payment of claims and adjustments All of those things must be paid for from the medical bill from taxes that would otherwise go to the payment of medical bills It would increase the expenses and it would decrease the amount of money that would actually go to medical treatment

SENATOR MURRAY Have you made such a thorough analysis of this bill that you could make that as your own conclusion? MR BAILEY That is my own conclusion I think it is inescapable

SENATOR MURRAY What objection do you have to the government undertaking to provide a program whereby the people of the country would be better taken care of? MR. BAILEY I have the same objection that whereby the government would through taxation, take care of my building a house take care of my buying a car, buying my food, my clothing my railroad tickets and pay my motion picture bills

SENATOR MURRAY You have no objection to the government providing programs whereby the farmers of the country are aided and assisted in matters pertaining to livestock and care of livestock and the manner in which they should be provided for and so forth? MR BAILEY The government has undertaken that not only in the field of agriculture but in every other field of course They have been providing advice and technical assistance.

SENATOR MURRAY You think wherever the government sees where the public is not being provided for that they should give study to it and assist in some manner in bringing about a better situation? MR BAILEY Yes certainly We think the study in this case here is thoroughly justified and we think the committee is making such a study and that the committee is working toward a final conclusion and their work is very commendable

SENATOR MURRAY Do you believe that the filing of this bill has developed great interest in the country and will bring about a complete study of the situation and probably result in some very satisfactory legislation? MR BAILEY We think that the introduction of the bill and the hearings being held by the committee will add considerably to the knowledge, interest and understanding of the people on this kind of measure, and eventually will lead to solutions of the problems whereby the methods, suggestions, or otherwise will be carried out

SENATOR MURRAY You say in your statement There is, I believe too much of a tendency in Washington to want to manage the lives and activities of every one whether or not they want or need such federal supervision Can you give me some examples of that? MR BAILEY An example of that would be the controls that we have had through the Office of Price Administration a great many of them They have tried to delve back into managing the affairs of the country and as a result, we have had black markets and disregard of regulations We have built up in this country an attitude of holding the law of the land very lightly

*(Senator Murray and Mr Bailey discussed at length factors concerned in inflation)*

SENATOR DONNELL What is the total approximate membership [of the Grange] at this time? MR BAILEY Eight hundred thousand

SENATOR DONNELL The organization is composed very largely of farmers MR. BAILEY It is composed almost exclusively of farmers

SENATOR DONNELL How widely distributed over the United States is the membership of approximately 800 000? MR BAILEY We have organizations in thirty eight states We have members in most of the other states but they are not organized on a statewide basis

SENATOR DONNELL The organization holds an annual meeting does it not? MR BAILEY Yes

SENATOR DONNELL You refer to the 1945 annual meeting held in Kansas City in November 1945? MR BAILEY Yes, sir

SENATOR DONNELL How large an attendance was there at that meeting, Mr Bailey, approximately? MR BAILEY I would have to answer that in two ways, Senator The official attendance consists of representatives of each of the thirty-eight states The representatives from each state consist of the state master and his wife We then have the officers of the national convention That is the entire official attendance It is a legislative body I would say that would make up about 125 who are official attendants At various times during the conventions other people come in I think the highest number we had at one time was approximately 3 000

SENATOR DONNELL Mr Bailey, may I ask you some questions on your personal experience? What was your occupation before you became the legislative counsel of the National Grange? MR BAILEY I was national farm editor for the United Press

SENATOR DONNELL How long did you have that connection? MR BAILEY Seventeen years

SENATOR DONNELL In your connection with the United Press did you have occasion to visit a portion of the United States? MR BAILEY I visited every state in the Union with one exception as a reporter SENATOR DONNELL You became acquainted with farm problems of the country you think quite well? MR BAILEY I felt that I understood them very well, yes

SENATOR DONNELL You believe you are familiar with the sentiment of the farmers of the country? MR BAILEY Yes sir being a farmer myself

SENATOR DONNELL Do you regard the expression that is made by the annual conventions of the National Grange as fairly representative of the sentiment of the great majority of the members of the Grange? MR BAILEY I will explain to you how the resolutions are passed, Senator I believe that will answer the question better than any other way The resolutions which reach the National Grange floor first must originate in a subordinate grange, which is a local community grange It must then be passed to the county, which is a promoted grange and consists of delegates of all the granges in the country It is then sent to the state grange and must be passed there It is then sent to the National Grange Every resolution has its roots in the farm home at the local level It must come from that direction it can come from no other

SENATOR DONNELL Do you think that committee knew of the fact that there had previously been introduced a bill called S 1050 a year or two before that? MR BAILEY I think the Public Health Committee which drafted this was familiar with previous proposals

SENATOR DONNELL In other words, the proposal is generally known as the 'Wagner-Murray-Dingell proposed legislation MR BAILEY I suppose, since they have made a study of the subject that they were familiar with it.

SENATOR DONNELL As you have pointed out in your statement here title II of S 1606 goes considerably beyond anything proposed or approved by the National Grange' Is that not true Mr Bailey? MR BAILEY That is right

SENATOR DONNELL Now Mr Bailey you made reference to various voluntary organizations I am wondering if you have had it within your knowledge or called to your attention that out in California your organization has had some negotiations or possibly some contractual arrangements I am not certain which with the California Physicians Service, looking to the furnishing, by their organization of approximately 100,000 members of the Grange, of certain facilities offered to the Grange Are you familiar with that? MR BAILEY I know about it but I am not familiar with the details on it, Senator

SENATOR DONNELL You do not have that? MR BAILEY I know it is a voluntary system on which we are working

SENATOR DONNELL Has that actually been entered into between the Grange and the California Physicians Service, do you know? MR BAILEY I am not certain. DR HALVORSON I believe I have seen an advertisement to that effect

SENATOR DONNELL Your membership in California is about 100 000 is it? MR BAILEY It is approximately that

SENATOR DONNELL You also referred in your testimony, page 8, to the fact, as you state that a number of labor unions,

for example, have tried compulsory health insurance for their members and have abandoned it as ineffective, expensive and unworkable" Do you know how many labor unions have made that experiment? MR BAILEY Only two that I know of I had reports and I did not bring them with me. This is based entirely on reports which I have had and not on personal experience The International Ladies' Garment Workers was one that tried it

SENATOR DONNELL Is that a Congress of Industrial Organizations organization? MR. BAILEY I believe it is now affiliated with the Congress of Industrial Organizations

SENATOR DONNELL What else do you know about it? MR BAILEY Three or four years ago they made a report in which they said that it had been unsuccessful for several reasons It gave, as among those reasons the fact that it increased the absenteeism of their members from work because they would be off ill and receive benefits They would go to a doctor They were using the services of a doctor when it was not necessary The physicians who had made contractual relations with the organization had gypped them, in other words, to put it briefly

SENATOR DONNELL That has a bearing I take it, on the point you make in your statement and is illustrative thereof as you say in your report 'there is a tendency on the part of too many people to enjoy a long illness, to run to a physician with every small or imaginary illness" The experience of the labor unions would bear out that point? MR BAILEY Yes sir

SENATOR DONNELL Do you remember what the other one of the two labor unions to which you refer is? MR BAILEY My recollection is that it was the Teamsters Union

SENATOR DONNELL I wanted to ask you also with respect to your statement on pages 5 and 6 as to the various indicia of the fact that this would build up a very large list of government employees Now you mentioned here I think to my mind, at any rate more clearly and definitely than any other witness we have had the different types of work that employees would have to do You mention the processes of certification filing inspection and payment of claims and adjustments You figured here for something around 125 million persons I think the figures we have had here range from 107 million to 112 million But at the rate of 107 million people, and to have those functions performed by employees, with respect to 107 million it is obvious to me that your point is quite clearly well taken that it would require a very large number of employees

SENATOR MURRAY You are familiar with the fact that we already have set up in this country a social security system We have administration headquarters here in Washington That office is staffed with personnel that would take care of a lot of this work that you have mentioned here MR BAILEY I am aware that you have that setup, yes I am not familiar with how it could operate in this case

SENATOR MURRAY A large part of the office work that should be required under this system will be handled by the personnel of the Social Security Administration as it is now staffed MR BAILEY Am I to infer from that Senator, that it would not be necessary to add more people to the Social Security Board to carry this work

SENATOR MURRAY It is possible that more may be added but you approach it as though you would have to build up from a ground foundation a huge organization now to administer this particular bill MR BAILEY I was assuming that it would be handled independently of any other agency now in existence

SENATOR DONNELL If I might interpolate at this point, Mr Chairman this may be a violent assumption, but I am assuming for the purpose of argument that the time of the employees' day is reasonably well occupied and that they are not sitting around idly with a lot of vacant space or time to be filled in While they may be able to add to some extent to the duties to be performed, I would think it would be obvious that with a vast new system such as this registration, constant operation complaints and so on certainly that would have to entail more people and a great deal more work

SENATOR MURRAY Not necessarily very many more, because they already have that setup now under the present Social Security System It would merely mean a little more work not much more, because the same people to a large degree, are already involved in the Socrl Security program as we have it today All of these collections, for instance they will already be paid into the Social Security Fund, and this would be just an addition of an amount added to their contribution

SENATOR DONNELL I am pleased that the chairman has mentioned this point, as Mr Bailey has emphasized his view on it I think at some future hearing it would be helpful if we had some additional information from the Social Security Board along those lines SENATOR MURRAY We intend to present that

SENATOR DONNELL Have you ever heard of a book or publication on 'Dr Crownhart on Sickness Insurance"? MR. BAILEY I am not familiar with it.

SENATOR DONNELL My information is, though I have not seen the book, that this doctor states, in substance, that in European countries sickness insurance schemes would indicate that one government employee for each hundred insured persons is required to administer and police the insurance system.

SENATOR DONNELL This insurance plan as you understand it is one under which there is going to be a spread of that cost Some of us do not have to go to a doctor at all. Those that that is true of would contribute something more than they ever had been contributing under any plan. As to the fellow who had been spending lots of money with doctors, he would pay less MR. BAILEY How many cents out of every dollar that we pay out would go for medical care, and how many cents would go to administrative care, I am not certain of It would be a very sizable amount of it

SENATOR DONNELL That is a very important question. Now the bill itself does not contain the financial provisions, does it? MR BAILEY I have not found that it does

*(To be continued)*

## Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St Chicago 10 Secretary

American Academy of Tuberculosis Physicians San Francisco June 30. Dr Oscar S Levin P O Box 7011 Denver 6 Colo Secretary

American Association for the Surgery of Trauma San Antonio Texas, June 26 28 Dr Gordon M Morrison 520 Commonwealth Ave Boston Secretary

American College of Allergists San Francisco June 28 30 Dr Fred W Wittich 401 LaSalle Medical Bldg Minneapolis 2 Secretary

American College of Chest Physicians San Francisco June 27 30 Mr Murray Kornfeld 500 N Dearborn St Chicago 10 Executive Secretary

American College of Radiology San Francisco June 29 Mr Mac F Cahal 20 N Wacker Drive, Chicago 6 Secretary

American Medical Women's Association San Francisco June 29 30. Dr Beulah Cushman 25 E Washington St Chicago Secretary

American Neurological Association San Francisco June 26-28 Dr Henry Alsop Riley 117 E 72d St. New York 21 Secretary

American Ophthalmological Society San Francisco June 26-28. Dr Walter S Atkinson 129 Clinton St Watertown N Y Secretary

American Orthopedic Association Hot Springs Va June 27 29 Dr Charles W Peabody 474 Fisher Bldg Detroit 2 Secretary

American Proctologic Society San Francisco June 30 Dr Harry E. Bacon 2031 Locust St Philadelphia 3 Secretary

American Radium Society San Francisco, June 28 29 Dr Edward H Skinner 1103 Grand Ave Kansas City 6 Mo Secretary

American Society for the Study of Sterility San Francisco June 29-30. Dr John O Haman 490 Post St San Francisco 2 Secretary

American Society of Clinical Pathologists San Francisco June 27 30. Dr A S Giordano 531 N Main St South Bend Ind Secretary

American Urological Association Cincinnati July 22 25 Dr Thomas D Moore 899 Madison Ave Memphis 3 Tenn. Secretary

Association for the Study of Internal Secretions San Francisco June 28-29 Dr Henry H. Turner 1200 N Walker St Oklahoma City Secretary

Maine Medical Association, Poland Spring June 23 25 Dr Frederick R. Carter 142 High Street, Portland 3 Secretary

Montana, Medical Association of Great Falls July 18 20 Dr Raymond F Peterson 9 W Granite St. Butte Secretary

Society for Investigative Dermatology San Francisco June 30 Dr S William Becker 55 E. Washington St. Chicago 2 Secretary

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION AND PUBLIC HEALTH)

## CALIFORNIA

**County Society Acquires Blood Bank**—The Alta Bates East Bay Blood Bank organized by the Alta Bates Hospital Berkeley, about two years ago has been transferred to the Alameda County Medical Association Dr David A Singman Berkeley who has supervised the blood bank since its inception will continue in charge

**Gibbs Medal Goes to Dr Pauling**—The Willard Gibbs Medal of the Chicago section of the American Chemical Society was presented to Linus C Pauling Sc D, June 14 Dr Pauling is on the staff of the California Institute of Technology Pasadena and his work has had significance not only in chemistry but also in physics and biology

**State Medical Election.**—Dr John W Cline San Francisco was chosen president-elect of the California Medical Association at its 1946 session in Los Angeles May 7-10 and Dr Samuel J McClendon San Diego was installed as president Dr Leo H Garland was chosen secretary to succeed Dr George H Kress and Dr Dwight Wilbur was named editor of the association's journal *California and Western Medicine* All are of San Francisco A resolution was adopted by the house of delegates in tribute to the many years of service of Dr Kress and designating him editor emeritus

## COLORADO

**Hubert Work Honored**—A plaque commemorating Dr Hubert Work was presented to the library of the Medical Society of the City and County of Denver May 7 the gift of Dr Thomas E Carmody Denver The inscription on the plaque outlines the career of the late Dr Work who once served as Postmaster General of the United States Secretary of the Interior and chairman of the Republican National Committee

## DELAWARE

**Society News**—The New Castle County Medical Society was addressed May 21 by Dr Arthur M Shipley professor of surgery University of Maryland School of Medicine Baltimore on the acute surgical conditions of the abdomen——Dr Helen B Taussig Baltimore addressed the society recently on Operative Congenital Malformations of the Heart

## DISTRICT OF COLUMBIA

**The Collins Research Fund**—Friends of the late Dr James Lloyd Collins have established a memorial research fund in the field of surgery which will honor his name and be known as the James Lloyd Collins Research Fund. It is desired that the fund shall remain intact and that the interest derived therefrom shall be used to carry on special research projects in the field of surgery at the George Washington University School of Medicine All checks should be made payable to George Washington University marked for the James Lloyd Collins Research Fund and mailed to the School of Medicine *1335 H Street N W*

**Changes at Georgetown.**—Dr Harold J Jeghers associate professor of medicine at Boston University School of Medicine has been appointed professor and director of the department of medicine at Georgetown University School of Medicine and physician in chief of the Georgetown University Hospital effective July 1 Dr Jeghers graduated at Western Reserve University School of Medicine Cleveland in 1932 and has been associated with the Boston University School of Medicine and Boston City Hospital since 1935 and with the Robert Dawson Evans Memorial Hospital since 1939——Dr Oscar B Hunter Washington was recently appointed adjunct professor of medicine at Georgetown University School of Medicine

## FLORIDA

**Director of Tuberculosis Control**—Dr Clarence M Sharp regional director U S Public Health Service New Orleans has been appointed director of tuberculosis control Florida State Board of Health according to the *Bulletin* of the National Tuberculosis Association Dr Elmer J Teagarden, Orlando formerly state director is now with the Pinellas County Health Department as tuberculosis clinician

## ILLINOIS

### Chicago

**Hans Popper Returns to Hektoen Institute**—Dr Hans P Popper recently released from active duty in the Medical Corps in the Army of the United States has returned to his position as research director of the Hektoen Institute for Medical Research He has also resumed his duties as director of the department of pathology of the Cook County Hospital

**Pasteur Memorial Rededicated**—The transfer of the Pasteur Memorial from Grant Park to Convalescent Park Medical Center District was observed in a special rededication program June 10 with Dr Herman L Kretschmer president of the Pasteur Memorial Association presiding The memorial was originally erected in Grant Park in 1928 as the result of a public subscription campaign headed by the late Dr Frank Billings who had studied under Pasteur in Paris The memorial as originally erected was designed by Leon Hermant French sculptor and Edward H Bennett Chicago architect. E Todd Wheeler consulting architect designed the new base



Hon. Jean Joseph Viala  Dr Herman L Kretschmer

and supervised transfer of the memorial and erection at the new site Coath and Goss were contractors for the work The Pasteur Memorial Association was given the privilege of handling all arrangements for the transfer of the memorial from its original location in Grant Park to its new site in Convalescent Park in the Medical Center District Among the speakers at the ceremony marking the transfer were

Rev James T Hussey S J president Loyola University
George McKibbin Chicago and Springfield chairman Illinois Postwar Planning Commission
Hon Clayton F Smith president Board of Commissioners of Cook County
Hon Edward J Kelly mayor of Chicago
Hon James H Gately president Chicago Park District
Louis L Mann Ph D rabbi
Hon. Jean Joseph Viala consul general of France
The Right Reverend Edwin J Randall S T D Suffragan Bishop of the Episcopal Diocese of Chicago

Dr Edwin P Jordan Associate Editor THE JOURNAL delivered an address on Louis Pasteur Scientist and Humanitarian Dr Raymond B Allen president of the Medical Center Commission and executive dean of the University of Illinois Chicago Colleges gave the speech presenting the memorial and Clayton F Smith gave the speech of acceptance

**Presbyterian Hospital Changes**—Presbyterian Hospital announces several changes in the chairmen of departments, effective June 1

Dr Edward D Allen succeeds Dr N Sproat Heaney resigned as chairman of the department of obstetrics and gynecology
Dr Stanton A Friedberg succeeds Dr Daniel B Hayden resigned as chairman of otolaryngology
Dr John Favill succeeds the late Dr Peter Bassoe as head of neuropsychiatry

As a part of the enlarged research education program of the hospital full time directors of pathology and biochemistry have been serving since the first of the year Dr George M Hass has succeeded Dr George J Rukstinat resigned as chairman of pathology and Dr Douglas A MacFadyen has been placed in charge of biochemistry

**Lowell Coggeshall Joins University of Chicago**—Dr Lowell T Coggeshall professor and chairman of the department of epidemiology University of Michigan School of Medicine Ann Arbor has been appointed professor and chairman of the department of medicine at the University of Chicago School of Medicine effective July 1 He succeeds Dr George F Dick who has held the position since 1933 and who was professor of clinical medicine at Rush Medical College from 1918 until its activities were absorbed by the University of Chicago in 1942 Dr Coggeshall graduated at the University of Indiana School of Medicine Indianapolis in 1928 He was instructor in medicine at the University of Chicago from 1931 to 1933 and assistant professor from 1933 to 1935 He was a member of the International Health Division of the Rockefeller Foundation and in 1941 went to Michigan During 1942 he was on leave from the University of Michigan to serve as senior medical officer for the Pan American African Airlines in establishing a medical department from the west coast of Africa to China. On Jan 29 1944 he was commissioned in the U S Naval Reserve to direct a tropical disease study on malaria and filariasis Dr Dick who graduated at Rush Medical College in 1905 was once a member of the staff of the McCormick Institute for Infectious Diseases

## KANSAS

**State Medical Election**—At a recent meeting of the Kansas Medical Society Dr Laurence S Nelson Salina was chosen president elect and Dr William M Mills Topeka was installed as president Other officers include Drs Oscar W Davidson Kansas City and James H A Peck St Francis, vice presidents Dr John M Porter Concordia secretary and Dr John L Lattimore Topeka treasurer

**Changes in Health Personnel**—Dr Albert E Bair Independence has been appointed health director of the Montgomery County Health Department effective April 1 succeeding Dr Harold O Bullock Independence who in the last eight months has served as a temporary part time health officer Part time appointments include those of Drs Carl E Sixbury, Oberlin of Decatur County William J Stewart Frankfort, of Marshall County and Lynn E Beal Fredonia of Wilson County

## MARYLAND

**Robert Patterson Resigns at Maryland**—Dr Robert U Patterson has resigned as dean of the University of Maryland School of Medicine Baltimore effective June 30 Dr Patterson who graduated at McGill Faculty of Medicine Montreal Canada in 1898 served for many years in the Medical Corps in the U S Army retiring in 1935 as major general He was dean of the University of Oklahoma School of Medicine Oklahoma City, from 1935 until 1942 when he accepted a similar position at Maryland

## MASSACHUSETTS

**Appointments at Harvard**—Dr Kendall Emerson Jr, formerly associated with the Rockefeller Institute and recently returned from service with the U S Naval Medical Research Unit number 2 on Guam has been appointed associate in medicine at Harvard Medical School and senior associate in medicine at the Peter Bent Brigham Hospital, Boston In addition to clinical teaching and research Dr Emerson will be in charge of the Chemical Laboratory and the metabolic division of the hospital Dr Henry M Fox formerly associated with Johns Hopkins University School of Medicine and Hospital Baltimore, and recently returned from service with the U S Army 118th General Hospital has been appointed assistant professor of psychiatry at Harvard Medical School and senior associate in psychiatry at the Peter Bent Brigham Hospital Dr Fox will direct a program coordinating the teaching of psychiatry and internal medicine This particular study is being carried on under a grant from the Commonwealth Fund

**Frances Bonner Named First Fellowship Holder in Genetics**—Dr Frances J Bonner, Boston, has been awarded the Helen Putnam Fellowship for Advanced Research in Genetics or Mental Health at Radcliffe College it was announced May 27 She will be the first holder of the fellowship which was established in 1944 by a gift of Dr Helen C Putnam of Providence, R I (THE JOURNAL, Dec 23 1944 p 1094) and will take up residence at the college October 1 The award, which carries a $2 000 stipend for an eleven month period is open annually to a mature woman scholar who is qualified to carry on significant research or creative work Dr Bonner graduated at Boston University School of Medicine in 1943 She is at present assistant in research in neuropathology at the Boston City Hospital and assistant in neurology as well as assistant laboratory instructor in neuropathology, Harvard Medical School Boston As holder of the Helen Putnam Fellowship she will do research on hereditary and social factors in hysteria

**New Scientific Research Laboratory**—On May 17 the new scientific research laboratory at McLean Hospital, Waverley was formally dedicated The new unit represents a serious and permanent venture in psychiatric research which has been established by the Massachusetts General hospitals, of which McLean is the mental disease department The laboratory facilities provided are of the most modern type for biochemical work including adequate low temperature rooms Dr Jorge Folch-Pi is director of the laboratory and assistant professor of biologic chemistry at Harvard Medical School Boston In addition to these responsibilities, Dr Folch Pi will train graduate students interested in fundamental and objective research in psychiatry It is hoped that as the work branches out in physiologic and psychiatric directions additional funds will be made available At the dedicatory program the speakers included

Dr Cecil K Drinker professor of physiology, Harvard School of Public Health Research at the McLean Hospital
Dr Folch Pi Biochemical Problems Related to Psychiatry
Dr Stanley Cobb chief of psychiatric service Massachusetts General Hospital and Bullard professor of neuropathology Harvard Medical School The Integration of Medical and Psychiatric Problems
Dr Herbert S Gasser director, Rockefeller Institute for Medical Research New York Protocol for a Review of Psychiatry
Dr Wilder G Penfield chief of neurologic service Montreal Que Neurological Institute Neurosurgery as an Avenue of Approach to Psychiatric Problems

At the reception and dinner Dr Edward A Strecker professor of psychiatry University of Pennsylvania School of Medicine Philadelphia spoke on The Psychobiology of Psychiatric Research'

## MICHIGAN

**Icie Macy-Hoobler Honored**—The Francis P Garvan Medal of the American Chemical Society was awarded to Icie Macy-Hoobler Ph D director of the research laboratory of the Children's Fund of Michigan Detroit Dr Hoobler was honored for her studies on nutrition and the chemical processes of human growth

**Changes in Health Officers**—Dr Lars W Switzer for two years plant physician for General Motors Corporation Bay City, has been named head of the Manistee-Benzie Health Unit with headquarters in Manistee a position he once before held.——Dr Clarence D Barrett Mason, on service with the Army of the United States has been appointed health officer of Ottawa County——Dr Charles F Atkinson Traverse City has resigned as director of the Grand Traverse-Leelanau County Health Department because of ill health

**Personal**—Mr Jay C Ketchum director Division of Prepayment Medical Care of the Council on Medical Service and Public Relations American Medical Association and executive vice president and director of Michigan Medical Service, Detroit was made an honorary member of the Wayne County Medical Society during its annual meeting May 6——Dr Lunette I Powers Muskegon, was recently given honorary life membership in the Muskegon County Medical Society——Dr James F Darby, St Ignace, recently completed fifty years of medical practice in Mackinac County——Dr Walter Newburn for the past twenty years a professional service representative for Frederick Stearns and Company division Sterling Drug Inc., Detroit has retired under the company's pension plan Dr Newburn expects to live at Sacketts Harbor Jefferson County, N Y and devote his time to writing

## NEW YORK

**Fund for Anti-Rabies Work**—The Westchester County board of supervisors has appropriated $18 000 to finance anti-rabies inoculations for the licensed dogs of Westchester County Inoculations, which will begin July 1 at clinics operated by the county health department, will be without cost to the owners and only on the consent of owners

### New York City

**Council for Heart Disease Organized**—At a meeting on May 21 the Council for Heart Diseases was organized to stimulate research and public education in the field of heart and cardiovascular disease The council will raise funds by voluntary subscription concentrating early efforts in New York State but expanding later to all parts of the nation The council will start next year with a campaign to raise $500 000 the greater portion of which will be applied in 1947 to the budget of the New York Heart Association 2 East 103d Street A statement by the organizing group said that the council was organized 'at the special request of" Governor Thomas E Dewey, who said I am not entitled to all that credit" which should properly go to Dr Edwin P Maynard Jr, Brooklyn president of the New York Heart Association, Dr Abram W Duryee, the governor's physicians and others Dr Maynard was elected a vice president, and a nominating committee was appointed to select a president for the council

## NORTH CAROLINA

**Dr Lehman Goes to Washington.**—Dr Arnold J Lehman, professor of pharmacology University of North Carolina School of Medicine, Chapel Hill, has resigned, effective July 1, to assume the position as chief of the division of pharmacology of the Food and Drug Administration, Federal Security Agency Dr Lehman graduated at Stanford University School of Medicine San Francisco in 1936 He has served on the staffs of Washington, Stanford and Wayne University His appointment fills the vacancy that occurred with the death of Herbert O Calvery, Ph.D

## NORTH DAKOTA

**New Medical Center**—Mr John A Page, Grand Forks has been named director of the North Dakota State Medical Center at the University of North Dakota, University Station Grand Forks, which was created under a legislative act by the last assembly The purpose of the center is to provide facilities for the coordination improvement, expansion and unification of health and welfare activities of the state and its agencies and its political subdivisions and private medical practitioners The control and operation of the center are under the administrative authorities of the University of North Dakota and its medical school under the supervision of the state board of higher education Physician members of the medical center advisory council include Drs John H Moore, Grand Forks George F Campana, Bismarck, and Harley E French Grand Forks secretary

## OHIO

**Medical Director Named for Goodrich Company**—Dr Rex H Wilson, first affiliated with the B J Goodrich Company, Akron, has been appointed medical director succeeding Dr Donald B Lowe, who died March 2 Dr Wilson graduated at Ohio State University College of Medicine Columbus in 1935 and once served on the staff of the, University of Chicago Medical School

**New Professor of Anatomy**—Joseph L Schwind Ph D associate professor of anatomy at Albany Medical College Union University since 1938, has been appointed Frances Brunning professor of anatomy at the University of Cincinnati College of Medicine effective May 1 Dr Schwind graduated at Cornell University in 1925 and received his Ph D in anatomy at Yale University in 1928

**Conservation, Nutrition and Human Health**—The fifth Conference on Conservation Nutrition and Human Health will be held at the university campus Athens June 29 30 Included among the speakers will be

Dr James Asa Shield Richmond Va Psychologic Behavior of People in Relation to Soil Fertility
Dr Alice D Chenoweth Rosemont P The Nutritional and Chemical Growth in Childhood.
Dr John A Saxton Jr St Louis Nutrition Growth and Their Influence on Longevity
Edward H Graham Ph D Washington D C The Capacity to Use Our Land
Dr Jonathan Forman Columbus Current Thinking on Nutrition

**Lay Diabetes Association.**—The Lay Diabetes Association was organized at a meeting in Cincinnati April 30 Mr Eldon Park was elected temporary president and Miss Alice Huenefeld temporary secretary-treasurer Announcement was made at the meeting that no advice with regard to treatment will be given, since this is strictly the function of the patient's physician It was also stated that practicing physicians would not participate in the organization or address its meetings It is intended that the activities of the association shall be determined by its own members, with the Public Health Federation offering assistance in the way of providing educational material clerical work and similar service The Council on Diabetes of the Public Health Federation took the initiative in stimulating the formation of the association through interested lay persons Before doing so the project was cleared with the council of the Academy of Medicine of Cincinnati, and the council's approval was secured. In the invitations sent out diabetic patients were asked to discuss the matter with their physicians and to secure their physicians' advice as to whether they should attend the meeting

## OREGON

**The Sommer Lectures**—The fifth series of Sommer Memorial Lectures were presented at the University of Oregon Medical School, Portland, June 6-8 Sir Reginald Watson-Jones spoke on Multiple Injuries Six Years with the Royal Air Force," "Internal Fixation and Bone Grafting in Fracture Treatment" and "The Rehabilitation Racket," and Dr Louis H Newburgh Ann Arbor, Mich, gave three lectures on "The Significance of Extracellular Fluid in Clinical Medicine These lectures are a memorial to the late Dr Ernst A Sommer emeritus professor of surgery

## PENNSYLVANIA

### Philadelphia

**Strittmatter Award Goes to Francis Borzell**—The twenty-third annual Dr Isidor P Strittmatter Award for the year 1945 was bestowed on Dr Francis T Borzell at a meeting of the Philadelphia County Medical Society May 15 Dr George P Muller, chairman of the Strittmatter Award committee, presented the award consisting of a gold medal and scroll The inscription on the scroll read 'In recognition of his outstanding services in behalf of the contributions of organized medicine to World War II and his sincere devotion and constructive effort in safeguarding the principles of the American system of medicine This annual award is made possible through the generosity of Dr Strittmatter to foster high ideals and distinguished service redounding to the credit of the medical profession in the interest of humanity A feature of the meeting was the presentation of the DeCosta Oration by Dr Damon B Pfeiffer on 'The Evolution and Present Status of the Treatment of Compound Fractures

## WEST VIRGINIA

**Personal**—Dr Charles E Hammer Columbus Ohio has been appointed superintendent of the Spencer State Hospital Spencer effective May 1 Dr Hammer succeeds Dr Alfred L. Morris who has been acting superintendent since December 1943 and who will remain on the hospital staff as an assistant superintendent.——Dr Leon A Dickerson, Oak Hill, has been appointed director of the Boone County Health Department, effective April 1 succeeding Dr Robert L Hunter, Madison resigned.

**State Medical Election**—Dr Wade H St. Clair, Bluefield, was unanimously elected president of the West Virginia State Medical Association during its meeting in Huntington May 14 New vice presidents include Drs James S Klumpp Huntington, and Basil L Page Buckhannon Other officers include Dr Thomas M Barber, Charleston treasurer, reelected and Mr Charles P Lively executive secretary Newly elected officers will assume their positions July 1 There were 429 physicians in attendance at the meeting Only one time before has the 1946 attendance been exceeded and this was in Clarksburg several years ago when 502 West Virginia physicians were registered Honorary life memberships were conferred on

Dr Robert L Hunter Madison
Dr Americus J Kemper Lost Creek
Dr Benjamin F Brugh Clearwater Fla.
Dr James R. Vermillion Princeton
Dr David B Lepper Bluefield

## GENERAL

**Executive Secretary Named for Society of Medical Research**—Mr Ralph A Rohweder, Chicago president of the Junior Association of Commerce of Chicago, has been appointed executive secretary of the National Society for Medical Research Prior to his appointment Mr Rohweder was editor of the *Farm Safety Review*, a publication of the National Safety Council, to which group he had also served as consultant Permanent headquarters of the recently organized National Society for Medical Research are at 25 East Washington Street, Chicago

**Prevalence of Poliomyelitis**—Reports of cases of poliomyelitis for the periods indicated have been received from the division of public health methods, U S Public Health Service, as follows

| Division and State | Week Ended June 8, 1946 | Week Ended June 9, 1945 | Median, 1941 1945 |
|---|---|---|---|
| New England States | | | |
| Maine | 0 * | 0 | 0 |
| New Hampshire | 0 | 1 | 1 |
| Vermont | 0 | 0 | 0 |
| Massachusetts | 0 | 1 | 0 |
| Rhode Island | 0 | 0 | 0 |
| Connecticut | 1 | 0 | 1 |
| Middle Atlantic States | | | |
| New York | 6 | 11 | 4 |
| New Jersey | 0 | 0 | 0 |
| Pennsylvania | 3 | 1 | 0 |
| East North Central States | | | |
| Ohio | 4 | 0 | 0 |
| Indiana | 1 | 1 | 0 |
| Illinois | 4 | 2 | 2 |
| Michigan | 0 | 0 | 0 |
| Wisconsin | 0 | 0 | 0 |
| West North Central States | | | |
| Minnesota | 3 | 0 | 0 |
| Iowa | 1 | 0 | 0 |
| Missouri | 2 | 0 | 0 |
| North Dakota | 0 | 0 | 0 |
| South Dakota | 0 | 0 | 0 |
| Nebraska | 0 | 0 | 0 |
| Kansas | 7 | 0 | 0 |
| South Atlantic States | | | |
| Delaware | 0 | 0 | 0 |
| Maryland | 0 | 0 | 0 |
| District of Columbia | 0 | 1 | 0 |
| Virginia | 0 | 2 | 0 |
| West Virginia | 1 | 1 | 0 |
| North Carolina | 2 | 2 | 0 |
| South Carolina | 3 | 3 | 1 |
| Georgia | 1 | 0 | 0 |
| Florida | 33 | 1 | 1 |
| East South Central States | | | |
| Kentucky | 0 | 0 | 1 |
| Tennessee | 3 | 2 | 1 |
| Alabama | 15 | 2 | 1 |
| Mississippi | 1 | 0 | 0 |
| West South Central States | | | |
| Arkansas | 2 | 1 | 1 |
| Louisiana | 9 | 1 | 1 |
| Oklahoma | 2 | 1 | 1 |
| Texas | 35 | 42 | 1 |
| Mountain States | | | |
| Montana | 0 | 0 | 0 |
| Idaho | 0 | 0 | 0 |
| Wyoming | 0 | 0 | 0 |
| Colorado | 5 | 0 | 0 |
| New Mexico | 0 | 0 | 0 |
| Arizona | 1 | 0 | 0 |
| Utah | 0 | 1 | 0 |
| Nevada | 0 | 0 | 0 |
| Pacific States | | | |
| Washington | 1 | 2 | 1 |
| Oregon | 0 | 0 | 0 |
| California | 15 | 13 | 9 |
| Total | 161 | 92 | 41 |
| First 23 weeks 1946 and 1945 | 1 196 * | 903 | 586 |

* Delayed report Week ended June 1, Maine 1 case.

**Institute of Biology Proposed.**—The organization of an American Institute of Biology is now being developed through the executive committees of the Union of American Biological Societies and the American Biological Society in cooperation with other groups An initiating committee has been formed and authorized to expand with a view toward complete geographic distribution and adequate representation of the principal societies of biology A statement has been approved by the council of the Union of American Biological Societies, comprising thirty-nine national societies, to endorse the formation of the organization of biologists on the basis of the two following general propositions

To provide a means for executing our public responsibilities as biologists and scientists so that the freedom essential to the progress of science and public welfare will be insured

*To safeguard* the professional interests of biologists and to assist in providing the material means for the promotion of biological research also to provide such services as may be necessary to facilitate this program

According to *Science*, a main feature is the importance of closely relating the proposed institute with the National Research Council and having the institute serve to strengthen and supplement the activities of the council

**Pan American Medical Women's Alliance**—The Pan American Medical Women's Alliance was incorporated at Columbus, Ohio, April 18, to set up an organization for the interchange of ideas among physicians in the Western Hemisphere. According to press reports the plan was fostered in Cincinnati to bring about an interchange of all possible medical ideas among women who are practicing physicians in the United States and South American countries Trustees of the new group include Drs Helen I Glueck, Cincinnati, Elizabeth Mason-Hohl, Los Angeles, Esperanza Oteo de Hoogh, Mexico City, Rita V S Finkler, Newark, N J, Alma Dea Morani, Philadelphia Victoire D Lespinasse, Chicago, and Margaret M Nicholson, Washington, D C. It is hoped to hold a meeting in Mexico City in about six months

**Fellowships Available for Study of Rheumatic Fever**—The American Council on Rheumatic Fever of the American Heart Association announces that it will entertain applications for American Legion fellowships for the study of rheumatic fever Applications will be accepted from recognized institutions concerned with the study of rheumatic fever and rheumatic heart disease Two fellowships are available. Each is for a period of three years and carries a stipend of $3 500, $4,000 and $5,000 for the first, second and third years respectively Each application should supply information concerning the institution, the projected study and the person proposed for the fellowship Applications will be received until August 1 and become effective September 1 The American Legion fellowships for the study of rheumatic fever have been made available by a grant from the American Legion and the Women's Auxiliary of the American Legion as part of their program of fostering research in rheumatic fever and rheumatic heart disease through the American Council on Rheumatic Fever of the American Heart Association (THE JOURNAL, June 15, p 620)

## CANADA

**Cancer Society Changes Name.**—The Canada Society for the Control of Cancer recently voted to change its name to the Canadian Cancer Society Mr J G Stephenson, London, Ont, was elected president to succeed Dr John S McEachern, Calgary, Alta., first president, who resigned in 1944 because of ill health. Mr Stephenson is the assistant general manager and director of agencies for the London Life Insurance Company

**Personal**—Major Gen Charles P Fenwick, Toronto Ont., who was director general of medical services for the Canadian army in World War II, has been named chief of medical services for the Canadian Pacific Railway, with headquarters in Montreal He succeeds Dr Henry A Beatty, Toronto who has retired after forty-four years of service, thirty of them in charge of the medical department.

**Canadian Medical Association.**—The 1946 session of the Canadian Medical Association was held in Banff Springs Hotel, June 10-14, under the presidency of Dr Leon Gérin-Lajoie, Montreal Included among the many speakers on the program were

Dr Leonard G Parsons, Birmingham, England The Blackader Oration
Dr Arthur W Proetz St Louis Reliability of Radiologic Evidence of Sinus Disease.
Dr Rubin Flocks, Iowa City Carcinoma of the Bladder
Dr Alan A Moncrieff London England, subject not announced
Dr Donald Patterson London England, subject not announced.

**Osler Medal to Student.**—The American Association of the History of Medicine at its annual meeting held in Atlantic City, May 27, awarded the William Osler Medal to Mr Peter Kellaway of McGill University Faculty of Medicine, Montreal, for his essay "The Part Played by Electric Fish in the Early History of Bioelectricity and Electrotherapy" The William Osler Medal was established by the association in order to stimulate interest and research in medical history among students of the medical schools of the United States and Canada and is granted annually to the author of the best student essay submitted to the association

## CORRECTION

**Academy of Sciences**—Karl P Link, Ph D is professor of biochemistry in the College of Agriculture in the University of Wisconsin and not in the medical school, as was reported in THE JOURNAL, June 1, page 473

# Deaths

**John Prescott Grant** ⊕ Coral Gables Fla , McGill University Faculty of Medicine Montreal, Que, Canada, 1895, born in New Glasgow, N S, Canada Oct 31, 1872 fellow of the American College of Surgeons, New York Academy of Medicine and the National Society for the Advancement of Gastroenterology member of the Royal College of Surgeons and the New York Gastroenterology Society, chief of the surgical clinic from 1907 to 1912 at Cornell University Medical College New York where he had been instructor in operative and clinical surgery from 1906 to 1912 adjunct professor of surgery from 1912 to 1914 clinical professor of surgery from 1914 to 1917 and professor of surgery from 1917 to 1938 at the New York Polyclinic Medical School and Hospital, where he had been president of the faculty from 1924 to 1926, director of the department of surgery for two years and later consulting surgeon and surgeon at the Polyclinic Hospital, consulting surgeon to the New York City, Midtown, Peoples and Bronx Maternity hospitals in New York, served as director of surgery at the Long Beach (N Y) Hospital, author of the surgical section in Dr Samuel Weiss's textbook "Diseases of the Stomach, Liver and Pancreas" in 1935 died in the Sun-Ray Park Health Resort in Miami, Fla , May 27, aged 73, of cerebral hemorrhage

**Warren Zimmerman Anders** ⊕ Collegeville, Pa , Medico-Chirurgical College of Philadelphia, 1898, served as president of the local board of education, died in the Montgomery Hospital Norristown, March 27, aged 70, of carcinoma of the bladder

**Charles James Burgess** ⊕ Lawrence, Mass , Tufts College Medical School, Boston, 1898, specialist certified by the American Board of Radiology Inc , member of the New England Roentgen Ray Society and the Radiological Society of North America, Inc., on the staff of the Lawrence General Hospital, died February 16, aged 76, of cerebral hemorrhage.

**Charles Smiley Cavett,** North Baltimore, Ohio, Starling Medical College Columbus, 1895, served as mayor of the village for two terms and as councilman for one term, lieutenant in the medical corps of the U S Army during World War I died February 16, aged 78

**Oliver Thaddeus Clark,** Keokuk, Iowa, Drake University College of Medicine Des Moines, 1909 member of the American Medical Association, on the staffs of St Joseph's Hospital and the Graham Protestant Hospital, where he died March 13 aged 63, of coronary thrombosis

**Henry Magruder De Jarnette,** Fredericksburg, Va University College of Medicine, Richmond, 1897, member of the American Medical Association, died in February, aged 72, of coronary thrombosis

**Lorenzo Simeon Dewey** ⊕ Okanogan, Wash Northwestern University Medical School, Chicago, 1907, for many years city and county health officer, died February 28, aged 64, of coronary thrombosis

**William Thomas Dickerson,** Licking Mo Marion-Sims College of Medicine St. Louis, 1892 died February 8, aged 81, of carcinoma

**Edward Lewis Dodd,** Belleville N J Columbia University College of Physicians and Surgeons, New York, 1900, member of the American Medical Association for many years medical examiner for the Pennsylvania Railroad, died February 19 aged 73, of cerebral thrombosis

**Frantz Brandon Erwin,** Oklahoma City University Medical College of Kansas City Mo 1906, member of the American Medical Association, died February 28, aged 72, of cerebral hemorrhage.

**John L Fennell,** Waterloo, S C University of Georgia Medical Department Augusta, 1902, honorary member of the South Carolina Medical Association member of the American Medical Association served as secretary-treasurer of the Laurens County Medical Society died February 27, aged 68, of cerebral hemorrhage.

**William Francis Flanagan** ⊕ New Britain Conn Fordham University School of Medicine, New York, 1917 fellow of the American College of Surgeons on the staff of the New Britain General Hospital, died February 13, aged 54 of heart disease

**Mary Stamper Hornby Frost,** Brookline, Mass Boston University School of Medicine 1891 died in Worcester recently aged 92 of bronchopneumonia

**Grover Willis Gaines,** Richmond, Mo , University Medical College of Kansas City, 1911, member of the American Medical Association, formerly secretary of the Ray County Medical Society served during World War I, for many years county coroner, died in the Trinity Lutheran Hospital Kansas City, February 26 aged 60, of coronary thrombosis

**Harry Shirk Garrett** ⊕ Park Ridge, N J , University of Buffalo School of Medicine, 1914, member of the Medical Society of the State of New York, served as a lieutenant in the medical corps of the U S Army during World War I died April 1 aged 54, of coronary thrombosis

**Henry Oswald Grangaard** ⊕ Jamestown, N D University of Minnesota College of Medicine and Surgery, Minneapolis, 1908, member of the American Medical Association and the Minnesota State Medical Association affiliated with the North Dakota State Hospital for Insane, died February 10, aged 63, of coronary occlusion

**Joseph Henry Graves,** Houston, Texas, University of Texas School of Medicine Galveston, 1912, member of the American Medical Association served during the Spanish-American War and World War I, formerly member of the county school board, died in the Veterans Administration Facility, Dallas, February 22, aged 71, of brain tumor

**Anna Morgan Handshaw,** Chicago, Northwestern University Woman's Medical School, Chicago, 1893 member of the American Medical Association, died in the Garfield Park Hospital February 20, aged 88, of chronic myocarditis

**Benjamin Harmon Hawkins** ⊕ Mena, Ark , University of Arkansas School of Medicine, Little Rock, 1904, served during World War I formerly owner of the Mena Hospital, died January 13, aged 67

**Charles Arthur Hayes,** Glendale, Calif , University of Southern California School of Medicine, Los Angeles 1900, fellow of the American College of Surgeons, formerly a medical missionary in China, died in the Good Samaritan Hospital, Los Angeles, February 25 aged 73 of cerebral hemorrhage

**Ralph Philip Higgins,** Ansley, Neb University of Nebraska College of Medicine, Omaha, 1912 served during World War I, died February 22, aged 57, of coronary thrombosis

**John Dixon Jackson,** Connellsville Pa (licensed in Pennsylvania in 1883), died recently, aged 93, of arteriosclerosis

**Charles F Kirkpatrick,** Ashland Neb Columbus Medical College, 1882, member of the American Medical Association, formerly affiliated with the local school board, died February 25 aged 88 of coronary thrombosis

**Milton Korb,** Providence, R I , Columbia University College of Physicians and Surgeons New York, 1939 served a residency at the Boston City Hospital and an internship at St. Joseph's Hospital commissioned a lieutenant in the medical corps, Army of the United States, on April 2, 1942, promoted to captain, relieved from active duty , died Dec 29 1945, aged 35, of coronary thrombosis

**Harry Michael Kraemer** ⊕ Scranton Pa , University of Pennsylvania School of Medicine, Philadelphia, 1914, served overseas during World War I, for many years affiliated with the State Hospital died February 16 aged 54 of chronic myocarditis

**James Stevens Macdonald,** Brookline Mass , McGill University Faculty of Medicine Montreal, Que., Canada, 1899, died February 26 of cerebral arteriosclerosis

**John A McCollum** ⊕ Vonore Tenn., Chattanooga Medical College, 1894, died February 20, aged 78 of heart disease

**Oscar Tracy McDonough,** Washington, Pa, College of Physicians and Surgeons Baltimore, 1904, member of the American Medical Association, died recently, aged 75 of generalized arteriosclerosis

**Thomas Chester McCord,** Paris Ill Medical College of Ohio, Cincinnati, 1883 formerly mayor, served during the Spanish-American War for many years member of the city council died in the Paris Hospital February 13 aged 89

**Melvin Saunders McLeod,** Melrose, Mass University of Vermont College of Medicine Burlington, 1920 member of the American Medical Association, served during World War I, on the staff of the Melrose Hospital, associate member of the Malden (Mass) Hospital staff died in Somerville February 26 aged 49 of coronary thrombosis

**John T Moss** ⊕ Memphis Tenn ; Jefferson Medical College of Philadelphia, 1908, died March 12, aged 66, of mitral regurgitation.

**Winfield Scott Nickerson,** Faribault Minn , University of Minnesota College of Medicine and Surgery, Minneapolis, 1905, served during World War I on the staff of the St Lucas Evangelical Deaconess Hospital, died in Bedford, Mass recently, aged 81, of arteriosclerotic heart disease

**Charles Ilsley Porter,** Sharon, Mass Boston University School of Medicine 1888 for many years a member of the board of health in Canton a member of the staff of the Norwood (Mass ) Hospital died February 18 aged 81 of coronary thrombosis

**Clarence Marion Porter,** Woodward Iowa Drake University Medical Department Des Moines 1901 member of the American Medical Association on the staff of the Hospital for Epileptics and School for Feebleminded died in the Mercy Hospital Des Moines February 16 aged 70 of carcinoma of the bladder

**John D Quarles,** Whitleyville Tenn , University of Nashville Medical Department, 1896 member of the American Medical Association died January 29 aged 73

**John Henry Reb** ⊕ Brooklyn College of Physicians and Surgeons medical department of Columbia College, New York, 1894 on the staff of the Samaritan Hospital, member of the board of visitors of the Kings Park (N Y ) State Hospital where he had been president died February 10 aged 72 of carcinoma of the urinary bladder

**Daniel Waldo ReMine,** Amarillo Texas, University of Tennessee College of Medicine, Memphis, 1932 member of the American Medical Association and the New Mexico Medical Society, died February 12 aged 38 of tuberculosis

**Eldred Andre Roberts,** Baltimore University of Maryland School of Medicine and College of Physicians and Surgeons Baltimore 1929 member of the American Medical Association died recently aged 49

**William J Saling** ⊕ Decatur, Ill University of Louisville (Ky ) Medical Department 1892 known for his invention of a metal splint designed to prevent 'flat wrist" following forearm or wrist breaks died May 9 aged 80 of myocarditis

**Owen Rogers Stafford** Los Angeles University of Southern California School of Medicine Los Angeles 1901, specialist certified by the American Board of Radiology, Inc. at one time professor of roentgenology at the College of Medical Evangelists served as county health officer, died February 16 aged 69 of arterial thrombosis

**James T Stone,** Oneonta Ala Memphis (Tenn ) Hospital Medical College 1891 member of the American Medical Association died February 5 aged 80 of myocardial degeneration and senility

**William Ross Strickland** ⊕ Rockport Mo Marion Sims College of Medicine, St Louis 1898 an Affiliate Fellow of the American Medical Association served as postmaster and mayor, died February 9 aged 76, of cerebral hemorrhage.

**Cleve L Sullivan,** Elmore City Okla Barnes Medical College, St Louis 1905 member of the American Medical Association, helped organize the First State Bank of Elmore City, of which he had been director and vice president died January 25 aged 65

**Mark Sutphin** ⊕ Huntington W Va Bennett Medical College Chicago, 1914 served in the medical corps of the American Expeditionary Forces during World War I formerly a medical consultant for the Veterans Administration in Logan died May 7 aged 59

**Abraham Otto Tumen** ⊕ New York University and Bellevue Hospital Medical College New York 1926, on the staffs of the Harlem Manhattan General and Mount Sinai hospitals, died February 14 aged 42 of coronary thrombosis

**Lucas Grove Tuttle,** Springfield Mo , Albany (N Y ) Medical College 1893, died February 16, aged 88 of heart disease

**Walter Harold Vance,** Fort Wayne Ind Indiana University School of Medicine Indianapolis 1925 member of the American Medical Association served as a captain in the medical corps Army of the United States during World War II, died February 9 aged 46 of coronary occlusion

**Fred Chandler Vilas,** Kelso Wash University of Vermont College of Medicine Burlington 1882 formerly postmaster of Stambaugh died in St John's Hospital Longview, January 18 aged 86, of prostatic obstruction of the bladder

**Charles L Waddle,** Somerset Ky Hospital College of Medicine Louisville 1903, member of the American Medical Association died in February aged 65 of hypertensive heart disease

**Ezra Heber Walker,** Moab Utah, Memphis (Tenn.) Hospital Medical College, 1911, for many years physician and surgeon for the Chesterfield Coal Company, died in a hospital at Provo May 16, aged 63, of parkinsonism

**Patrick McHugh Walker,** Los Angeles, McGill University Faculty of Medicine, Montreal, Que, Canada, 1898, member of the American Medical Association, formerly chief division surgeon for the Great Northern Railway, died in the Good Samaritan Hospital February 25, aged 69

**Mae Louise D Washburn,** Wellsboro, Pa Southern Homeopathic Medical College, Baltimore, 1904 died January 4, aged 78, of carcinoma of the breast.

**John Thomas Watkins,** Nashville, Tenn , Vanderbilt University School of Medicine Nashville, 1912, first director of the venereal disease clinic of the city health department, for many years member of the staff of the Protestant Hospital, died February 27, aged 57, of pulmonary tuberculosis

**John Samuel Wells Jr,** Clearwater, Fla , Rush Medical College Chicago, 1931, found dead February 12 in Seco, Ky aged 40

**E Reed Whittemore** ⊕ New Haven, Conn , Columbia University College of Physicians and Surgeons New York, 1902, fellow of the American College of Surgeons on the staff of the New Haven Hospital, died recently, aged 68.

**Louis Willard,** Pittsburgh Hahnemann Medical College and Hospital of Philadelphia, 1906 member of the American Medical Association, died January 27, aged 64, of heart disease

**John Wilson,** Bloomfield Mo , Washington University School of Medicine, St Louis 1911, served in France during World War I, died in St Francis Hospital Cape Girardeau, January 24, aged 60

**Russell Wilson Wolfe,** Taylorstown, Pa Western Pennsylvania Medical College, Pittsburgh, 1889, died recently aged 85, of bronchopneumonia and carcinoma of the colon

**William Yarm,** Brooklyn, Cornell University Medical College New York 1909, at one time on the New York State Board of Health, attending physician at the Kingston Avenue Hospital and a member of the heart clinic of the Cumberland Street Hospital, died April 2 aged 59, of coronary thrombosis

## DIED WHILE IN MILITARY SERVICE

**Richard Williams Cragg** ⊕ Vallejo, Calif , University of Cincinnati College of Medicine, 1931, born in Cincinnati Dec. 14, 1905, member of the American Society of Clinical Pathologists, interned at the Cincinnati General Hospital physician at the Cincinnati Workhouse from October 1931 to October 1932, when he joined the Mayo Foundation Rochester, Minn., as a fellow in pathology, later appointed first assistant in pathologic anatomy and surgical pathology, consulting physician in pathologic anatomy at the Mayo Clinic instructor in pathology at the foundation and assistant professor of pathology received the degree of master of science from the University of Minnesota in 1936, began active duty as a first lieutenant in the medical corps of the U S Naval Reserve on July 1, 1942, pathologist at the Naval Hospital at Corona Calif assigned to duty at the Naval Advance Base Training Section at San Bruno, Calif , went to Mare Island where he was chief pathologist at the Naval Hospital promoted to lieutenant commander, died February 18 aged 40 of coronary occlusion

**Joseph George Sandler,** Ellenville, N Y , Yale University School of Medicine New Haven Conn, 1931 member of the American Medical Association, interned at the Jewish Hospital in Brooklyn served as health officer of the town of Wawarsing began active duty as a lieutenant in the medical corps, U S Naval Reserve, on April 5 1943 served over seas in the invasions of Sicily and Africa and on the island of Eniwetok in the Pacific, died in the Hamilton Avenue Hospital, Monticello, Nov 16 1945 aged 38 of coronary thrombosis

**Ignatius Zielinski** ⊕ Salem, Mass Tufts College Medical School, Boston 1924 interned at the Salem Hospital in Salem for many years medical examiner of the Tenth Essex district commissioned a lieutenant commander in the medical corps of the U S Naval Reserve on Nov 21 1942 served at the dispensary of the Boston Navy Yard and later saw duty in Hawaii assigned as chief surgeon to Quonset subsequently died in Fishkill N Y Nov 11, 1945, aged 45, of injuries received in an airplane crash

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

May 18, 1946

### Official Investigation of Doctors' Incomes

With reference to the national health service the minister of health appointed a committee, of which nearly half were doctors, to consider what should be the range of total income of a registered medical practitioner in any publicly organized service of general medical practice, with due regard to what have been the normal financial expectations of general practice in the past, and to the desirability of maintaining in the future the proper social and economic status of general medical practice and its power to attract a suitable type of recruit to the profession. The report of the committee, which has just been published, proposes an increased expenditure on general practice 'less on any particular consideration than on the importance of such practice in a publicly organized health service." The report states that general practice is the foundation on which all else is built If its recruitment is not maintained, alike in quantity and in quality, both as against other professions and as against other branches of the medical profession, no other health service specialist or hospital however excellent, can make good the loss or even play successfully the part it should

The main recommendation of the committee in respect to a publicly organized service is that the scheme should be devised to secure as far as practicable that between 40 and 50 years of age approximately three fourths of practitioners should receive incomes of more than $5,000, one half of whom should receive $6,500 or over, approximately one fourth should receive $8,000 slightly less than one tenth should receive more than $10,000 and a small proportion should receive at least $12,500 All incomes are given as net, that is after deduction of professional expenses The recommendations are made in terms of the 1939 value of money, which was distinctly greater than the value at present.

*Incomes of General Practitioners After Deducting Professional Expenses Allowed for Income Tax Purposes*

| | Proposed Distribution Per Cent | Distribution Before 1939 Per Cent |
|---|---|---|
| Under $3,500 | 7 | 20 |
| $3 500 to 5 000 | 20 | 22 5 |
| $5 000 to 6,500 | 24 | 21 |
| $6 500 to 8 000 | 24 | 17 5 |
| $8 000 to 10 000 | 16 | 10 |
| Over $10 000 | 9 | 9 |

A table is given in the report of incomes of general practitioners in urban areas in the prewar years 1936-1938 after deducting professional expenses and covering ages 30 to 64 It shows that throughout the best years of a practitioner's working life almost 20 per cent of urban practitioners had a net income of less than $3 500 a year and over 40 per cent less than $5,000 Having regard to the length of training to the arduousness of the general practitioner's life compared with that of other professions to the greater danger to health, to the skill and other qualities required, and to the degree of individual responsibility, the committee unanimously held that the proportion of low incomes was too high and that the proportion of practitioners able to reach a net income of $6,500 or over was too low The committee considered it desirable to secure a percentage spread of incomes not less favorable than that shown in the accompanying table, which refers to the age group 40-49

The committee points out that the effect of its proposals will be that between the ages of 40 and 50 three fourths of general practitioners would have achieved a net income of over $5,000 per annum, half over $6,500, a fourth over $8,000 and slightly less than one tenth $10,000 or over The committee is satisfied that there exists a far greater diversity of ability and effort among general practitioners than admits of remuneration by some single scale applicable to all It anticipates that a publicly organized service will level up low incomes to a considerable extent. Any augmentation required might be provided, for example if sufficient refresher courses could be provided by paying a bonus of, say, $500 a year to a practitioner who had attended such a course within the preceding three years or by grant toward professional expenses when they represent an abnormally high percentage of gross receipts On the assumption that the number of persons covered by a publicly organized service will be 45 million, the committee calculates that its proposals could be realized at a cost of $3 a head This is a considerable increase both on the capitation payments under the existing national health insurance scheme and on the total income of practitioners in the three years that ended in 1939 A rider to the report by one member of the committee, Sir Edward Fass, proposes a lower rate of remuneration than that mentioned on the ground that the earnings of a physician must be kept in proportion to those of comparable professions

## PARIS

*(From Our Regular Correspondent)*

May 28, 1946

### "Haptoglobin' and Its Clinical Significance

In a quantitative study of the peroxydasic power of hemoglobin, by the determination of iodine liberated in a mixture of hydroiodic acid and ethylhydroperoxide, M Polonovsky and M Jayle noted that the reaction increases when small quantities of blood plasma are added. The fraction of the plasma responsible for this reaction is a blood protein named 'haptoglobin" by them

Haptoglobin is increased in all infections tuberculosis, rheumatism malignant tumors and certain endocrine-disorders It is more responsive and more precise than the blood sedimentation test. The index of haptoglobinemia may be zero or low in newborn children or in hemolytic diseases

### Neuroedematous Syndrome

R. Debre, J Marie, P Seringe and Mande describe a new disease of epidemic aspect with alteration of the general state fever, tachycardia, edema, diffuse pain and peripheral paralysis Recovery may occur within a few weeks, or death ensue through bulbar paralysis

### Testosterone for Endometriomas

P Moulonguet has obtained a cure of endometrioma by 250 mg of testosterone per month. This method is a substitute for castration, which has been the only efficacious treatment up to now

### Intravenous Procaine Hydrochloride

M P Ameuille has discussed the successful use in France of intravenous injections of 1 per cent procaine hydrochloride for asthmatic crises, pulmonary emboli, angina pectoris and chronic dyspnea

# Marriages

DUNN HAMILTON ROW Indianapolis to Mrs Alice Grace Rhodes of Washington, D C March 16

JOSEPH F KELL JR., Lawrence, Kan., to Miss Rita Claire Ryan of Lynchburg Va, April 4

ROBERT LEE VANN, Winston-Salem, N C, to Miss Patricia Jane Hille, St. Louis, April 6

# Correspondence

## MORTALITY IN PREGNANCIES COMPLICATED BY DIABETES

*To the Editor* —In an article in THE JOURNAL Jan 29, 1944 entitled Fetal and Neonatal Mortality in Pregnancies Complicated by Diabetes Mellitus, Miller, Hurwitz and Kuder presented evidence showing that the fetal and neonatal mortality was 20 per cent in a group of 252 infants born twenty years or less before the appearance of signs or symptoms of diabetes in their mothers Drs Henry Dolger and Joseph Herzstein in a communication in THE JOURNAL July 29, 1944 presented evidence which they thought failed to substantiate the results published by Miller, Hurwitz and Kuder Drs Dolger and Herzstein have elaborated on this evidence in a recent publication entitled The Fetal Mortality in Women During the Prediabetic Period, which appears in the *American Journal of Obstetrics and Gynecology* of March 1946

*In their recent publication those authors state that 'the first* five year prediabetic period revealed an increased fetal and neonatal mortality, but the preceding fifteen years was *not* [italics theirs] characterized by such a tendency" Their data show, however, a mortality of 7 5 per cent among 212 infants born during the fifteen years prior to the onset of maternal diabetes The mortality in the nondiabetic group of 398 infants was 3 01 per cent Assuming that the diabetic and nondiabetic groups studied by Dolger and Herzstein are comparable in all respects except in regard to diabetes, the difference between the mortality rate of 7 5 per cent for the prediabetic pregnancies is significantly higher than that of 3 01 per cent for the nondiabetic group The chi square test applied to these two mortality rates shows a value of 6 5, indicating that the difference between the two groups is well within the range that is usually considered to be statistically significant Furthermore, it is difficult to understand why Dolger and Herzstein attach no significance to the fact that the gross fetal and neonatal mortality rate for all their 626 prediabetic pregnancies was 6 01 per cent when actually it is possible to demonstrate that this rate is also statistically significantly higher than that for the nondiabetic group The chi square test applied to these two groups shows a value of 4 9

The data presented by Dolger and Herzstein support not only the earlier findings of Miller, Hurwitz and Kuder but also the more recent studies of mine (The Effect of the Prediabetic State on the Survival of the Fetus and the Birth Weight of the Newborn Infant) reported in the *New England Journal of Medicine* **233** 376 (Sept 27) 1945 The last mentioned study shows that the fetal and neonatal mortality rate is higher than is to be expected during the period of fifteen years preceding the onset of diabetes even though the diabetic syndrome is not established until after the mothers have passed their fortieth birthday

The conclusions reached by Dolger and Herzstein are of doubtful significance, since they have failed to make clear whether or not the data on their control group of cases were obtained in the same manner as those in the experimental group Fetal and neonatal mortality rates obtained by personally interviewing women several years after the births of their infants are not to be compared, for instance, to similar rates based on hospital deliveries in which every infant weighing over 1 000 Gm at birth is recorded and counted Furthermore, in their recent publication Dolger and Herzstein do not define either the term 'fetal" or "neonatal' death thus making it difficult to compare their data with those reported by other investigators

HERBERT C MILLER, M D, Kansas City, Kan

## THE RADIATION TREATMENT OF GIANT FOLLICULAR LYMPHADENOPATHY

*To the Editor* —Dr Ovid O Meyer, in a communication published in THE JOURNAL April 13, questions the validity of your editorial expression that giant follicular lymphadenopathy "is curable by mild x-ray therapy," stating with rather broad inclusiveness, it seems to me, that "this is incorrect in the opinion of most students of the disease." However this may be, the fact remains that in the comparatively short interval of twenty one years during which radiation has been employed in the treatment of giant follicular lymphadenopathy I myself have encountered 5 histologically proved cases in which this form of therapy was followed by apparent cures for periods of 3, 4½, 5, 9½ and 12 years Another patient with histologically proved giant follicular lymphadenopathy survived 9 years without treatment of any sort directed against the enlarged lymph nodes, the final microscopic examination having been made 10 days before death from lobar pneumonia

In giant follicular lymphadenopathy the quick response of the lymph nodes to mild roentgen therapy is so impressive that if recurrence is noted and readjustment of the enlarged nodes is delayed or incomplete or both, and larger doses are required, one would seem to be justified in suspecting that the condition has undergone some form of mutation such as transformation into polymorphous cell follicular sarcoma or into Hodgkin's disease, both of which have been described and both of which are radioresistant It is entirely possible that some, perhaps many, of those cases which have been regarded as recalcitrant examples of giant follicular lymphadenopathy were in reality mutations of the sort indicated and therefore less amenable to radiation therapy In other words, before one condemns the radiation treatment of giant follicular lymphadenopathy one should be certain that the diagnosis is correct

DOUGLAS SYMMERS, M D, New York

# Bureau of Investigation

## SOME MISCELLANEOUS MEDICAL FRAUDS

### A Variety of Schemes Debarred from the Mails

Fraud orders issued by the Post Office Department have frequently been the subject of extensive articles by the Bureau of Investigation in these pages of THE JOURNAL. One such order is abstracted here

**Phurcerol Company** —This Chicago concern is reported to have had one Charles L. Cremieux as president and superintendent and an Irene Drew as vice-president and general manager Through the mails it sold Phurcerol as an external remedy for 'arthritis rheumatism muscular aches and pains' which nostrum was described on the company's letterhead as The Wonder Sulphur For Arthritis' According to federal investigators the business was started about July 1941 and reached its clientele through newspaper advertising in small cities and towns. Those who replied received a form letter and a descriptive pamphlet. The former claimed that the product had been 'carefully tried out on a large number of stubborn cases and 'the results have been truly amazing" It went on to claim that all those who were given treatment were aware of improvement and in some cases where the patients had been bed ridden they found themselves able to walk again ' There was the further claim Phurcerol has been approved by the U S Food & Drug Administration I Finally the concern was ordered by the Post Office Department to show cause why it should not be debarred from the mails on the ground that it conducted a fraud At the hearing a government chemist testified that his analysis of a specimen of Phurcerol obtained through test correspondence showed it to be a yellowish red liquid consisting of a hydroalcoholic solution of about 1 per cent isopropyl alcohol and glycerin with 11 grams of potassium sulfide in the four-ounce bottle, and some flavoring Another government witness, a Senior Medical Officer for the Food and Drug Administration, testified that in the treatment of arthritis, complete diagnostic measures should be taken to determine the type of the disease and any existing complications He showed that there is no one course of treatment for all the various types of arthritis and their complications and hence each sufferer requires

individualized therapy He further showed that the potassium sulfide in the mixture was the only drug present in sufficient strength to have any effect worth considering and that the sulfur or sulfides present could not be absorbed into the skin to any appreciable extent and even if they were they would be of no value to the system His final testimony was that he could find no evidence in the files of the Food and Drug Administration that that agency had approved Phurcerol and that on the contrary it had notified the defendants by letter "that this preparation should not be considered as a good remedy or an effective treatment for arthritis and rheumatism and that labeling it as such would be considered by the officials to be misbranding under the Food Drug and Cosmetics Act No defense was offered by the respondents who neither appeared at the hearing nor were represented by counsel though the latter did declare in a letter to the Post Office Department that his clients had made no extensive progress in marketing Phurcerol and hence had discontinued the advertising and sale of it through the mails Since the charges were found to be sustained by the evidence a fraud order was recommended and this was issued on June 8 1944 against the Phurcerol Company Irene Drew C Cremieux and their officers and agents

## NEW NAMES FOR OLD SWINDLES

### Mail-Order Defrauders Are Also Repeaters

Fraud orders issued by the United States Post Office are really effective—so far as the trade styles and names used at the time of the order are concerned Circumvention therefore requires the use of new trade styles and names—but this fortunately results in the issuance of supplemental orders by the Post Office Department as indicated in the following abstract

**Hall Dean Home Health Association or Health Service**—This outfit at Boulder Colo, appears to have been an outgrowth of the Fisheropathic College Association of Denver, which was debarred from the mails by a Post Office fraud order in 1933, as reported in a lengthy article in this department of The Journal October 28 that year The original outfit was run by a George B Fisher, his sister and his son Denver newspapers reported in 1911 that George B Fisher had been found guilty in the federal courts of sending obscene matter through the mails to the "wives of two prominent Denver business men and that the judge before whom Fisher was tried gave him a scathing arraignment, stating that a man who was guilty of the practices of which Fisher had been convicted was of the lowest species of humanity and not fit to mingle with decent and respectable people. The papers further reported that at some prior time Fisher had been charged with defrauding an aged and infirm woman out of $15 000 in notes and securities and forced by a court to restore them. In 1923 two of Fisher's nostrums, "Uterine Tonic and Kidney Food ' were found to be misbranded under the National Food and Drugs Act the former because it was fraudulently represented as an effective cure for lack of passion cancer of the uterus gonorrhea and some other things. His nostrums included several others among them After Dinner Gems and Uterine Tonic Knowledge which also figure in the present case Early in 1944 the Post Office Department obtained evidence that a Boulder Colo. outfit operating as Hall Dean Home Health Association Hall Dean Health Service or just plain Hall Dean was promoting through the mails a so-called system of treatment called synonymously Deanopathy and Fisheropathy with one George H Hall as chief promoter and apparently had revived the old business of the Fisheropathic College Association which enterprise the Post Office had declared a fraud as mentioned above The new concern was representing its After Dinner Gems as a highly effective remedy for appendicitis hay fever asthma, catarrh, bronchitis whooping cough, ptomaine poisoning and many other' diseases and ailments such as all stomach troubles including cancer Further it was claiming that Fisher's Uterine Tonic Knowledge was a highly effective remedy for even the most aggravated cases of female disorders that it would remove foreign growths and would eliminate the necessity for operations in such conditions. The so-called system of Deanopathy or 'Fisheropathy was represented as a highly effective preventive restorative and treatment for persons afflicted with paralysis pneumonia wasting of arterial muscular or nerve energy lost sexual power, weakened spine fallen arches baldness, dropsy consumption cancers and other disorders too numerous to mention When Hall was directed to appear at a hearing and show cause why a fraud order should not be issued against his business a government chemist testified that the Gems consisted of brown coated tablets containing sodium chloride talc, plant material (apparently senna and charcoal) phosphorus pentoxide and traces of capsicum oil of peppermint potassium calcium and nitrates The Uterine Tonic Knowledge he testified consisted of a small bottle of brown liquid and a number of empty capsules in which the medicine was to be taken and the mixture contained over 68 per cent of water, with smaller amounts of glycerin ammonium carbonate iodine a trace of potassium and some coloring matter A physician testifying as an expert medical witness for the government discussed the ailments for which these nostrums were promoted showing that the mixtures would be of little if any value in the conditions cited. Neither George H Hall nor his counsel attended the hearing though they did send communications to the Post Office Department declaring that their claims were fully warranted. Since their contentions were without weight and did not in any sense controvert the testimony presented against the outfit at the hearing a fraud order was issued Sept. 15 1944 debarring Hall Dean Hall Dean Health Service and Hall Dean Home Health Association from further use of the mails

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Collection Agencies Corporation to Collect Hospital Bills—Illegal Practice of Law**—The plaintiff, Hospital Credit Exchange, Inc., sued to recover the balance of a bill for hospital services rendered to the defendant's wife The case was heard on plaintiff's motion for summary judgment and defendant's motion for a dismissal of the complaint in the municipal court of the city of New York, borough of Manhattan, first district.

The plaintiff, Hospital Credit Exchange, Inc. was incorporated under the Membership Corporations Law and its certificate of incorporation was approved by a justice of the New York Supreme Court in March 1939 As stated by its certificate of incorporation its purposes were among others, "To render services to member hospitals in connection with obtaining payment for care received by patients therein" Pursuant to such general purposes it appeared that the plaintiff had made arrangements with a large number of charitable hospitals in the city and vicinity of New York under which these hospitals refer to plaintiff for collection bills which they themselves have been unable to collect, these claims are generally, although not always, assigned to plaintiff by written instruments of assignment, plaintiff in its own name sends collection letters to the debtors requesting payment and stating that if the bill remains unpaid it will be turned over to an attorney for collection, if no results are obtained collection letters are then sent by an attorney who is employed by the plaintiff on a regular salaried basis, ultimately suit is instituted by the plaintiff in its own name, usually before suit is begun the plaintiff, which also employs a staff of so called field workers, attempts to collect the debt by sending one of these workers to call personally on the debtor The present case came to the plaintiff in accordance with this procedure and this suit was instituted by the salaried attorney for the plaintiff and in the name of the plaintiff as assignee of a charitable hospital

It was the defendant's primary contention that the plaintiff in operating as described was engaged in the practice of law contrary to public policy and in violation of the penal law The court said that the plaintiff was conducting the business of an ordinary collection agency, that it solicited claims and took assignments of such claims for the purpose of bringing suit, and that after effecting collection by suit or otherwise it retained for itself a percentage of the amount collected out of which it paid its office expenses and its salaried employees, including the attorney Section 280 of the penal law expressly forbids any corporation from practicing "as an attorney-at-law" and further provides 'No corporation shall solicit any claim or demand, or take an assignment thereof for the purpose of representing any person in the pursuit of any civil remedy, ' Section 275 of the penal law provides, in part No person or co partnership, engaged directly or indirectly in the business of collection and adjustment of claims, shall take an assignment of, or be in any manner interested in buying or taking an assignment of a book debt or other thing in action, or any claim or demand, with the intent or for the purpose of bringing an action or proceeding thereon "

The plaintiff contended that it is exempted from these provisions by virtue of a 1941 amendment to section 275 of the penal law which provides 'Nothing herein contained shall affect any assignment heretofore or hereafter taken by any corporation organized for religious, benevolent or charitable purposes The plaintiff argued that it was a charitable corporation. In my opinion, said the court, the plaintiff is not a charitable corporation. It is true that its only clients or customers are charitable hospitals However, the fact that for a fee it serves only charitable institutions does not make it a charitable corporation. The further fact that, after paying salaries to employees and commissions on collections to the aforementioned field workers, it distributes its profits to the charitable institutions which it serves, does not make it a chari-

table corporation. Furthermore, said the court, this amendment was not intended to authorize charitable corporations to practice law If the legislature had intended to confer on charitable corporations the right to practice law it would have so provided in explicit terms It is not to be inferred from anything contained in the act as amended that so radical a change in public policy was intended to be effected.

The plaintiff also insisted that it was exempted by the provisions of section 280 of the penal law which provides that such section shall not 'apply to organizations organized for benevolent or charitable purposes, or for the purpose of assisting persons without means in the pursuit of any civil remedy, whose existence, organization or incorporation may be approved by the appellate division of the supreme court of the department in which the principal office of such corporation or voluntary association may be located." I read that section, said the court, as meaning that any organization 'organized for benevolent or charitable purposes' which desires to be excepted from the operation of section 280 must be approved by the appellate division of the Supreme Court of the department in which its principal office is located Plaintiff would read the requirement for such approval as applicable only to organizations having "the purpose of assisting persons without means in the pursuit of any civil remedy" There is no good reason, the court concluded, for distinguishing between the two types of organizations so that one requires approval and the other does not

In conclusion the court said that, although the motives of the people who organized the plaintiff are commendable, and although the many persons who have come to its aid merit the respect of this court, the plaintiff must nevertheless yield to the public policy which interdicts the practice of law by lay agencies That policy springs from a vital public necessity Balancing the conveniences, and weighing the respective public interests involved I am constrained to the conclusion that to tolerate the practice of law by this plaintiff—and the plaintiff is undoubtedly practicing law—is to set a most dangerous precedent and to sanction a clear, though well intentioned, violation of statutes which are as specific as they could have been made.

Accordingly the plaintiff's motion for summary judgment was denied and judgment was entered in favor of the defendant dismissing the complaint.—*Hospital Credit Exchange, Inc., v Shapiro 59 N Y S (2d) 812 (N Y, 1946)*

**Medical Practice Acts Use of "M D," Drugs and Hemovitameter by Naturopath.**—In a proceeding before the State Board of Medical Registration and Examination the defendant s license to practice naturopathy was revoked On defendant s appeal to the circuit court, the board s order was reversed, so the board appealed to the Supreme Court of Indiana

The defendant a licensed naturopath, advertised himself as "Successor to C R Perdue, M D, Dermatologist and Plastic Surgeon," and as "a physician of wide experience and well qualified to administer any form of treatment which may be needed" He also asserted that, among other degrees, he had a degree of 'Doctor of Medicine.' He prescribed pills, salves and other medicines and used a machine which he called a hemovitameter and about which he testified "The interior of a hemovitameter is just a lot of wires and different circuits to different contacts and connections There is at least one radio tube in it. There are a number of resistance coils ' This machine he said, worked much like a radio The operator would contact with a little fibroid plate under which there are two coils in which the magnetism is built up to the point at which it causes the fingers to stick lightly to that plate Then by measuring the amount he can turn another dial which tunes in to that same circuit a blocking condenser until that magnetism is completely blocked out By that means the dials are read as being the intensity of the disease of the patient s body for that particular setting The detection of magnetism with one s fingers, the defendant explained, is by means of a traction through the plate to the coils underneath, the plate must be rubbed lightly, and it takes a lot of practice to operate the machine efficiently After using this machine, the defendant told one patient on her first visit that she was not addicted to tobacco and that she had catarrh and a cancer of the colon An engineer testified 'It is impossible to build any machine dealing in frequencies or vibrations that will pick up vibrations regardless of their source that does not fall within the known spectrum from zero to three hundred million cycles per second All those frequencies can be detected and measured with regular equipment. They cannot be detected by the human hand outside of those frequencies which cause burns, or light, or other physical manifestations observable to sight It is absolutely impossible for the human hand to detect magnetism in any form simply because basically and fundamentally magnetism has no effect except on a very few metals and minerals"

The Supreme Court said that misrepresenting himself as entitled to practice medicine, prescribing drugs and medicines not permitted by his license, and misrepresenting the powers of his machine to credulous and unsuspecting sufferers who put themselves in his hands on the assumption that, from his being permitted to practice, he was skilled in diagnosis and treatment of diseases, was, of course, grossly immoral The circuit court, on appeal, had only to determine whether or not the board conformed to the statutory procedural method and whether or not its decision was supported by substantial evidence From the undisputed evidence, the Supreme Court concluded that the board's decision was substantially supported Accordingly the judgment for the defendant was reversed and an order entered revoking the defendant's license.—*State Board of Medical Registration and Examination v Scherer, 46 N E (2d) 602 (Ind, 1943)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### BOARDS OF MEDICAL EXAMINERS
### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

Examinations of the boards of medical examiners and boards of examiners in the basic sciences were published in THE JOURNAL June 15 page 629

### NATIONAL BOARD OF MEDICAL EXAMINERS

NATIONAL BOARD OF MEDICAL EXAMINERS *Part I* Various centers Sept 30-Oct 2 Final date for filing application is Sept 1 *Part II* Dec 16-17 Sec. Mr Everett S Elwood 225 S 15th St Philadelphia 2.

### EXAMINING BOARDS IN SPECIALTIES

AMERICAN BOARD OF ANESTHESIOLOGY *Oral* New York Oct. 9-14 Sec, Dr Paul M Wood 745 Fifth Ave. New York 22

AMERICAN BOARD OF DERMATOLOGY & SYPHILOLOGY *Written.* Various centers Oct. 7 Final date for filing application is Aug 15 *Oral* Cleveland Dec. 5 7 Sec Dr George M Lewis 66 E. 60th St. New York 21

AMERICAN BOARD OF INTERNAL MEDICINE *Written.* Oct. 21 Final date for filing application is July 1 Asst. Sec. Dr W A Werrell 1 W Main St Madison 3 Wis.

AMERICAN BOARD OF OBSTETRICS & GYNECOLOGY *Written All Groups Part I* Various centers Feb 7 Final date for filing application is Nov 1 Sec Dr Paul Titus 1015 Highland Bldg Pittsburgh 6

AMERICAN BOARD OF OPHTHALMOLOGY *Oral All Groups Parts I and II* New York, June 1947 Final date for filing application is Dec 1 Chicago October 1947 Final date for filing application is March 1 Sec. Dr S J Beach 5o Ivie Rd. Cape Cottage Me.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY *Part II Oral* Chicago January Final date for filing application is Nov 1 Sec. Dr Guy A Caldwell 1136 W Sixth St Los Angeles 14

AMERICAN BOARD OF OTOLARYNGOLOGY *Oral* Chicago Oct. 8 12 Sec Dr D M Lierle University Hospitals Iowa City Ia.

AMERICAN BOARD OF PEDIATRICS *Oral* San Francisco July 1 5 Sec, Dr Lee F Hill 3309 Forest Ave. Des Moines Ia.

AMERICAN BOARD OF PSYCHIATRY & NEUROLOGY New York December Final date for filing application is Sept 30 Sec. Dr Walter Freeman, 1028 Connecticut Ave N W Washington D C.

AMERICAN BOARD OF RADIOLOGY Chicago Nov 27 to Dec. 1 Final date for filing application is Sept 1 Sec Dr B R. Kirklin Mayo Clinic Rochester, Minn

AMERICAN BOARD OF SURGERY *Written Part I* Various centers, October Final date for filing application is July 1 Sec. Dr J S Rodman 225 S 15th St Philadelphia 2

AMERICAN BOARD OF UROLOGY *Oral* Chicago, February 1947 Final date for filing application is Nov 15 Sec., Dr Gilbert J Thomas, 1409 Willow St. Minneapolis 4

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested) Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order Reprints as a rule are the property of authors and can be obtained for permanent possession only from them

Titles marked with an asterisk (*) are abstracted below

### Alabama State Medical Assn Journal, Montgomery

**15** 253 280 (March) 1946

Bronchoscopy and Esophagoscopy in General Medicine. G E Fisher —p 253
Traumatic Carotid Sinus Syndrome Followed by Idiopathic Epilepsy C E Johnson Jr —p 255
Cultural Examination for Mycobacterium Tuberculosis Results in a Public Health Laboratory Over a Four Year Period N K. Whitfield and S R Damon —p 259
Recent Progress in Planned Parenthood Eva F Dodge.—p 262
Continuous Caudal Anesthesia Record of Experience in 90 Obstetric Cases. H L. Rogers —p 264

### American Journal of Medical Sciences, Philadelphia

**211** 257-384 (March) 1946

Invasive Character of Cancer Growth D R Coman —p 257
Multiple Pulmonary Hemangiomata P T Makler and D Zion —p 261
*Effect of Streptomycin on Experimental Brucellosis in Guinea Pigs I. Live F G Sperling and E L Stubbs —p 267
Treatment of Acute Rheumatic Fever with Large Doses of Sodium Salicylate with Special Reference to Dose Management and Toxic Manifestations B V Jager and R Alway —p 273
Effect of Sodium Bicarbonate on Therapeutic Effectiveness of Sulfadiazine in Mice A Kornberg —p 286
Penicillin in Acute Nephritis in Children Susanta Sen —p 289
*Penicillin Therapy in Ulcerative Colitis Preliminary Report B B Korostoff and H E. King —p 293
Combined Penicillin and Sulfadiazine Therapy in Pneumococcic Pneumonia M F Collen A L Sellers and E C Kast —p 299
Influence of Sulfanilamide Therapy on Course of Acute Glomerulonephritis in Children M Rapoport M I Rubin and A D Waltz. —p 307
Treatment of Temporary Renal Insufficiency (Uremia) by Peritoneal Lavage W E Abbott and P Shea —p 312
Relative Efficiency of Quinacrine (Atabrine) and Quinine in Treatment of Acute Attacks of Vivax Malaria H Most and J M Hayman Jr —p 320
Qualitative Changes in Fibrinogen Which Influence Erythrocyte Sedimentation Rate and Clot Retraction Time I R Morrison —p 325
Persistent Ventricular Bigeminal Rhythm in Apparently Normal Hearts W Sensenbach and R M Bute Jr —p 332
Functional Paroxysmal Auricular Fibrillation A M Master and H Eichert.—p 336
Effect of Sodium Salicylate on Sedimentation Rate of Erythrocytes in Vivo F Homburger —p 346
Serologic Types of Bacteria as Epidemiologic Principle W L Aycock and G E Foley —p 350
Spreading Factors and Bacterial Infection D S Fleming —p 374

**Streptomycin in Experimental Brucellosis**—Live and his co-workers found that 5 000 units of streptomycin daily given to guinea pigs in five doses had a bacteriostatic effect on Brucella abortus Four of 9 animals in which treatment was begun on the day of infection and was continued for twenty-seven days and 4 of 10 animals in which treatment was begun one week after infection and was continued for twenty days yielded negative cultures on necropsy one day after cessation of treatment Of the guinea pigs from which cultures were made eight days after discontinuation of therapy 3 animals from the group of 10 in which treatment was begun on the day of infection were still negative while all the guinea pigs in which treatment was begun one week after infection yielded Brucella abortus Treatment of guinea pigs with 20 000 units of streptomycin daily divided into six doses, seemed to eliminate the infection from most of the animals The treatment was begun one week after infection and was continued for twenty four days Necropsy of 17 animals one day after cessation of therapy revealed that 4 were positive on cultures necropsy of 10 animals eight days after cessation of treatment revealed that 2 were positive on cultures, and necropsy of 8 guinea pigs fifteen days after discontinuation of therapy revealed that only 1 animal yielded Brucella on cultures Following a single subcutaneous injection of streptomycin, the blood serum levels are highest soon after injection of the drug In guinea pigs injected with 1,000 units no detectable concentration of streptomycin was found in the blood serum after four hours, and in those injected with 5,000 units no detectable concentration of streptomycin was found in the blood serum after six hours

**Penicillin in Ulcerative Colitis**—Korostoff and King administered penicillin in doses of 30 000 units intramuscularly every three hours for four or five days up to a total of 1,200,000 units to 5 patients with ulcerative colitis The disappearance of rectal ulcerations in each case within one week after the completion of one course of penicillin was the prominent feature The subjective symptoms and the character of the stool improved in each instance. The results in these few cases indicate that adequate penicillin therapy may be of considerable value in the treatment or control of some cases of chronic ulcerative colitis

### American Journal of Tropical Medicine, Baltimore

**26** 151-256 (March) 1946

Medical Research in Postwar World R E Dyer —p 151
Two New Species of Rat Mites (Neoschongastia Spp.) From Focus of Scrub Typhus on Mindoro Philippine Islands C B Philip and T E Woodward —p 157
Clinical and Laboratory Variation of Virulence in Scrub Typhus E N Irons —p 165
Experimental Studies with Bullis Fever M Pollard H R. Livesay D J Wilson and J C Woodland —p 175
Neurotropic Virus Isolated from Aedes Mosquitoes Caught in Semliki Forest. K C Smithburn A J Haddow and A F Mahaffy —p 189
Medical Shock in Pathogenesis of Algid Malaria B H Kean and C E Taylor —p 209
Outline for Teaching Mosquito Stomach and Salivary Gland Dissection G W Hunter T H Weller and W G Jahnes Jr —p 221
Tsutsugamushi Disease (Scrub or Mite Borne Typhus) in Philippine Islands During American Reoccupation in 1944-1945 C B Philip T E. Woodward and R. R Sullivan.—p 229
Contribution to Knowledge of Bionomics of Common North American Chigger Eutrombicula Alfreddugesi (Oudemans) with Description of Rapid Collecting Method R. W Williams —p 243
Method of Rearing Chigger Mites (Acarina Trombiculinae) C D Michener —p 251

### Annals of Surgery, Philadelphia

**123** 321-480 (March) 1946

Battle Wounds of Thoracic Cavity J Johnson —p 321
* Wet Lung' in War Casualties L. A Brewer B Burbank P C Samson and C A Schiff —p 343
Penetrating Wounds of Chest J Burke and T T Jacobs —p 363
Thoracic Gastric Cyst A R. Valle and M L White Jr —p 377
Results Following Bands and Ligatures on Human Internal Carotid Artery W E Dandy —p 384
Gastric Retention After Posterior Gastroenterostomy for Duodenal Ulcer Prevention and Treatment H K Gray and W S Sharpe.—p 397
The So-Called Dumping Syndrome After Subtotal Gastrectomy Clinical Study M D Custer Jr H R Butt and J M Waugh.—p 410
Postappendectomy Interstitial Inguinal Hernia H C Fisher —p 419
Aneurysm of Hepatic Artery W L McNamar L A Baker and K Costich —p 427
Reflex Vasodilatation in Tubed Pedicle Skin Grafts S Gordon and R. F Warren —p 436
Rhabdomyosarcoma of Skeletal Muscles A P Stout.—p 447
Supracondylar Amputations Survey M J Tobias —p 473

**"Wet Lung in War Casualties**—Experience gained in treating 770 chest casualties and thoracic complications that arose in over 3 000 other casualties demonstrated to Brewer and his associates the importance of wet lung Wet lung promotes anoxia and paves the way for pulmonary complications Abnormal amounts of mucoid secretions or blood from intrapulmonary hemorrhage may be present. Pulmonary trauma, increased respiratory effort, tracheal obstruction and anoxia are factors which favor the escape of fluid from the pulmonary capillaries into the alveoli and bronchial radicles Blast injuries of the lung are known to produce hemorrhage in the terminal divisions of the pulmonary tree and may be factors in the production of alveolar transudates In the late stages of shock blood plasma escapes into the tissue spaces One of the most important signs of wet lung is an almost constant wet cough"

Physical examination reveals dyspnea and bronchial rales. Every patient with a chest wound or a severe abdominal or brain injury must be regarded as a candidate for the development of wet lung. If the patient does not clear the bronchial tree by coughing, additional measures must be employed. The abolishment of painful and other stimuli arising in the chest wall and parietal pleura by nerve block may be all that is needed for clearing the pulmonary tree. Blocking of the intercostal nerves had made strapping of the thorax unnecessary. If the patient does not improve, or if there is evidence of inadequate raising of sputum, mechanical aspiration of the bronchial tree is resorted to. In bronchial obstruction recurring in spite of repeated tracheobronchial aspirations, bronchoscopy is preferred. The escape of plasma fluid into the alveoli and branches of the bronchial tree presents a problem demanding positive pressure oxygen therapy, but excessive pressures must be avoided.

## Archives of Neurology and Psychiatry, Chicago

**55** 171-298 (March) 1946

Importance of Neural Fibroblasts in Regeneration of Nerve. D. Denny Brown.—p. 171
Vasoparalysis and Vasothrombosis of Brain in Infancy and in Early Childhood. I. Mark Scheinker.—p. 216
Divergence Paralysis Associated with Tumor of Brain. N. Savitsky and M. J. Madonick.—p. 232
Combat Neuroses. Development of Combat Exhaustion. R. L. Swank and W. E. Marchand.—p. 236
Neurofibromatosis with Defect in Wall of Orbit. Report of 5 Cases. W. T. Peyton and D. R. Simmons.—p. 248

## Archives of Otolaryngology, Chicago

**43** 93-198 (Feb.) 1946

Testing Hearing of Young Children. E. Froeschels.—p. 93
*Treatment of Acute Pharyngeal Infections by Insufflation of Sulfanilamide Powder. J. L. Goldman and W. B. Kiesewetter.—p. 99
Xanthoma of Lipoid Granuloma of Temporal Bone (Hand-Christian-Schuller Syndrome). M. A. Glatt.—p. 110
Interesting Lesions of the Tongue. R. A. Sage.—p. 122

**Insufflation of Sulfanilamide Powder in Pharyngeal Infections.**—Goldman and Kiesewetter present observations on the first 69 patients treated for acute tonsillitis, Vincent's ulcerative tonsillitis and acute pharyngitis by the local insufflation of sulfanilamide powder. Early in the series the powder was insufflated once a day. At present, whenever possible, the powder is administered twice a day. Fifty-four patients treated by other currently accepted methods served as controls. The average length of time required for clinical cure to be obtained was 1.8 days shorter for the patients with acute tonsillitis who were treated with sulfanilamide powder than for the control series, and 1.7 days shorter for the patients with Vincent's ulcerative tonsillitis who were similarly treated than for the control series. Sulfanilamide insufflations appeared effective for 9 patients with acute pharyngitis. The method of insufflation of sulfanilamide powder is simple and particularly suitable for use in the treatment of military personnel. The amount of the powder administered at each insufflation was about 5 grains (0.32 Gm.). In the cases of Vincent's ulcerative tonsillitis the powder remained in contact with the ulcer for as long as three hours after insufflation. The blood of 16 patients was examined for sulfanilamide, none had a detectable amount. Streptococcus hemolyticus (beta) was the principal microorganism in acute tonsillitis. It was isolated from the tonsils of 31 of the 64 patients with acute tonsillitis. Fusiform bacilli and Vincent's spirilla were demonstrated in smears of material from the throats of 49 of the 51 patients with ulcerative tonsillitis. Fifteen of 22 patients whose throats were studied bacteriologically were shown to harbor in addition pyogenic micro-organisms.

## Bulletin New York Academy of Medicine, New York

**22** 113-166 (March) 1946

Inaugural Address. G. Baehr.—p. 115
Intravenous Histamine in Treatment of Migraine. W. A. Thomas and S. Butler.—p. 125
Psychiatry in a General Hospital. S. Cobb.—p. 137
Brucellosis. Problems of Diagnosis and Treatment. H. J. Harris.—p. 147

## California and Western Medicine, San Francisco

**64** 63-114 (Feb.) 1946

Malpractice Suits—The Rising Tide. L. J. Regan.—p. 69
Heparin and Dicumarol—Anticoagulants. Their Prophylactic and Therapeutic Uses. P. M. Aggeler.—p. 71
Volvulus of Cecum with Left Sided Colon. Report of Case. J. H. Brady.—p. 77
Rupture of Urethra and Impassable Stricture of Urethra. T. E. Gibson.—p. 79

**64** 115-164 (March) 1946

California State Department of Public Health. Its Administrative Organization. W. L. Halverson.—p. 121
Typhoid Fever Outbreak Traced to Cream Filled Pastries. R. Frantz and C. V. Mason.—p. 123
Corneal Transplantation. Report of Case. C. H. Albaugh.—p. 125
Deafness—Modern Approach to Its Treatment. W. D. Currier.—p. 126
Congenital Atresia of Esophagus with Tracheoesophageal Fistula. H. A. Keener and R. C. Hickey.—p. 128
Calcified True Aneurysm of Left Renal Artery. J. P. Brady and J. S. Hanten.—p. 131

## Gastroenterology, Baltimore

**6** 83-170 (Feb.) 1946

Total Solids, Fat and Nitrogen in Feces. I. Study of Normal Persons and of Patients with Duodenal Ulcer on Test Diet Containing Large Amounts of Fat. E. E. Wollaeger, M. W. Comfort, J. F. Weir and A. E. Osterberg.—p. 83
Id. II. Study of Persons Who Had Undergone Partial Gastrectomy with Anastomosis of Entire Cut End of Stomach and Jejunum (Polya Anastomosis). E. E. Wollaeger, M. W. Comfort, J. F. Weir and A. E. Osterberg.—p. 93
Gastroscopic Study Following Outbreak of Food Poisoning. I. R. Schwartz.—p. 105
Review of Literature on Roentgenology of Gastrointestinal Tract for Year 1944. Eva L. Gilbertson and B. R. Kirklin.—p. 112
Curling's Ulcer in Experimental Burns. II. Effect of Penicillin Therapy. Correlation of Observations with Other Recent Evidence Regarding Pathogenesis of Peptic Ulcer. F. W. Hartman.—p. 130
Frequency of Peptic Ulcers in Protein Deficient Dogs. Tsan Wen Li and S. Freeman.—p. 140
Attempt to Prevent Histamine Induced Ulcers in Dogs by Administration of Enterogastrone Concentrates. M. I. Grossman, D. F. Dutton and A. C. Ivy.—p. 145

## Journal Industrial Hygiene & Toxicology, Baltimore

**28** 29-50 (March) 1946

Atmospheric Concentrations of Fluorides in Aluminum Reduction Plants. C. D. Yaffe.—p. 29
Method for Determination of Iron in Welding Fume Samples. R. G. Keenan and Bettie L. Minderman.—p. 32
Nitrogen Dioxide. Rate of Oxidation of Nitric Oxide and Its Bearing on Nitrogen Dioxide Content of Electric Arc Fumes. H. B. Elkins.—p. 37
Comparison of Chronic Toxicity of Triethylene Glycol with That of Diethylene Glycol. O. Garth Fitzhugh and A. A. Nelson.—p. 40
Lead Intoxication by Inhalation. L. H. Cotter.—p. 44
2,4 Dinitrophenol Poisoning. Case Report. J. B. Gisclard and M. M. Woodward.—p. 47
Chromates in Animal Nutrition. W. G. Gross and V. G. Heller.—p. 52

## New England Journal of Medicine, Boston

**234** 241-278 (Feb. 21) 1946

*Transdiaphragmatic Resection of Vagus Nerves for Peptic Ulcer. T. D. Moore, W. P. Chapman, M. D. Schulz and C. M. Jones.—p. 241
Interview Method for Obtaining Personal Histories. C. W. Heath.—p. 251
Atropine Poisoning. Report of Case with Recovery after Ingestion of 1 Gram. E. Alexander, Jr., D. P. Morris and R. L. Eslick.—p. 258
Symposium on Medical Sociology. Minority Views on Improving Medical Care. A. M. Butler.—p. 260
Media Necrosis Aortica Cystica with Rupture of Aorta into Pericardium.—p. 270
Calcareous Aortic Stenosis.—p. 272

**Transdiaphragmatic Resection of Vagus Nerve for Peptic Ulcer.**—In their transthoracic transdiaphragmatic resection, which Moore and his associates have performed on 15 patients, sizable portions of both vagus nerves are resected and steps are taken to avoid regeneration. The procedure appears to be a potent weapon in dealing with peptic ulceration as judged by the clinical results in the early follow-up. The final evaluation of this method must await the passing of time and study of the patients in whom it has been employed. Patients who have had other surgery, such as pyloroplasty, posterior gastrojejunostomy or gastric resection, and who present themselves with renewed ulceration are ideal subjects for this procedure. The previous surgery does not complicate

the operation It may be carried out with excellent relief of symptoms in cases in which renewed attack on local structures through the abdomen would be technically complicated

**234** 279-312 (Feb 28) 1946

Medical Shock Abnormal Biochemical Changes in Patients with Severe Acute Medical Illnesses With and Without Peripheral Vascular Failure C S Davidson Jessica H Lewis H J Tagnon and others —p 279
*Early Diagnosis of Phlebothrombosis W R Moses —p 288
*Regional Injection of Penicillin in Local Infections Preliminary Report D Rose and D Hurwitz.—p 291
Practical Considerations in Planning and Conduct of National Medical Care Program E S Rogers —p 296
Ewing's Sarcoma of First Rib —p 304
Chronic Glomerulonephritis of Left Kidney Congenital Hypoplasia of Right Kidney —p 307

**Early Diagnosis of Phlebothrombosis**—Moses has observed that tenderness of the posterior calf following the course of the deep veins is almost always the first local sign of venous thrombosis The skin, subcutaneous tissue fascia and large calf muscles may be tested as a group aside from the deep veins by a simple test Firm pressure of the fingers is used to explore for tenderness in any area of the posterior calf When the level of tenderness has thus been determined the calf is firmly compressed from side to side and the degree of tenderness is compared with that elicited in the first part of the test In the presence of bland venous thrombi the skin, subcutaneous tissue fascia and muscles show little if any tenderness on firm compression, whereas direct pressure on the veins, as executed in the first maneuver, causes definite pain On the other hand, the superficial tissues are extremely tender at the second test if the tenderness resides in their layers These two stages do not, however, rule out tenderness of the deep calf nerves such as is present in a peripheral neuritis The third part of the test is therefore a neurologic examination

**Regional Injection of Penicillin in Local Infections**—The series of cases treated by Rose and Hurwitz comprised 2 cases of osteomyelitis of the finger, 6 of felon, 6 of carbuncle, 3 of perianal infections 6 of cellulitis, with and without abscess, and 2 of furuncle Penicillin dissolved in isotonic solution of sodium chloride was prepared in the usual manner, the amount of solution used depending on the type and size of lesion to be treated. In fingers and other areas where loose tissue precluded a large volume, 2 to 4 cc was used to dissolve 100,000 units of penicillin thus giving a concentration of 50 000 to 25 000 units per cubic centimeter The parts were cleansed with soap and water and painted with an aqueous solution or tincture of zephiran and zones of tenderness were mapped out. Two to four sites of injection were chosen The authors made the injection by hypodermic needle starting outside the zone of palpable tenderness injecting slowly ahead of the needle and progressing toward the center of the infection The injection was made deeply in the tissue, not merely subcutaneously, except when the infection was within the skin such as furuncles Disability is reduced far below the point reached by any other means of treatment There is no deformity such as that frequently following radical surgical incision and drainage Pain is quickly relieved in some cases within one hour and always within thirty-six hours Preferably no evacuation should be performed until complete localization and then only minimal surgery is indicated. In most cases evacuation occurs spontaneously during localization with freedom from pain Injections are painful, and the degree of pain is in direct ratio to the density of tissue and the volume of injection Injections once daily are adequate. The fear of spreading the infection by this treatment has not been substantiated. In part this is due to the fact that injections are started well outside the center of infection, thus reinforcing the barrier and aiding in localization.

## Occupational Medicine, Chicago

**1** 199 332 (March) 1946

Symposium on Scientific Proof and Relations of Law and Medicine
Effects of Electrical Injuries with Particular Reference to Nervous System G H Hyslop.—p 199
Medicolegal Aspects of Injuries from Exposure to Roentgen Rays and Radioactive Substance C E Dunlap —p 237
Tuberculosis in Industry From Viewpoint of Physician in Industry M Pollak —p 302

## Public Health Reports, Washington, D C

**61** 371-402 (March 15) 1946

Public Health Service Drinking Water Standard, 1946 Regulations of the United States Public Health Service.—p 371

**61** 403-432 (March 22) 1946

Excretion of DDT (2 2 Bis-(P Chlorophenyl) 1 1 1 Trichloroethane) in Man Together with Clinical Observations, P A Neal T R Sweeney S S Spicer and W F von Oettingen.—p 403
Alterations in Cardiac Conduction Mechanism in Experimental Thiamine Deficiency W D King and W H Sebrell —p 410

**61** 433-472 (March 29) 1946

Cerebrospinal Meningitis Chronologic Record of Reported Cases and Deaths Mary Gover and G Jackson —p 433
Physical Properties of DDT and Certain Derivatives H L Andrews W C White L R Gamow and Dorothy C Peterson.—p 450

## Review of Gastroenterology, New York

**13** 77-154 (March-April) 1946

Abdominal Pain from Surgeon's Point of View L Berger —p 93
Hydrops of Gallbladder N Blumberg and L. Zisserman.—p 97
Gastric Mucosa in Infectious Hepatitis Roentgenologic and Gastroscopic Studies Report on 10 Cases H A Monat A L Robins and S Glanz.—p 102
Gastroscopy H Barowsky —p 104

## South Carolina Medical Assn. Journal, Florence

**42** 53-84 (March) 1946

Medical Education in South Carolina from a Survey Report to the Research Planning and Development Board of South Carolina. Division of Surveys and Field Services —p 53
Penicillin in Obstetrics H A Power and C A. Cravotta —p 65

## Surgery, Gynecology and Obstetrics, Chicago

**82** 367-494 (April) 1946

Hits Strikes and Outs in Use of Pedicle Flaps for Nasal Restoration or Correction V P Blair and L T Byars —p 367
*Observations on Treatment of Adenocarcinoma of Uterus L. A. Gray, M Friedman and W S Randall.—p 368
Practical Observations on Copper Sulfate Method for Determining Specific Gravities of Whole Blood and Serum E. E. Muirhead M H Grow and Albert T Walker —p 405
Lumbar Appendicitis and Lumbar Appendectomy W W Babcock —p 414
Correction of Blood Loss During Surgical Operations C E. Crook Vivian Iob and F A. Coller —p 417
Patellectomy in Military Service Report of 19 Cases T Horowitz and R G Lambert.—p 423
Bronchopneumonia Following Ether Anesthesia in Obstetrics H C Hartzell and E P Mininger —p 427
Retrograde Lymphatic Spread of Carcinoma of Rectosigmoid Region Its Influence on Surgical Procedures R. P Glover and J M. Waugh —p 434
Rectal Strictures Due to Lymphogranuloma Venereum with Especial Reference to Pauchet's Excision Operation L T Wright B N Berg J V Bolden and W A. Freeman —p 449
Ligation of Innominate Artery for Innominate Aneurysm Using Rubber Bands Report of Case. J C Trent.—p 463
Failure of Urogenital Union A. W Badenoch.—p 471
Preliminary Report of Method for Prevention of Leakage of Intestinal Anastomoses Experimental Study J Devine.—p 475
Utilization of Henle's Ligament Iliopubic Tract, Aponeurosis Transversus Abdominis and Cooper's Ligament in Inguinal Herniorrhaphy Report of 162 Consecutive Cases J H Clark and E I Hashimoto. —p 480
Early Postoperative Rising Statistical Study of Hospital Complications. J B Blodgett and E J Beattie —p 485

**Treatment of Adenocarcinoma of Uterus**—Gray and his associates treated 10 women with adenocarcinoma of the uterus The cases are reported without a five year follow up because residual carcinoma was found in some who had received enormous doses of radium by means of the hysterostat designed by one of the authors and because of the presence of ovarian metastasis in 3 patients The radium applicator, called the hysterostat was designed to achieve a more equable distribution of radiant energy to all parts of the uterus Of the 10 cases 9 were moderately advanced or advanced but without induration of the pelvic ligaments, and were therefore considered operable Seven patients received unusually large doses of radium (6,030, 7,000, 7,000, 8,000, 8 900, 10,410, 12,480 milligram hours) followed by hysterectomy thirty-eight days to six months later Six of these 7 uteri showed residual carcinoma. The 1 case in which there was no remaining carcinoma after radium was an extensive undifferentiated tumor in a large

uterus treated with 12,480 milligram hours of radium One patient with early undifferentiated adenocarcinoma was treated with surgery alone. Three patients had ovarian metastasis This study suggests that radium alone will not completely eradicate adenocarcinoma of the uterus Subsequent excision of uterus, tubes and ovaries is necessary Recent reports suggest that panhysterectomy with bilateral salpingo oophorectomy should result in a five year arrest of 60 to 65 per cent of operable lesions The impression that the five year survival rate may be increased to 70 or 80 per cent by the use of preoperative radium followed by hysterectomy has been growing during the last ten years The authors think that the exact role and specific indications for preoperative radium therapy have not yet been satisfactorily delineated

## Surgery, St. Louis

**19** 303-436 (March) 1946

*Preoperative Dietary Management for Surgical Patients with Special Reference to Lesions of Stomach and Duodenum R L Varco —p. 303
Alkaline Phosphatase and Metastatic Liver Disease R. W Bullard Jr —p 379
Pulsating Hematoma False Aneurysm and Arteriovenous Fistula Due to War Injuries H Conway and G Plain —p 383
*Causalgia Secondary to Injury of Major Peripheral Nerves Treatment by Sympathectomy F F Allbritten Jr and G L Maltby —p 407
Gunshot Wounds of Abdomen Review of 149 Cases R. S Wilkinson L M Hill and L T Wright.—p 415
Acute Pulmonary Edema Associated with Mediastinal Emphysema F T Wallace —p 430

**Preoperative Dietary Management for Surgical Patients**—Varco says that, more frequently than seems to be appreciated, patients ill with diseases remediable by surgery present mild to severe states of starvation or malnutrition A failure to recognize the importance of the concomitant effects that may develop from an inadequate nutrition (fatty liver, decreased hepatic function, hypoproteinemia) increases the hazards of surgery Adequate preparation with appropriate diets lessens these dangers These "poor risk" cases can be accepted for operative procedures tolerable to standard risk cases without augmenting seriously the risk, if good dietary preparation has been achieved A diet rich in proteins, carbohydrates and calories but low in fats is best High protein content has been achieved by fortifying several vehicles with milk powder which contains all the essential amino acids Similarly lactose, cane or beet sugar or cerelose (dextrose) was added to attain the high carbohydrate content The fat content has been reduced to minimal values Two diets developed on this plan are most frequently employed Diet I is palatable and comes in multiple servings during the day Diet II is designed for tube feedings and is less palatable but is taken readily by mouth by most patients These diets have been used in the routine care of several hundred surgical patients The percentage of body weight loss is probably the best guide for the duration of the feeding program Despite the lack of confirmatory evidence obtained under rigid experimental conditions indicating that dietary preparation lessens the risk of formidable operations, the clinical evidence on this score is overwhelming as suggested in a number of the case reports detailed in this study

**Causalgia Secondary to Injury of Major Peripheral Nerves**—Patients suffering from causalgia continue to be admitted to hospitals with a diagnosis of severe psychoneurosis and prolonged delay in treatment has been a usual occurrence. During this period of delay the changes of disuse affect the extremity This is of particularly serious import when the hand is involved Despite the lack of an adequate explanation for the etiology of the pain, interruption of the sympathetic nerve supply to the extremity greatly modifies or abolishes the symptoms of the disease During the past twelve months 67 patients have been admitted to Allbritten and Maltby's hospital with injury to a major peripheral nerve and causalgia of sufficient severity to warrant some form of treatment. The seat of the maximum pain has been in the distribution of the posterior tibial nerve or the median nerve Thirty of this group desired sympathectomy after experiencing relief by sympathetic block Of this group 22 had lumbar sympathectomies and 8 had preganglionic dorsal sympathectomies Good to excellent results were obtained in 28 of the patients Failure to relieve symptoms and reestablish use of the affected part occurred in 2 patients The sympathectomization should be of sufficient extent to include the area of injury as well as the area of symptoms Early sympathectomization will, in the vast majority, relieve the symptoms of the disease and prevent the profound disabilities of disuse

## Tennessee State Medical Assn Journal, Nashville

**39** 77-116 (March) 1946

Surgical Convalescence. J C Burch —p 77
Professional Ethics C E. Reeves —p 81
Use of Octin in Ureterolithiasis Case. J C Pennington —p 92

**39** 117-156 (April) 1946

This Is Our Medical Profession W C Chaney —p 117
American Medical Association—What Why and Who R I Lee —p 120
Beta Hemolytic Streptococcic Septicemia Acute Bacterial Endocarditis, Acute Mastoiditis and Embolic Brain Abscess Successfully Treated with Sulfadiazine and Penicillin Report of Case J L. Chestnut —p 126
Acute Thyroiditis Treated with Penicillin D Scheinberg —p 137

## United States Naval Med Bulletin, Washington, D C

**46** 479-622 (April) 1946

Dysentery Outbreak Aboard Naval Vessels in San Pedro Bay, Philippine Islands F S Cheever —p 479
Report of 200 Necropsies on Natives of Okinawa E L Benjamin —p 495
*Tropical Headache Preliminary Report on Diagnosis and Treatment W W Woods and J W Stutzman —p 501
Headache Etiologic Approach with Special Reference to So-Called Vacuum Headache H L. Jones Jr —p 507
Causes of Uniocular and Binocular Blindness in U S Navy and U S Marine Corps in World War II C A Swanson and R. A Stewart. —p 520
Shigellosis Studies I Etiology and Clinical Features. C M Thompson B V White Jr and W L Schafer —p 528
Epidemiologic Study of Epidemic Hepatitis R W Getty —p 541
Copper Ionization Treatment of Fungous Infections W J Lahey and J E Byrnes —p 554
Abdominal War Wounds Report of 10 Cases with Recovery F P Shidler —p 558
Aggravation of Bacterids by Penicillin with Theory as to Causation. J A Heinlein, C C Carpenter and B J Duffy Jr —p 571

**Tropical Headache**—Woods and Stutzman examined 20 young men suffering from severe incapacitating headache for which no specific cause could be found Five patients had severe unilateral frontotemporal headaches the remaining 15 patients had bilateral frontal headaches The unilateral type is to be considered as caused by abnormal extracranial vasodilatation The pain is conducted by afferent fibers coursing along the vessels and may often be relieved by selective arterial resection The unilateral pain did not respond to therapy consisting of increased salt solution and calcium intake or of neostigmine injections It was made worse by heat and exertion and by jugular compression produced by a blood pressure cuff about the neck inflated to 35 mm of mercury for three minutes The second type represented by the 15 cases of bilateral frontal headache is to be considered as arising from intracranial vascular structures In all these cases the headache was made worse by heat and exertion but was often improved by the jugular compression test Carotid occlusion seemed to relieve the headache on that side only and often made the pain worse on the opposite side Occlusion of extracranial arteries had no effect. Since the headache was accompanied by decreased intracranial pressure in the upright position made worse by lowering the level further and abolished by raising the pressure, it could be assumed that traction on the intracranial vessels was a factor This type of headache was definitely aided by increased salt, calcium and fluid intake and by injections of neostigmine methylsulfate

## Western J Surg, Obst & Gynecology, Portland, Ore.

**54** 77-126 (March) 1946

Operation for Correction of Flexible Flat Feet of Adolescents E. F S Chambers —p. 77
Infiltrating Benign Lipomas of Extremities J M Regan W H Bickel and A. C Broders.—p 87
Further Studies in Use of Sigmodal in Obstetric Analgesia and Amnesia T M Watson —p 94
Menstrual Dysfunctions The Climacteric. S C Freed —p 103

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below Single case reports and trials of new drugs are usually omitted

### British Journal of Urology, London

**17** 131-178 (Dec) 1945

True Infective Abacterial Pyuria T Moore —p 131
Contribution to Etiology of Acquired Fibrosis of Bladder Neck W E. Coutts and R Vargas-Zalazar —p 136
Incidence of Signs of Renal Injury Following Prolonged Burial Under Débris in Unselected Series of 764 Air Raid Casualties Admitted to Hospital. J W B Douglas —p 142

### Edinburgh Medical Journal

**53** 49 96 (Feb) 1946 Partial Index

Increasing Incidence of Pulmonary Tuberculosis in Children in Glasgow S Laidlaw —p 49
Experiences in Mass Radiography A Maclean —p 52
Pathogenesis of Tuberculous Epididymitis W M Borthwick —p 55
Health Risk in Tuberculosis Nursing C Cameron —p 76
Acute Inflammation and Abscess Formation Due to Diphtheroid Bacillus R Salm —p 83

### Lancet, London

**1** 369 404 (March 16) 1946

Penicillin in Subacute Bacterial Endocarditis Report to Medical Research Council on 147 Patients Treated in Fourteen Centers Appointed by Penicillin Clinical Trials Committee R V Christie. —p 369
Blood Loss in Battle Casualties Use of Transfusion Fluids. J V Dacie and G F Homer —p 371
Urinary Mepacrine in Relation to Incidence and Diagnosis of Malaria J Yudkin —p 377
Spinal Anesthesia Variations in Dosage Required A R Hunter —p 380
Achalasia of Esophagus Following Depressed Fracture of Base of Skull J J Flemminger and M C Smith.—p 381

**1** 405-446 (March 23) 1946

Search for Philosophy of Medicine D Guthrie.—p 405
Penicillin Therapy Clinical and Laboratory Observations on 400 Cases R V Hudson R I Meancock J McIntosh and F R. Selbie —p 409
Paralytic Ileus in Severe Hypothyroidism. P A Bastenie —p 413
Gravid Uterus in a Strangulated Hernia. R Laird —p 416
Unusual Rectovesical Injury R Smith —p 417

### Practitioner, London

**156** 152-224 (March) 1946 Partial Index

Dental Emergencies and the Medical Practitioner F C Wilkinson —p 160
Significance of Dental Infections F A Knott and C W Shuttleworth. —p 168
Modern Views on Pyorrhea J D Hamilton Jamieson —p 176
Care of the Teeth in Children. J P Hellwell —p 184
Observations on Elucidation of Obscure Pyrexia. J L Fluker —p 190
Investigation of Some Causes of Delay in Labor Elizabeth A Nettell —p 203

### Quarterly Journal of Medicine, Oxford

**15** 1-90 (Jan) 1946

Treatment of Amebiasis with Special Reference to Chronic Amebic Dysentery W H Hargreaves —p 1
*Pamaquin Hemoglobinuria S B Dimson and R B McMartin —p 25
Temporal Arteritis Generalized Vascular Disease W T Cooke P C P Cloake A D T Govan and J C Colbeck —p 47
Lead Content of Blood and Its Relation to Rarefying Processes in Bone. A Brown —p 77

**Hemoglobinuria Due to Pamaquin** —Dimson and McMartin encountered hemoglobinuria in 13 of 10 000 Indian troops who received pamaquin (plasmochin) during blanket treatment and in 5 of 8 000 patients who received it during routine treatment of malaria The authors use the term blanket treatment' to describe a course of treatment given to men withdrawn from a malarious area to one which is nonmalarious on the assumption that they have already developed subclinical malaria Three deaths occurred in the group given blanket treatment' Clinical and postmortem findings were identical with those described in classic blackwater fever Treatment was usually by absolute rest, fluids and alkalis Etiologic factors discussed include lack of rest dosage batch toxicity race, suppressive quinacrine malaria blackwater fever liver damage and toxicity of pamaquin The term blackwater fever describes a syndrome which has several causes Definition on an etiologic basis is desirable Thus hemoglobinuria due to malaria quinine quinacrine or pamaquin are terms which are preferable, being more accurate, though there may be common underlying factors present in varying degrees As far as pamaquin hemoglobinuria in the present series is concerned malaria appears to play a lesser role than it does in classic blackwater fever (malarial hemoglobinuria) Oversusceptibility to pamaquin is held to be the determining factor in producing the hemoglobinuria with the previous administration of quinacrine an important contributory cause

### South African Medical Journal, Cape Town

**20** 77-104 (Feb 23) 1946 Partial Index

Streptomycin H O Hofmeyr —p 78
Electroencephalography in Mental Hospital Practice L. A Hurst —p 87
Pure Vi Strain of Bact Typhosum W Lewin —p 92
Should Sterilization be Legalized? D K Ludwin —p 94
Note on Sulfonamide Drugs as Inhibitors of Intestinal Vitamin Synthesis H Le Riche —p 98

### Presse Médicale, Paris

**54** 85-104 (Feb 9) 1946

Electron Microscopic Examination of Treponema Pallidum C Levaditi —p 85
*Brain Abscess and Sulfonamide Therapy J Piquet —p 87
Initial Lesions of Periarteritis Nodosa P Nicaud —p 88
Intramedullary Osteosynthesis of Diaphyses P L Chigot —p 89
Determination of Proteins Hemoglobin and Red Blood Corpuscles by Philipps and Van Slyke's Method J Perrotin M Lemaire and Rosine Stoecklin —p 91

**Sulfonamide Therapy for Brain Abscess** —Piquet reports the results of sulfonamide therapy of 15 patients operated on for brain abscess of otitic origin Nine had a cerebral abscess and 6 a cerebellar abscess Six patients with cerebral abscess and 2 with cerebellar abscess recovered Treatment consisted in surgical removal of the initial focus drainage of the abscess, allowing an iodoform drain to remain in the cavity and occasionally of decompression trephining Eight to 10 Gm of the sulfonamide compound was administered daily for one week, and treatment was continued with smaller doses depending on the improvement Two patients had recurrence of the abscess Sulfonamide therapy apparently improves the prognosis of a cerebral abscess by checking the encephalitis in the adjacent area of the abscess but control of the patient for the next three months is essential because of occasional recurrence Increased cerebral pressure may be relieved by puncture of the dura in the area of the primary abscess An iodoform drain should be placed in the cavity for two to three months and be changed every eight to ten days Neither local nor general sulfonamide therapy was effective in cerebellar abscess It was demonstrated that the white substance of the brain fixed twice the amount of sulfonamide as the cerebellar tissue

### Progres Medical, Paris

**74** 65-96 (Feb 24) 1946

Osteolytic Metastases of Cancer of Breast M Loeper and M Le Sourd —p 67
Metastases of Cancer of Prostate M Loeper and J Tremolieres —p 69
*Calcium Metabolism in Course of Cancer of Breast and of Cancer of Prostate with Bone Metastases. J and Jacqueline Loeper —p 70

**Calcium Metabolism in Cancer with Bone Metastases** —The Loepers studied 14 cases of cancer of the breast with bone metastases In 13 cases the metastases were of the osteolytic type, and in only 1 case were osteoplastic metastases present In 9 cases there was an abnormal rise of blood calcium up to 128 mg By comparing the level of blood calcium with the extent of the osteolytic process it was demonstrated that higher calcemia corresponded in general to a larger extent of the osteolytic lesions but 2 patients with a calcemia of 100 and 110 mg presented a fairly extensive osteolytic process and a third patient with a calcium blood level of 100 mg presented an extensive osteolytic process Because of the regulating system of the blood calcium level, the calcemia does not always give an exact picture of calcium mobilization The calcium balance of 3 patients was determined The first patient showed a pronounced negative balance there was an extensive osteolysis a calcemia of 124 mg and a mean daily calcium loss of 188 mg Patient 2 showed an even more pronounced negative balance with extensive osteolysis a calcemia of 100 mg and a mean

daily calcium loss of 895 mg The third patient showed a positive balance, a mild osteolysis, a calcemia of 116 mg and a mean daily calcium excess of 95 mg In general the calcium balance of patients with extensive osteolytic lesions is negative In the same patients the calcemia is more pronounced when less calcium is lost by the excretory organs, and inversely Renal and intestinal factors have some influence on the elimination rate of the mobilized bone calcium Extracts of tumors of the breast were injected subcutaneously in rabbits and in dogs A permanent hypercalcemia resulted in 4 of 7 animals, the increase in calcemia varied from 8 to 35 mg It is suggested that cancer cells are endowed with osteolytic internal secretion and that the effect of the osteolytic principle may be similar to that of parathyroid extract The parathyroid reaction given occasionally by patients with cancer of the breast in which there are osteolytic metastases is not constant and is secondary to the osteolytic process caused by the cancer cells It is a primary defense reaction which surpasses its aim and in turn aggravates the osteolytic process Study of 2 patients who had cancer of the prostate with bone metastases demonstrated that the metastases were osteoplastic, they were not associated with hypercalcemia, and there was a positive calcium balance

## Annales Pædiatrici, Basel

**166** 1-56 (Jan) 1946

*Pontine Tumors in Infancy Tieline A E Janssen —p 1
Vitamin Resistant Rickets. Marlies Lüssy —p 11

**Pontine Tumors in Infancy**—To 5 cases of tuberculoma pontis collected from the literature Janssen adds a sixth of her own observation, her patient being a little girl in whom symptoms appeared when she was 3½ months old and who died at 9 months Necropsy revealed a ganglioneuroma or a ganglioglioneuroma which had spread from the caudal portion of the pons to the left half of the cerebellum and to the medulla oblongata All 6 patients had lesions of one or several of the cerebral nerves, but the symptoms of the pontine tumor in the author's patient showed greater multiformity than in the others She thinks that this may be due to the extensive and infiltrating growth of the ganglioneuroma.

## Schweizerische medizinische Wochenschrift, Basel

**75** 981-1000 (Nov 10) 1945

Clubfoot and Other Orthopedic Deformities as Hereditary Defects H Debrunner —p 981
Gunshot Wound of Heart K Lenggenhager —p 985
*Electrocardiographic Aspects of Epidemic Hepatitis V Louis —p 986
Early Diagnosis and Treatment of Tumors of Superior Maxilla K Kallenberger —p 990
Role of Adrenals in Pathology and Treatment of Mustard Gas Poisoning J Kuchárik and A Telbisz.—p 996

**Electrocardiographic Changes in Epidemic Hepatitis**—Louis reports electrocardiographic studies made on 47 jaundiced patients Twenty-four, or more than 50 per cent, of these patients had pathologic changes in the electrocardiogram Anomalies in the T deflection and in the ST wave were most frequent He also observed changes in the rhythm indicative of atrioventricular conduction disturbances He believes that his is the first report of such conduction disturbances in jaundice

## Arch. Urug de Med, Cir y Especialid, Montevideo

**27** 473-576 (Nov) 1945 Partial Index

*Malaria Caused by Blood Transfusion R V Talice and J E Mackinnon.—p 473
Ovalocytosis R A Piaggio Blanco and P Paseyro —p 482
Gentian Violet in Skin Disorders in Children J M Tiscornia Denis —p 487
Complications During Convalescence of Patient with Typhoid Orchiepididymitis and Spondylitis. J M. Reyes Terra and J Dubourdieu (h) —p 512

**Accidental Malaria by Transfusion.**—Talice and Mackinnon present the histories of 2 patients who developed malaria after they had received transfusions of fresh blood. In both patients the malaria was produced by Plasmodium malariae Both responded to quinine therapy Investigation of the donors revealed that *1 had acquired malaria* nine years before in Africa and the other seven years before in Italy The authors stress that malaria and syphilis are the two diseases that must be watched for in selecting donors for blood transfusions, regardless of whether the blood is to be used fresh or is to be stored. Since malaria is not endemic in Uruguay they think that, if only persons who have never been outside Uruguay are used as blood donors, accidental transmission of malaria by blood transfusion will be avoided

## Nederlandsch Tijdschrift v Geneeskunde, Amsterdam

**90** 39-78 (Jan 19 and 26) 1946

Occurrence Diagnosis and Prognosis in Total Atrioventricular Block in Diphtheria. P Schweitzer —p 44
Hemorrhagic Infarction of Uterus and Adnexa Following Abortion Provoked by Soap Suds H E Schornagel —p 47
Epicondylalgia (Epicondylitis) M N Roegholt —p 50
*Rheumatism and Liver E M Bingen and J B Stolte —p 52
Leukoerythroblastosis in Malignant Tumors J B Stolte —p 54
Roentgenologic Measurement of Pelvis H E A Termin —p 57
Penicillin Therapy in Staphylococcic Sepsis J A van Loon and G H De Kleyn —p 59
Biologic Aspects of Effects of Atomic Bomb D den Hoed —p 61

**Rheumatism and Liver**—Bingen and Stolte found that a large percentage of *27* patients with acute rheumatism and of 21 patients with chronic rheumatic polyarthritis exhibited deviations from the normal in various liver tests Occasionally hepatic cirrhosis was associated with chronic rheumatic polyarthritis Jaundice was present in 8 among 193 patients with chronic rheumatic polyarthritis, in 1 it was caused by hepatitis and in the other 7 by cholecystopathy, but a favorable effect on the articular symptoms was never noted In 1 patient joint symptoms appeared while there was jaundice The authors conclude that acute rheumatism as well as chronic rheumatic polyarthritis is frequently accompanied by liver impairment and that rheumatic heart lesions concur frequently in patients with hepatic cirrhosis The etiologic significance of liver and biliary tract for rheumatism is not certain

## Acta Medica Scandinavica, Stockholm

**123** 303-402 (Feb 15) 1946

Neurocirculatory Syndrome ("Neurocirculatory Asthenia") in Soldiers II Clinical Investigation E Adlercreutz —p 303
Epinephrine Determination According to Fluorescence Method B von Porat —p 317
Vitamin C Standard in Various Groups of Population in Finland in Years of War 1941 1943 J E Wingren —p 340
*Treatment of Parathyroid Tetany with Vitamin D- P Schultzer and B C Christensen —p 362
Panmyelopathy (Panmyelophthisis) A Aubert —p 377
Studies on Serum Proteins in Hepatitis I Relation Between Serum Albumin and Serum Globulin M Bjørneboe —p 393

**Treatment of Parathyroid Tetany with Vitamin $D_2$**—Eleven patients who had parathyroid tetany were treated by Schultzer and Christensen with ultranol fortior, an oil solution containing 300,000 international units of vitamin $D_2$, i e. 7 5 mg in 1 cc, which corresponds to 0 25 mg in one drop Nine of the patients had developed symptoms after a subtotal strumectomy for hyperthyroidism In 1 patient strumectomy with removal of practically all parathyroid tissue was performed for a large adenoma of the parathyroid One patient suffered from idiopathic tetany Ten of the patients were women between the ages of 23 and 48, and 1 was a man aged 33 All the patients had previously been treated with dihydrotachysterol, of which they received between 1 33 and 5 mg daily The reaction of the patients to dihydrotachysterol was not uniformly ideal, since some of them presented mild hypocalcemia Dihydrotachysterol was replaced by vitamin $D_2$, and the dose adjusted so that the patients presented a normal blood calcium level The daily dose was 1 to 4 5 mg of D Dihydrotachysterol may be safely replaced by vitamin $D_2$ The amount of vitamin D to be given should be somewhat smaller (on an average about 25 per cent) than that of dihydrotachysterol For the treatment of acute cases of postoperative parathyroid tetany 5 mg of vitamin $D_2$ daily will generally be adequate, additional intravenous injections of calcium chloride or calcium gluconate may be given for the first few days In the cases studied there occurred a prompt rise of the serum calcium concentration, which continued for from one to five months until the maximum effect of vitamin $D_2$ was obtained. When adjusted the patients felt as well under treatment with vitamin D as they did when treated with dihydrotachysterol

# Book Notices

**The Sulphonamides in Theory and Practice** By J Stewart Lawrence M.D M R C.P Cloth Price 9s Pp 125 London H K Lewis & Co Ltd 1946

In the preface the author states that "the spate of new drugs of this class seems to be warning and recent work has been concerned more with consolidating our knowledge of the old ones Time therefore seems opportune to attempt a brief survey of the facts which have been evolved" He has succeeded in crystallizing the present status of sulfonamide therapy, drawing heavily on the literature rather than on his personal experience for his information. There is an excellent summary of the mode of action and the pharmacology of the sulfonamides Included in the discussion are phthalylsulfathiazole and homosulfanilamide. There is a well timed chapter on common abuses of the sulfonamides In a concluding section on sulfonamides or penicillin the author devotes only one and one-half pages to this important feature of the subject. In general, the material is presented clearly and concisely Pertinent references to the literature are given This monograph can be recommended to the practitioner who desires a comprehensive and up to date survey of the subject.

**Human Embryology (Prenatal Development of Form and Function)** By W J Hamilton M D D Sc F R S E Professor of Anatomy in the University of London at the Medical College of St Bartholomew's Hospital J D Boyd M.A M.Sc. M.D Professor of Anatomy in the University of London at the Medical College of the London Hospital and H W Mossman M.S Ph.D Associate Professor of Anatomy in the University of Wisconsin Madison Cloth Price $7 Pp 366 with 364 illustrations Baltimore William Wood & Company 1945

This book may well be taken by other medical authors as an example to emulate. The text is well written, the beginning student will find the expositions of developmental processes remarkably clear The style is delightful and never becomes stodgy Without sacrificing scientific accuracy, the authors have succeeded in avoiding the dry, boring flavor one meets so often in textbooks One reason for their success may be the frequent references to the literature. The illustrations are excellent They have been well chosen and excellently drawn and reproduced. Many are three dimensional They serve admirably to clarify points which might be difficult for the reader to visualize from descriptions The book is printed on good paper and is well bound. One could wish that the page had been printed in two 3 inch columns instead of one 6 inch column. There is a full list of references at the end of each chapter The authors have displayed excellent judgment in the space allotted to the various topics Development of the human embryo is emphasized, although there are chapters on experimental and comparative embryology This book will become popular with medical teachers and students

**De behandeling van hypertensie met zoutloos dieet en met uitdrijving van keukenzout Een klinische en haemodynamische studie** Door Hendrik Johan Viersma [Therapy of Hypertension with Salt Free Diet and with Elimination of Salt Clinical and Hemodynamic Study ] Academisch proefschrift ter verkrijging van den graad van doctor in de geneeskunde aan de Universiteit van Amsterdam Paper Pp 322 with 22 illustrations. Amsterdam N V Noord Hollandsche Uitgevers Maatschappij 1945

Although the use of a salt poor diet for the treatment of hypertension was first recommended about forty years ago, the rationale of its use and its value in this disease has been a subject of controversy With the renewed interest in the experimental and therapeutic study of hypertension, several groups of investigators have recently once again undertaken a study of the effects of drastic salt restriction on the blood pressure and the value of this form of therapy clinically In the monograph under review, Viersma has surveyed in great detail the earlier literature, not only on the effect of salt restriction, but also on the various hemodynamic factors and salt and water metabolism in the organism and renal factors which might be affected by salt restriction In addition, careful and well controlled observations were made on 8 patients with essential hypertension 2 with chronic nephritis and 4 with malignant hypertension, who were studied over periods varying from seventy-two days to two and a half years All the patients studied were in the older age groups, the youngest being 35 and the others 45 or older As is well known, the drops in pressure observed during drastic salt restriction are less in the older persons, which was also the experience of the author In addition to the salt free diet, ammonium nitrate and salyrgan to deplete further the organism of salt were added as an adjuvant form of therapy The author concludes that the combination of drastic salt restriction with the use of a mercurial diuretic is to be recommended in the treatment of hypertension, particularly in those who manifest serious symptoms of heart failure, angina pectoris, hypertensive retinopathy or vascular crises However, in malignant hypertension and in the presence of poor renal function, salt restriction alone without the use of a mercurial diuretic is advocated In the acute stage of myocardial infarction, salt deficiency is contraindicated

The author is to be commended for a carefully controlled and well documented study which demonstrates again the value of drastic salt restriction in the treatment of hypertension However, much still remains to be learned before the mechanism involved in this process will be elucidated.

**Diagnostic Psychological Testing The Theory Statistical Evaluation and Diagnostic Application of a Battery of Tests** By David Rapaport Ph D With the collaboration of Merton Gill M D and Roy Schafer B S Volume I The Menninger Clinic Monograph Series No 3 Cloth Price $6 50 Pp 573 with 38 illustrations Chicago Year Book Publishers Inc 1945

In this volume seven psychologic tests are evaluated The authors made a serious attempt to present not only the technical aspects of psychologic testing but also the kind of material useful to the clinical psychiatrist. There is no doubt about the importance of psychologic testing and the efforts of the authors emphasize the importance of obtaining psychologic information from the test performance in addition to a diagnosis of intellectual capacity In the effort to obtain information additional to the test scores the authors have fallen into several serious errors For example, in the foreword the authors state that they did not advocate a mechanically standard procedure of administering the tests but one which would create optimal conditions This statement seems plausible but actually makes the rather curious assumption that the psychologist can change the standard methods to suit a particular situation If this is done it is obvious that there are no standard methods, and the authors constantly refer as they should to the fact that scientific data in the field of testing can be obtained only if scientific methods are rigorously used That the authors are somewhat confused regarding the use of standard methods and of subjective observation is further brought out by their statement on page 3 that in psychologic testing more or less standard scoring systems are used Again, on page 10 in speaking of the word association test, the statement is made that this test lost its usefulness because it was mechanically applied and statistically treated. The authors then state that they introduced a systematic qualitative point of view Any psychologist who has labored in his laboratory in order to standardize and quantify psychologic methods and to create a science out of the subjective psychology of the nineteenth century will probably be shocked by such statements The fact that the authors adapted the tests to suit the patient s needs (p 13) and that the psychologist s attitudes varied from individual to individual indicates a somewhat contemptuous attitude toward rigorous scientific method. This is probably inconceivable in view of the excellent work of these authors it may well be that the pressure of the clinicians for interpretative material created attitudes which tended to make the testing subjective rather than objective.

The discussion of the tests is excellent, and the book is readable

**The Diagnosis of Nervous Diseases** By Sir James Purves Stewart K C M G C B Ninth edition Cloth Price $11 Pp 880 with 358 illustrations Baltimore William Wood & Company 1945

This is a good book on neurologic diseases The author is well known and has followed the study of nervous diseases for over forty years Because of this, one finds material or facts about almost all the diseases of the nervous system. It is up to date and is highly recommended for medical students and general practitioners

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT HOWEVER REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## REACTIONS FROM INTRAVENOUS GLUCOSE SOLUTION

*To the Editor* —Why do glucose solutions produce a reaction with chills and a rise of 2 or 3 degrees of temperature if the glucose solution is pyrogen free and the appliance and needles autoclaved? M D Minnesota

ANSWER.—Pyrogens are chemical substances which are elaborated by bacteria which may grow even in distilled water Many species of bacteria produce these substances but the most common source are the types found in river water The name is derived from the fact that the substances produce febrile reactions when injected parenterally Pyrogens pass through most bacterial filters and are not inactivated by the heat applied in autoclaving solutions or equipment for parenteral therapy (Seibert, F B Fever-Producing substances Found in Some Distilled Waters, *Am J Physiol* **67** 90 [Dec.] 1923, **71** 621 [Feb.] 1925)

In the preparation of equipment for parenteral therapy two steps must be observed 1 The equipment must be thoroughly washed with pyrogen-free solutions, such as distilled water which has recently passed through a proper still 2 The equipment then must be autoclaved within a few hours (approximately six) to destroy any bacteria which may have been introduced after the cleansing

If a solution of dextrose was employed which was manufactured commercially and tested for pyrogens then the pyrogenic substances must have resulted from the imperfect preparation of the rubber tubing and other apparatus In such a case the pyrogens could be washed out by allowing the first 100 to 200 cc of the dextrose solution to be discharged through the apparatus and discarded before the injection into the patient is begun The occurrence of pyrogens in the equipment for parenteral therapy is a strong argument for entrusting the preparation of such equipment to a few trained personnel in the hospital

## ATTACKS OF DYSPNEA AND COUGH

*To the Editor* —A physician aged 63 has been suffering from repeated attacks of early morning dyspnea and cough raising phlegm He is relieved by whisky and oxygen It has lasted four months without sign of improvement Now although slightly improved attacks continue The electrocardiogram reveals left bundle branch block There are recurring attacks at three or four day intervals and heavy sweats in the morning I am requesting information relative to additional treatment particularly if digitalization is indicated under these conditions

M D New Jersey

ANSWER.—From the information given, it is impossible to make a definite statement with regard to digitalization Digitalis is indicated if there is any evidence of congestive failure or if there is auricular fibrillation with a rapid ventricular rate As mention is not made of these conditions, digitalis is presumably not indicated. The left bundle branch block may be considered evidence of myocardial damage but not the cause per se of any of the signs or symptoms of congestive failure Many patients exhibit bundle branch system block for years without any cardiac symptoms

Although no mention is made of physical findings it is possible that this condition may be due entirely to pulmonary disease Chronic bronchitis or bronchiectasis can cause these symptoms The occurrence of these episodes in the early morning is suggestive of bronchiectasis, though other pulmonary conditions such as neoplasm must be considered It is important especially in a 63 year old man that the etiology of such a condition be established It is suggested that in addition to a more complete cardiac examination a complete study of the lungs be made including x-rays of the chest bronchograms and if necessary bronchoscopic examination

## PENICILLIN FOR COLDS

*To the Editor* —What success has there been in the prevention or treatment of colds by the use of penicillin? M D Iowa

ANSWER.—Penicillin does not seem to be of value in the prevention and treatment of colds Up to the present time penicillin has not proved valuable in the treatment of any virus infections If colds are complicated by acute sinusitis due to penicillin susceptible organisms then penicillin may be used

## VITILIGO

*To the Editor* —A woman with vitiligo is being given gold sodium thiosulfate 100 mg intravenously twice weekly and bergamot oil solution 10 per cent in 95 per cent alcohol applied twice daily Coincident with this treatment she is supposed to get five minute exposures of ultraviolet rays without the sun tan effect on the skin twice weekly The patient has had ten weeks of treatment with the gold sodium thiosulfate and the bergamot oil but no ultraviolet radiation She now wishes to begin the treatment over taking the ultraviolet radiation along with the other medication In case this should not be done will it have the desired effect if she takes the recommended ultraviolet radiation without any other medication? Will you please discuss the outlined treatment for vitiligo? What type of carbon arc lamp is most desirable for ultraviolet rays with the least amount of sun tan?

M D West Virginia.

ANSWER.—There is no effective therapy for the treatment of vitiligo Gold sodium thiosulfate has been used for this purpose, but the proportion of favorable results is so small that it seems questionable whether it is advisable to expose the patient to the possible toxic effects of gold salts, particularly in large doses such as are being used in this instance The use of bergamot oil with ultraviolet irradiation is based on the observation that in certain persons hyperpigmentation of the skin has developed when patients have applied toilet waters containing essential oils to the skin and have then been exposed to sunlight. Unfortunately this method of treatment has practically no effect on depigmented areas in vitiligo In exceptional instances the pigment returns spontaneously in cases of vitiligo, and it is entirely possible that in cases in which favorable results have been obtained, either while using gold salts or employing bergamot oil and the ultraviolet method or a combination of the two methods, the improvement is coincidental

## AMPHETAMINE AND DEXTROAMPHETAMINE SULFATE

*To the Editor* —Amphetamine (benzedrine) and dexedrine sulfate have been given to patients complaining of depressive states bordering on melancholia with a great deal of temporary symptomatic relief What deleterious effect might be produced by the continued use of either of these drugs over a long period aside from the possibility of producing a drug habit? Is there any difference in the two drugs aside from their chemical composition?

T A Moran M D Melrose Iowa

ANSWER.—Benzedrine sulfate (racemic amphetamine sulfate) has been given daily over a period of years in the treatment of narcolepsy without any apparent ill effects attributable to the long continued administration and rarely if ever with the development of tolerance Dexedrine sulfate (dextroamphetamine sulfate) is about one and one-half to two times as active as the racemic amphetamine in its central nervous system stimulating effect. The peripheral actions of the two drugs are essentially equivalent Hence, when used as a central stimulant, dexedrine is claimed to have fewer undesirable side-effects

References


Bakst H K Daily Use of Benzedrine Sulfate Over a Period of Nine Years Report of a Case *U S Nav M Bull* **43** 1228 (Dec.) 1944

Bloomberg Wilfred End Results of Large Doses of Amphetamine Sulfate Over Prolonged Periods *New England J Med* **222** 946 (June 6) 1940

Prinzmetal Myron and Alles G A The Central Nervous System Stimulant Effects of Dextroamphetamine Sulfate *Proc Soc Exper Biol & Med* **42** 206 (Oct.) 1939


## FATE OF BEESWAX IN PENICILLIN MIXTURES

*To the Editor* —What is the fate of beeswax which has been injected intramuscularly? Is it completely absorbed or does it act like paraffin? Does it induce much fibrous tissue formation?

M D California

ANSWER.—Beeswax is removed from the tissues by phagocytosis Twenty-four hours after the intramuscular injection of penicillin in beeswax and peanut oil the particles of beeswax are separated by collections of polymorphonuclear cells large mononuclear cells and foreign body giant cells No muscle necrosis is associated with this reaction the fibers merely being separated Beeswax usually disappears by the thirtieth day Very little fibroblastic reaction occurs and that disappears within several months In human beings who died from various causes one or two months after receiving penicillin in beeswax and peanut oil numerous sections of the muscle were necessary to find the site of injection and beeswax was not identified At this time minute cysts some partially collapsed having thin fibrous walls with scattered giant cells are present.

References


Romansky M J and Rittman G E *Bull U S Army M Dept* October 1944 number 84 p 43

Romansky M J, Murphy R J and Rittman G E. Single Injection Treatment of Gonorrhea with Penicillin in Beeswax Peanut Oil THE JOURNAL June 9 1945 p 404

Bryson J C and Code C F *Proc Staff Meet Mayo Clin* **17** 100 (Feb 23) 1944



JAMES R MILLER
Hartford Conn



ELMER L HENDERSON
Louisville Ky



CHARLES W ROBERTS
Atlanta Ga



ERNEST E IRONS Secretary
Chicago



ROSCOE L SENSENICH Vice Chairman
South Bend Ind.



JOHN H FITZGIBBON
Portland Ore



WILLIAM F BRAASCH
Rochester Minn.



DWIGHT H MURRAY
Napa Calif



LOUIS H BAUER
Hempstead N Y

BOARD OF TRUSTEES



FRANK W HARTMAN
Detroit
Secretary
Section on Pathology and Physiology



ERNEST L STEBBINS
New York
Chairman
Section on Preventive and Industrial Medicine and Public Health



W B HARM
Detroit
Secretary
Section on General Practice of Medicine



WINGATE M JOHNSON
Winston Salem N C
Chairman
Section on General Practice of Medicine



DANIEL C ELKIN
Atlanta Ga
Chairman
Section on Surgery General and Abdominal



CLYDE L CUMMER
Cleveland
Chairman
Section on Dermatology and Syphilology



FLETCHER D WOODWARD
Charlottesville Va
Secretary
Section on Laryngology Otology and Rhinology



VIRGIL H MOON
Philadelphia
Chairman
Section on Pathology
Biology



J WARREN WHITE
Greenville S C
Secretary
Section on Orthopedic Surgery



FREDERICK C CORDES
San Francisco
Chairman
Section on Ophthalmology



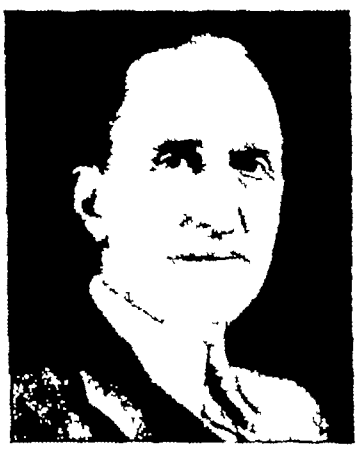
JOHN AIKMAN
Rochester N Y
Chairman
Section on Pediatrics



THEODORE A WILLIS
Cleveland
Chairman
Section on Orthopedic Surgery



ANSEL M CAINE
New Orleans
Chairman
Section on Anesthesiology



EDWIN C ERNST
St Louis
Chairman
Section on Radiology



CECIL J WATSON
Minneapolis
Secretary
Section on Internal Medicine



ARBOR D MUNGER
Lincoln Neb
Chairman
Section on Urology



WILLIAM F MENGERT
Dallas
Secretary
Section on Obstetrics and Gynecology



DWIGHT L WILBUR
San Francisco
Secretary
Section on Experimental Medicine and Therapeutics



U V PORTMANN
Cleveland
Secretary
Section on Radiology



Morrison N. Shrauder

President, American Medical Association, 1946-1947

# The Journal of the American Medical Association

**Published Under the Auspices of the Board of Trustees**

VOL 131, NO 9 — CHICAGO, ILLINOIS — JUNE 29, 1946

COPYRIGHT 1946 BY AMERICAN MEDICAL ASSOCIATION

## OCCIDENTAL BERIBERI HEART DISEASE

M A BLANKENHORN M D C F VILTER M D
I M SCHEINKER M D and R S AUSTIN M D
Cincinnati

Although descriptions of beriberi date far back in the oriental literature the modern concept of heart disease due to beriberi is dominated by the vivid descriptions of Wenckebach[1] in the Far East and by the observations of Weiss and Wilkins[2] in the United States Beriberi has not, however gained much recognition in the etiology of heart disease in this country even though the descriptions of the latter authors have been readily available

In collaboration with Aalsmeer a physician in Java, Wenckebach[1] described in 1932 a large heart, particularly the right side, with precordial pulsations and a 'jumpy pulsus celer of increased frequency" in persons with slight to absent neurologic findings and beginning dependent edema These patients had "curious hardness and swelling of the calf muscles," 'pistol shot sounds" over the larger arteries and peripheral vasodilatation and there was "quick and great benefit" afforded by rest Shock and syncope were frequent He confirmed the allegation of Shimazono and of Aalsmeer that epinephrine had an unfavorable effect on this state, that paradoxically, vasodilatation increased after administration of epinephrine All these signs of a rapid circulation in the face of heart failure are found in most descriptions of the disease in the Orient Keefer,[3] however, while at Peiping China, in 1930 noted the fast circulation in only a third of his patients The banal signs of the others were fatigue palpitation and dyspnea, symptoms which could occur with failing myocardium of any cause

Weiss and Wilkins,[4] describing the picture in 35 instances of beriberi heart disease in the Boston City Hospital, again emphasized the rapid circulation This was, however by no means the rule and these authors concluded that the disease was confined to no rigid syndrome

The large group of cases of beriberi heart disease without the rapid circulation which closely resembles other types of degenerative heart disease still escapes frequent recognition Some of the reasons for this become apparent after studying the cases of this disorder seen in the Cincinnati General Hospital in the last five years It seems that the oriental concept of beriberi heart disease as characterized by Wenckebach's vivid criteria probably hindered the diagnosis in many instances The clinical picture of the failing heart with exceedingly rapid circulation is not likely to be overlooked, it is, however readily remembered in preference to the majority of less dramatic case studies presented in this hemisphere[5] In our studies the combined skill of the nutritionist the cardiologist, the neurologist and the neuropathologist was applied to the material at hand From this study evolved a new and less rigid set of criteria for the diagnosis of beriberi heart disease This reorganization of the requirements, in harmony with modern concepts of nutrition cardiology and neurology, has been described by one of us[6]

This report is concerned with the available material afforded by the study of the 12 cases which were diagnosed in the five years that began in 1940 Since there were approximately 12 000 medical admissions in this period, the incidence was 0 1 per cent Five of the patients in this group died in the hospital, and three autopsies were performed

### CLINICAL OBSERVATIONS

The 12 cases conform for the greater part to the criteria described by Blankenhorn[6] These requirements are (1) insufficient evidence for other etiology, (2) three or more months on a thiamine deficient diet, (3) signs of neuritis or pellagra, (4) enlarged heart with sinus rhythm (5) dependent edema, (6) elevated venous pressure, (7) minor electrocardiographic changes and (8) recovery with decrease in heart size or autopsy consistent with beriberi heart disease

First thought of beriberi usually came with the realization that the etiologic nature of the heart disease was obscure Initial and final elimination of coronary arteriosclerosis as a cause was always difficult None of the patients suffered from angina or precordial oppression There was seldom any persistent fever or persistent leukocytosis which might suggest Fiedler's isolated myocarditis Since 11 patients were men and since the only woman was 56 years of age postpartum myocardosis did not enter the differential diagnosis We

Read in part before the Central Society for Clinical Research Chicago Nov 3 1945

From the Departments of Internal Medicine Neuropathology and Pathology University of Cincinnati College of Medicine.

1 Wenckebach K. F Das Beriberi Herz Morphologie Klinik Pathogenese Berlin Julius Springer 1934 The Riddle of Beriberi Heart L

2 Weiss Soma and Wilkins R W Nature of Cardiovascular Disturbances in Vitamin Deficiency States Tr A. Am Physicians **51** 341 1936 Weiss Soma Occidental Beriberi with Cardiovascular Manifestations J A M A **115**: 832 (Sept 7) 1940 Weiss and Wilkins[4]

3 Keefer, C S The Beriberi Heart Arch Int Med **45** 1 (Jan.) 1930

4 Weiss Soma and Wilkins R W The Nature of Cardiovascular Disturbances in Nutritional Deficiency States Ann Int Med **11** 104 1937

5 Little, J M Jr Beriberi J A M A **63** 1287 (Oct 10) 1914 Kepler E. J Beriberi from a Diet of Raw Starch ibid **83**: 409 (Aug 8) 1925 Aykroyd W R Beriberi and Other Food Deficiency Diseases in Newfoundland and Labrador J Hyg **30** 357 1930 Smith J J and Hurth J Fibrosis of the Endocardium and the Myocardium with Mural Thrombosis Notes on Its Relation to Isolated (Fiedler's) Myocarditis and to Beriberi Heart, Arch Int Med **71** 602 (May) 1943 Perkins J A Cardiac Symptoms in Beriberi M Bull Vet Admin **20** 422 1944 Warshawsky H and Weisberg J Beriberi as a Complication of Organic Heart Disease ibid. **20**: 287 1944 Wenckebach Das Beriberi Herz.[1] Weiss and Wilkins[4] Weiss[2] Dock[7]

6 Blankenhorn M A The Diagnosis of Beriberi Heart Disease, Ann. Int Med **23** 398 1945

have not observed the "idiopathic hypertrophy with mural thrombosis' described by Dock

Alcoholism accounted for the poor dietaries of 11 patients The majority of the diets, as far as assessment was possible were deficient not only in thiamine but also in the other water soluble vitamins, particularly niacin riboflavin and ascorbic acid One patient, though an alcoholic addict had apparently been eating amounts of the essential nutrients which under normal conditions would have been adequate This person, however, proved to absorb many substances poorly In every instance the patient had been existing on a diet deficient in thiamine for longer than three months Although the work of Williams Mason and Smith [8] and Williams, Mason, Power and Wilder [9] suggests that three months may be in the region of the time limitation for the production of cardiac abnormalities only recently has transitory heart failure due to beriberi been induced [10] Certainly the time interval is probably subject to wide fluctuation, since the degree of hypovitaminosis, individual variations, the amount of activity, the presence of complicating disease and many other factors will influence the final nutritional balance. Actually ninety days is an arbitrary point selected to aid the evaluation of the problem

TABLE 1.—*Incidence of Alterations in Electrocardiograms of Ten Patients with Beriberi Heart Disease*

| | No of Cases |
|---|---|
| Low voltage of T waves and/or QRS | 7 |
| Inverted T waves in one or more leads | 5 |
| Premature auricular and ventricular contractions | 2 |
| Long PR interval | 2 |
| Depressed ST segments (digitalis) | 2 |
| Long QT interval | 1 |
| Tachycardia (90 or more) (Clinically 10 of the 12 had tachycardia) | 6 |
| Inverted $T_3$ and $Q_3$ | 1 |
| Bundle branch block | 1 |
| Auricular fibrillation and heart block | 1 |
| Known reversion to normal electrocardiogram | 4 |

In all 12 cases there was other clinical evidence of nutritive failure Always there was some indication of peripheral neuritis or of pellagra In 6 cases (1, 2, 4 5 6 and 12) evidence for both disorders was found This combination is to be expected and sought for, because of the concomitant natural occurrence usual for thiamine and niacin Pellagra was diagnosed in the presence of the typical acute erythematous and the chronic hyperkeratinized lesions of the skin or in the presence of the acute painful glossitis Although the question of the presence of peripheral neuritis sometimes was delicately dependent on the combination of tender calf muscles and absent ankle jerks alteration of other reflexes was usually observed along with changes in the sensory modalities, which were usually distributed in stocking fashion

There were numerous additional observations to support a diagnosis of nutritive failure. Eight of the 12 patients had anemia which in 3 instances was normocytic and in 5 macrocytic Hypoproteinemia was consistent In the 9 patients in whom it was measured the serum protein content ranged between 4 87 and 6 4 Gm per hundred cubic centimeters all but one of the values lying below 6 Two patients in whom gastric analysis was made had histamine refractory achlorhydria and 2 suffered from diarrhea Eight of the 12 showed unmistakable delirium and although in every instance it may have been due to alcohol or of the type that frequently accompanies heart failure, it may well have been nutritional in origin

Ten of the patients during life showed clinical and roentgenologic evidence of cardiac enlargement Patient 2 proved to have cardiac hypertrophy at autopsy, although this could not be demonstrated clinically Patient 1 suffered pulmonary infarction, but thrombotic and embolic manifestations were not evident in the others The cardiac rhythm was almost always sinoauricular In 2 instances premature auricular contractions were frequent In a third auricular fibrillation was finally abolished in favor of normal rhythm (case 5)

TABLE 2.—*Influence of Treatment on Course and Outcome of Beriberi Heart Disease*

| Case | Symptoms and Duration | Time Lapsed Before Giving Thiamine | Treatment | Recovery Period and Outcome |
|---|---|---|---|---|
| 1 H R | Dyspnea orthopnea weakness for 8 mo edema—2 days | 1 day | Thiamine intravenously for 5 wk digitalis last 3 wk. | Slight improvement over 2 mo sudden death |
| 2 H S. | † | None | Thiamine and niacin intramuscularly | Death in 8 days from acute pulmonary edema |
| 3 F R | Dyspnea weakness edema for 1 month | None | Thiamine intramuscularly and intravenously digitalis first 3 wk † | Moderate recovery in 6 wk probable relapse in 6 mo or year |
| 4 T B | Dyspnea—6 mo edema neuritis and weakness 3 wk | None | Thiamine intravenously mercupurin | Gradual recovery in 2 wk still alive 4 yr later |
| 5 J K | Dyspnea orthopnea and edema for 10 days | 4 days | Digitalis * first 21 days thiamine intravenously | Gradual recovery in about 1 wk no recurrence in 3 yr |
| 6 M D | Dyspnea 3 wk then progressive edema | 2+ days | Thiamine intravenously for 9 days | Rapid recovery in 1 wk convalescence prolonged over 4 wk no recurrence |
| 7 J D | Dyspnea edema—3 weeks | 2 wk | Thiamine intravenously | Steady and complete recovery in 1 wk |
| 8 G B | ? | None | Thiamine intravenously nicotinamide | Death second day |
| 9 J B | Nervous jaundice—3 weeks edema—2 wk dyspnea—1 wk | None | Thiamine nicotinamide Vit K. | Death following vomiting |
| 10 J B. | Dyspnea—1 yr edema—10 days | | Digitalis † diet | Moderately rapid recovery 25 days dead 3 mo later |
| 11 F K | Dyspnea edema—2 yr | | Digitalis † diet only | Slow recovery in 6 wk no relapse without digitalis—6 mo |
| 12 C B | Edema—6 mo ? | | | Death—24 hours |

* No effect † Questionable effect ‡ No immediate effect

The cardiac rhythm was almost always sinoauricular In 2 instances premature auricular contractions were frequent In a third auricular fibrillation was finally abolished in favor of normal rhythm (case 5)

Dependent edema was present in 11 of the 12 patients and elevated venous pressure was measured from the antecubital veins in 9 The edema frequently disappeared after the patient was in bed but a few hours

Most writers agree that the electrocardiographic changes are definite, but usually minimal and nonspecific [11] Such changes have been induced in subjects on thiamine deficient diets and abolished by thiamine administration [8] Electrocardiograms (serial) were

7 Dock W Marked Cardiac Hypertrophy and Mural Thrombosis in the Ventricles in Beriberi Heart, Tr A Am Physicians 55 61, 1940

8 Williams, R. D [illegible] n H L and Smith B F Induced Vitamin B1 Deficiency in Subjects Proc Staff Meet. Mayo Clin 14 787 1939

9 Williams R D [illegible] M H and Wilder R. M Induced Thiamine (Vit [illegible] of Thiamine to Develo[illegible] Man Relation of Depletion [illegible]ethy Arch Int Med Defect and of Polyneu Keys Ancel Bl[illegible]mer 27 Nov 1 19

20 Contract No

11 Weiss and Wilkins [4] Weiss [5]

made in 10 of the 12 cases and showed abnormalities in all One, case 4, showed a depressed $T_3$ and shallow $Q_3$ suggestive of a remote posterior infarction In case 8 it revealed bundle branch block on the left side In case 5 there were remarkable alterations as the patient improved The first and second electrocardiograms demonstrated auricular fibrillation with the ventricular rate at 60 to 70, low voltage of the QRS complexes T waves of low voltage in all leads and inverted $T_{1,4}$ A day after the second record, the electrocardiogram showed sinus rhythm and first degree heart block, low voltage T waves and QRS complexes, and inverted $T_{3,4}$ Thirteen days later and again four years later it was normal except for a PR interval always longer than 0.20 second The most common discoveries throughout the group were low voltage and minor alterations in the T waves (table 1)

was rapid diuresis following the intravenous administration of thiamine and there was cardiac compensation How common in general this rapid response is cannot be ascertained The literature of the Orient is dated by the use of oral and impure preparations In those instances in which thiamine has been used parenterally an adequate control period of rest in bed has seldom been employed Some of our patients (10 and 11) improved on unrestricted diet and rest alone

The slow improvement following the parenteral administration of thiamine to 6 of our patients and also of patient 1, who died later and was examined post mortem, is certainly compatible with beriberi particularly protracted beriberi in which irreversible damage may have occurred in tissues responsible for the clinical picture of the heart disease A direct correlation (table 2) between a short duration of symptoms and

TABLE 3—*Twelve Cases of Beriberi Heart Disease and the Criteria for Diagnosis at the Cincinnati General Hospital*

| Case Number | Age | Sex | Enlarged Heart: Transverse Diameter of Chest (cm) | Enlarged Heart: Transverse Diameter of Heart (cm) | Enlarged Heart: Decrease in Heart Size (cm) | Rhythm | Dependent Edema | Elevated Venous Pressure (cm H O) | Other Signs of Deficiency Disease | Abnormal Electrocardiogram | Absence of Other Etiology | 3+ Months Poor Dietary | Recovery or Autopsy Consistent with Beriberi Heart Disease |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 H R. | 41 | M | 28 | 18 | —2 | Normal | + | 0<br>10 | Pellagra<br>? neuritis | + | + | + | Autopsy |
| 2 H S | 46 | M | 26 | 11 | | Normal | 0 | 0 | Pellagra<br>neuritis | Not made | + | + | Autopsy |
| 3 F R. | 34 | M | 27 | 14.5 | —3.5 | Normal | + | +<br>20 | Neuritis | + | + | + | Improved |
| 4 T B | 35 | M | 25 | 15 | ? | Normal | + | +<br>14 | Pellagra<br>neuritis | + | ? | + | Recovered |
| 5 J K. | 47 | M | 29 | 13.5 | —2 | Auricular fibrillation first degree heart block normal | + | +<br>15 | Pellagra<br>neuritis | + | + | + | Improved |
| 6 M D | 6 | F | 24 | 14 | —2.5 | Normal | + | Clinical elevation<br>+ | Pellagra<br>neuritis | + | + | + | Recovered |
| 7 J D | 55 | M | 27.5 | 14.5 | —2 | Normal | + | +<br>21 | Neuritis | + | + | 0 | Recovered |
| 8. G B | 67 | M | | | | Normal | + | ±<br>12.5 | Pellagra | + | ? | + | Death |
| 9 J B | 39 | M | 31 | 15.5 | | Normal | + | +<br>15 | Pellagra | + | + | + | Death primarily cholemia |
| 10 J B | 53 | M | 29 | 15 | | Normal | + | +<br>17.5 | Pellagra | + | ? | + | Improved dead on admission 3 mo later |
| 11. F K. | 45 | M | 25.5 | 16 | —3 | Normal | + | +<br>20 | Neuritis | + | ? | + | Improved |
| 12 C B | 33 | M | | | | Normal | + | 0<br>10 | Pellagra<br>neuritis | Not made | + | ? | Autopsy |

Almost any failing heart is dilated and sometimes hypertrophied As compensation recurs the heart decreases in size This is particularly true of the heart in beriberi of short duration and can be demonstrated best by the teleoroentgenogram This improvement with rest and with the administration of thiamine is one of the characteristics of the disorder Failing this, autopsy findings consistent with beriberi were considered of significance When beriberi heart disease was suspected the patient was put on a strict regimen which included rest in bed and a diet very low in thiamine A control period was pursued as long as the patient's condition permitted Large doses of thiamine were then given intravenously, doses of 50 to 100 mg were frequently employed simply in order that there might be no doubt that enough of the medicament had been given to be effective Although 7 of the patients improved and significant decrease in the size of the heart was demonstrated by x-ray in all 6 cases in which it was attempted only in case 6 was there dramatic improvement Here within twenty-four hours there a short period of recovery is not certain but seems likely The relation cannot be certified when it is dependent on the unreliable history of an alcoholic addict It must be correlated with the biochemical lesion of thiamine deficiency

The condition of the majority of the patients was critical when they came to the hospital Death occurred in 5, in 1 it was probably due to cholemia (case 9) In the others it occurred rather suddenly (cases 1, 2 8 and 12) In 3 of these autopsy was performed and observations were consistent with beriberi heart disease

Table 3 shows how the cases in this group fit in with the criteria which have been outlined The traditional signs of oriental beriberi were not wanting in some of the patients but their frequency was such as to confirm the diagnosis in less than half the cases Table 4 indicates the incidence of the signs which Wenckebach employed The severity of the signs and symptoms and the kind of criteria offered for the diagnosis of beriberi heart disease constitute an admission that we recognize the disease only in its latest stage

It is likely that the early changes are biochemical and give no clinical sign

Digitalis was given to 5 of the patients (table 2), and 3 may have benefited slightly from it There is some uncertainty as to the origin of the dictum that digitalis is of no aid in this condition and that if the heart responds well to this drug the diagnosis of beriberi is eliminated Certainly if the changes in the heart are purely degenerative and if failure occurs because of loss of tone" and "contractility" as Wenckebach [12] has suggested one would expect the administration of digitalis to help

TABLE 4.—*Beriberi Heart Disease Incidence of Traditional Signs Twelve Cases at Cincinnati General Hospital 1940 to 1945*

| Name | Age Sex | Circulation Time (Sec.) | Prominent Right Heart | Pedal Shot | Gallop Rhythm | Syncope or Shock | Critical Improvement After Thiamine | Comment |
|---|---|---|---|---|---|---|---|---|
| H R | 41 M | 0 40 | 0 | 0 | + | + | 0 | Died autopsy |
| H S | 46 M | ? | 0 | 0 | 0 | + | 0 | Died autopsy |
| F R | 33 M | 0 21 | + | 0 | + | + | 0 | |
| T B | 53 M | + 14 | + | 0 | 0 | 0 | 0 | |
| J K | 47 M | + 13 | + | + | 0 | 0 | 0 | |
| M D | 56 F | ? | 0 | 0 | 0 | 0 | + | |
| J D | 55 M | + 13 | 0 | 0 | 0 | 0 | 0 | |
| G B | 67 M | 0 32 | + | 0 | + | + | 0 | Died no autopsy |
| J B | 30 M | + 19 | ? | ? | 0 | + | 0 | Died no autopsy |
| J B | 53 M | + 11 | ? | + | + | 0 | 0 | 3 mo. after discharge dead on admission |
| F K | 48 M | + 17 | 0 | + | + | 0 | 0 | Korsakoff's psychosis |
| C B | 33 M | + 15 | 0 | 0 | + | + | 0 | Died autopsy |

On the other hand, organic heart disease can be complicated by beriberi heart disease We think that we can recognize some of these instances but methods of diagnosis are not refined to the point where the diagnosis is made with any frequency or certitude

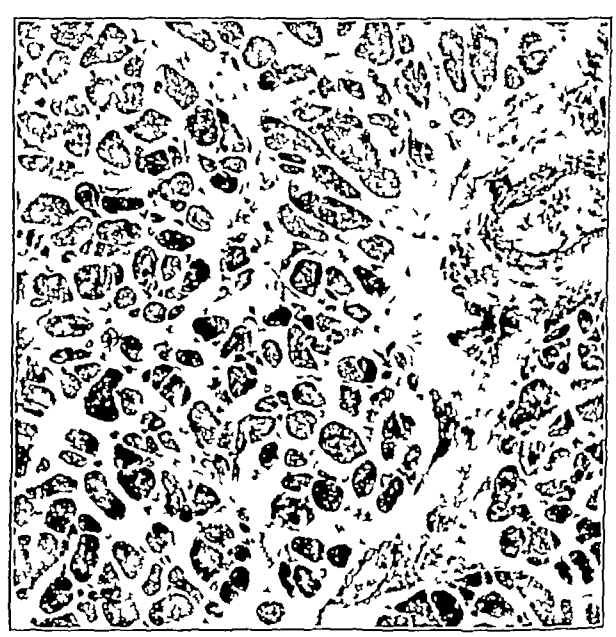
### PATHOLOGIC OBSERVATIONS

Alterations in the myocardium in beriberi heart disease have been described and studied repeatedly for many decades without revealing a pathognomonic picture and without contributing to an understanding of the mechanism of the clinical picture Wright [13] and Wenckebach [12] found a heart which was large and dilated on the right side, consistent with their clinical observations More recent observations in this country, however, do not agree with the consistency of a lesion on the right side Weiss and Wilkins [4] found overall hypertrophy in 9 of 30 cases, dilatation alone in the remainder The microscopic picture they describe, hydropic degeneration of the myocardial fibers and the conduction bundle, "intercellular edema" and an increase in collagen, is not at variance with earlier or later authors It has been demonstrated, however, that the hypertrophy is not due to edema of the heart muscle [4]

At autopsy 1 of our subjects (case 2) showed dilatation of both chambers of the heart, the other 2 had hypertrophy as well In 1 there were petechial hemorrhages in the mural endocardium and in that covering the aortic and tricuspid valves All showed degenerative changes in the muscle fibers and "interstitial edema," as shown in the accompanying illustration These are the observations which are considered consistent with but not diagnostic of beriberi heart disease

The lesions of the nerves were essentially degenerative and involved the central, peripheral and autonomic nervous systems There was a triad of outstanding lesions present in both cases, namely, degenerative alterations of the cells of the nucleus sympathicus and of the tracts of the lateral horn in the upper cervical segments of the spinal cord, damage of the spinal cord roots and, finally, far advanced degeneration of the nervi vagi and of some of the peripheral nerve trunks In addition there were mild cellular changes within the sympathetic chain (*swelling and chromatolysis*) Similar cellular changes were frequently observed in cases of beriberi (Wright [13] and others) In view of the fact, however, that many factors may be responsible in the production of diffuse changes in nerve cells and since they occur in so wide a variety of diseases, such changes hardly can be interpreted as pathognomonic for the morbid process

Lesions found in the tracts (lateral horn) and roots of the spinal cord appear to be of somewhat greater significance. A review of the literature dealing with neuropathologic studies on beriberi in human beings failed to disclose a detailed description of these structures The lesions most frequently described in beriberi are those of peripheral neuritis (Wright,[13] Kursternan,[14] Eddy and Dalldorf,[15] Williams and Spies [16] and many others) Only occasionally are there mentioned alterations of the roots of the spinal cord (Rumpf and



Myocardial degeneration in case 12 Interstitial spaces are widened as if by edema and contain small amounts of granular material The parenchyma is granular and shows some vacuolization

12 Wenckebach K F The Riddle of Beriberi Heart in Libman Anniv 3: 1199 1932

13 Wright Hamilton A Discussion on the Etiology and Pathology of Beriberi Brit M J 2 1095 1905

14 Kursterman Zur Pathologie der Beriberi Munchen med Wchn schr 43: 436 1896

15 Eddy W H and Dalldorf G The Avitaminoses Baltimore, Williams & Wilkins Company 1937

16 *Williams, R R and Spies, T D Vitamin B₁ and Its Use in* Medicine New York Macmillan Company 1938

Luce[17] Mendes,[18] Durck[19]) and of the dorsal columns (Wright,[13] Mendes,[18] Durck,[19] Vedder,[20] Hsu Ying-Kuei[21]) Wright, who reported a detailed study of a large series of cases of beriberi, concluded that "observed atrophy in the terminations of the vagal inhibitory fibers, in the heart muscle, axonal reaction in the cells of the ambiguus and vagal portion of the combined nuclei in the bulb are conclusive evidences that almost the entire cardiac nervous system is affected"

The lesions of the nerves observed in the present study showed for the first time degenerative alterations of the cells of the nucleus sympathicus and of the tracts of the lateral horn in the upper cervical segments of the spinal cord The exact mode by which the nervous regulation of the cardiac function is affected in beriberi is not known Is the primary site of damage in the spinal autonomic center followed by a secondary degeneration of the spinal cord roots and nervi vagi? Or does the process of degeneration progress centripetally from the peripheral terminations toward the spinal cord? It is beyond the scope of the present report to attempt to answer this pertinent question Additional information on beriberi in man including a careful study of the spinal cord and spinal cord roots will be needed to establish the significance of the lesions of the central nervous system in the pathogenesis of beriberi heart disease

## SUMMARY

In five years at the Cincinnati General Hospital we have been able to recognize beriberi heart disease in 12 patients, an incidence of 0 1 per cent of all medical admissions Five of these patients died in the hospital and 1 three months later at home From these studies we may draw the following conclusions The beriberi heart disease in this country is likely to be missed if one follows strictly the description given by Wenckebach Although the failing heart with the signs of fast circulation occurs and is a vivid picture the commoner type resembles any other type of degenerative heart disease Therefore other criteria have been established to aid in its recognition Important among these are the elimination of other etiologic agents, a diet deficient in thiamine for longer than three months and the presence of other evidence for nutritive failure, particularly neuritis or pellagra

The histories reveal that all the patients were chronic alcoholic addicts, but alcohol is not considered a direct cause of the disorder The onset varied, being either sudden or gradual and healing occurred in the same fashion Response to thiamine was not dramatic save in 1 instance It is thought that the duration and the severity of the deficiency play a part in the reversibility or irreversibility of the process

The autopsies of 3 of the patients revealed facts consistent with previous descriptions of beriberi, and in 2 instances in which the nervous system was examined definite lesions of the central, peripheral and autonomic nervous systems were revealed

## REPORT OF CASES

CASE 1.—*History.*—H R, a white man aged 41 a waiter was first brought to the hospital in 1939 because of chronic alcoholism and delirium tremens At that time a teleoroentgenogram of the chest showed the transverse diameter of the heart to be 14 cm in a chest of 29 cm On Oct 6 1943 he appeared in the heart clinic, where the attending house officer diagnosed beriberi heart disease and admitted him to the hospital Some eight months before he had been rejected at an army examination because of 'heart disease He knew of no signs or symptoms at that time but shortly thereafter began to notice dyspnea, orthopnea and weakness He continued to work until stricken by a cold and cough three weeks prior to admission There was some pain in the left anterior portion of the chest at that time, accentuated by a cough, and sputum of unknown nature was produced The dyspnea progressed and two days before his visit to the clinic his ankles swelled Because of the cold he increased his whisky and decreased his food intake He became nervous irritable and insomnious A variable story suggestive of neuritis was obtained by direct questioning on some occasions he admitted having numbness and tingling in the legs burning of the feet and cramps in the calves and on others he denied these symptoms

The only notes of significance in the past were that he had been a heavy drinker for twenty years and had experienced *anorexia during most of that time* An analysis of his diet was difficult, but it appeared to have been exceedingly low in protein thiamine and niacin and moderately deficient in riboflavin It was apparent that most of the caloric intake was supplied by alcohol

Incidental in the history were blindness of the left eye following a blow from a baseball at the age of 17 and progressive deafness of the left ear for six years

*Physical Examination.*—The temperature was 97 F pulse rate 120 respiratory rate 32 and blood pressure 110 systolic and 86 diastolic The patient displayed a varying amount of confusion and delirium and within a few hours it was necessary to restrain him He was orthopneic There was an external strabismus of the left eye and an opacity of the lens The outer edge of the tongue was smooth and somewhat reddened—other observers later described it as magenta with papillary atrophy along the edges The pharynx was diffusely injected The chest was clear The heart was enlarged to the right and the left There was a soft systolic murmur at the apex The pulmonic second sound was accentuated At times a diastolic gallop could be heard The liver was tender and extended 3 to 4 fingerbreadths below the costal margin the surface was soft and smooth There was moderate edema and cyanosis of the lower extremities The ankle jerks were weak and several observers could not agree on the presence or absence of peripheral neuritis as manifested by tenderness of the calves and stocking paresthesia

*Laboratory Examination.*—The count of red blood cells was 4 75 million hemoglobin content 17 Gm per hundred cubic centimeters and white blood cells 7,200 Urine gave a 2 plus reaction for albumin Circulation time with dehydrocholic acid was 40 seconds Venous pressure was 10 cm of water The vital capacity of the lungs measured 1 2 liters The serum protein content was 5 98 Gm. per hundred cubic centimeters Reaction of the blood to the Kahn test was negative. The electrocardiogram revealed sinus rhythm with a PR interval of 0.22 second QRS 0 10 second and T waves of low voltage in all leads A teleoroentgenogram of the chest showed pulmonary congestion and a diffusely enlarged heart with a transverse diameter of 18 cm. (in a chest of 28 cm.)

*Course.*—Delirium and hallucinations occurred intermittently for some weeks On the second day bronchopneumonia developed which cleared in a week with specific therapy The temperature varied between normal and 100 to 101 F the pulse rate between 90 and 120 and the respiratory rate between 22 and 46 for five weeks After the examination on admission the blood pressure was always low representative figures were 90/74, 74/60 86/74 and 100/78 The leukocytes varied between 7 000 and 15 000 Albumin disappeared from the urine

On the second day a course of thiamine 100 to 150 mg a day intravenously was begun This was supplemented with riboflavin and niacin amide and brewers' yeast throughout the hospital stay In the first few weeks the patient improved moderately but remained orthopneic and dyspneic There was *no azotemia, the icterus index was 23* At the beginning of

17 Rumpf and Luce Zur Klinik und pathologischen Anatomie der Beriberi Krankheit Deutsche Ztschr f Nervenh **18** 63 1900
18 Mendes P cited by Durck.[19]
19 Durck H Untersuchungen uber die pathologische Anatomie der Beriberi Beitr z path Anat u z allg Path **8** 1 1908
20 Vedder E B A Fourth Contribution to the Etiology of Beriberi Philippine J Sc Sect B **7** 415 1912
21 Hsu Ying Kuei Pathologic Anatomy of Human Nervous System in Avitaminosis Arch Neurol. & Psychiat **48** 71 (Aug.) 1942

the fifth week the venous pressure was 8.5 cm of water and the circulation time was 42 seconds at this time digitalization was begun After receiving a calculated dose he was given 1 5 to 3 grains (0 1 to 2 Gm ) a day for the remaining days of life. In the second week of digitalis therapy there was some decrease in weight (7 pounds, or 3 Kg ) attributed to water loss but the gallop rhythm and accelerated pulse persisted. Electrocardiograms taken from time to time revealed a PR interval varying between 0.24 and 0 16 second, QRS usually 0 08 second notched and of low voltage and low or inverted T waves At the end of the fifth week (the first week of digitalis therapy) the x-ray revealed what was probably a pulmonary infarct in the right upper lung field With digitalis the patient seemed a little less dyspneic and the pulse rate varied between 88 and 100 The blood pressure remained low 115/70 to 95/60 the gallop rhythm was heard intermittently At the end of the seventh week x-ray examination at last showed a decrease in the transverse diameter of the heart from 18 cm to 16 cm At this time the patient was permitted to sit up in a chair but took the additional liberty of walking about. On the fifty sixth day he died suddenly in bed

*Necropsy*—At necropsy, diagnoses were cardiac hypertrophy and dilatation myocardial edema and moderate degeneration with generalized visceral congestion and edema, including the lungs

The microscopic changes in the nervous system, which are to be reported in detail elsewhere included degenerative changes in the cerebral cortex, degeneration of the nerve fibers confined to the lateral horn of the gray substance, destruction of the nerve cells of the lateral sympathetic nucleus and appreciable damage of the vagus phrenic and ischial nerves The alterations in the ganglions of the sympathetic chain were minimal

CASE 2—*History*—H S a Negro aged 46 an ice man, was brought to the hospital Aug 18 1942 A sister told of his chronic alcoholism and poor dietary For seven weeks he had shown some mental deterioration and had to be forced to eat

*Physical Examination*—The temperature was 102 F, pulse rate 100, respiratory rate 24 and blood pressure 76/50 The patient was poorly nourished, somnolent and disoriented The skin was dry and scaly in some areas The mucous membranes were pale The chest and lungs showed no abnormalities The heart did not seem enlarged rhythm was regular, the rate 100 no murmurs or gallop rhythm were heard There was slight tenderness in the upper portion of the abdomen on the right side although the liver was not felt Lesions on the legs were suggestive of pellagra Tenderness of the calves was considerable Deep reflexes in the arms were hyperactive and in the legs hypoactive General cutaneous hyperesthesia was more decided in the legs

*Laboratory Examination*—A teleoroentgenogram showed a heart of normal size (11 cm in a chest of 26 cm ) The bronchovascular markings were accentuated The urea nitrogen content of the blood, 102 mg per hundred cubic centimeters two days after admission, fell to 24 mg on hydration. Reaction of the blood to the Kahn test was negative The serum calcium content was 11 1 mg per hundred cubic centimeters No free acid was present in gastric secretions Three stool specimens gave positive tests for blood There was a macrocytic anemia red blood cells 2 2 million and hemoglobin content 9.2 Gm per hundred cubic centimeters, and white blood cells 7 600 Results of urinalysis were normal The cerebrospinal fluid was normal

*Course*—The temperature was subnormal for thirty-six hours Then followed an irregular course, never exceeding 100 4 F The pulse rate ranged between 70 and 110 Respirations were usually in the neighborhood of 30 a minute. Throughout his stay the patient had considerable diarrhea Measures were taken to restore hydration He was given transfusions of blood thiamine by the parenteral route and niacin daily As he responded a bit it seemed that he had a Korsakoff's psychosis The blood pressure varied between 95/54 and 122/80 After the first few days the liquid stools became black

On the eighth day he suddenly began to cough and to expectorate large quantities of brownish purulent, frothy sputum amounting to 200 cc. Coarse rales appeared at the base of the left lung and in the right axilla The attack subsided only to recur later in the day Choking on the large quantities of sputum, the patient died.

Pathologic diagnoses were myocardial edema, granular degeneration and atrophy, decided congestion and edema of the lungs peripheral neuritis, petechial hemorrhages in the aortic and tricuspid valves, beneath the endocardium and in the gastrointestinal tract. The nervous system was not examined in detail

CASE 3—*History*—F R, a white man aged 33, a bartender, was brought to the hospital in coma on Aug 14 1944 The record showed that he had been admitted for delirium tremens and chronic alcoholism three years before One month before admission he had experienced the onset of dyspnea weakness and edema of the ankles These became worse so that he could not climb stairs for two weeks before coming to the hospital Orthopnea had appeared three or four days earlier, and he quit work He was found unconscious and cyanotic by a relative on the day of admission He had been a heavy drinker for years and visited other bars after closing the one at which he worked His dietary was so irregular that it could not be definitely evaluated, but it seemed deficient in most nutrients

*Physical Examination*—The temperature was 100 F., pulse rate 70 and respiratory rate 36 Blood pressure could not be obtained and the patient could not be roused Extremities were cold and cyanotic the pupils dilated, the veins of the neck distended The heart sounds were of good quality with a regular rate of 70 As the blood pressure rose, a gallop rhythm became evident. Rales were heard over the upper lobe of the right lung The liver was much enlarged There was moderate edema of the ankles No reflexes were obtained

Despite distended neck veins, the patient was given an intravenous injection of 1 000 cc. of 5 per cent glucose in saline solution and then 100 cc of 50 per cent glucose, caffeine, nikethamide, oxygen, thiamine and niacin were included in the drugs given in the receiving ward In the medical service shortly thereafter he was given 4 units of plasma (1,200 cc.) After 2 units the blood pressure was 80/50 Venous pressure was 29 cm of water Circulation time with papaverine hydrochloride was 17 seconds When the blood pressure reached 140/90 that night the patient finally responded well A 30 inch roentgenogram of the chest showed a homogeneous density over the entire right lung field and increased bronchovascular markings on the left. On the following day (first hospital day) physical examination revealed certain alterations The blood pressure was 150/90 the heart rate 120 The pulse became bounding The apical impulse was felt 12 cm to the left of the midsternal line Gallop rhythm persisted There were signs suggestive of pneumonia over the right upper lobe of the lung Edema had disappeared and there was moderate peripheral neuritis in the legs The patient passed a tarry stool Laboratory examination revealed white blood cells 22,000, no anemia, normal urine, and stool positive for blood The electrocardiogram showed low voltage T waves $T_3$ inverted $ST_{1-3}$ depressed. The urea nitrogen content of the blood was 27 mg per hundred cubic centimeters

*Course*—The patient was given sulfadiazine and digitalized The temperature and pulse remained elevated On the fifth day the venous pressure was 5 cm of water and the circulation time with dehydrocholic acid was 20 seconds The administration of 50 mg of thiamine intramuscularly daily was begun at this time and that of sulfadiazine was discontinued On the second day a teleoroentgenogram of the heart showed the greatest diameter to be 14 5 cm in a chest of 27 cm One week later it measured 12 5 cm During this time although the fever cleared, the elevation of the pulse rate persisted, 96 to 120 The administration of digitalis was discontinued on the twenty-first day General improvement continued although there was wide variation in the pulse rate On the forty first day x-ray studies demonstrated the transverse cardiac diameter to be even smaller, 11 cm An electrocardiogram at this time showed sinus rhythm 100 $T_1$ of low voltage and diphasic $ST_3$ slightly depressed The patient was discharged on the fifty-third day, his pulse still somewhat accelerated his blood pressure 114/72 and the vital capacity normal

He was known to be alive a year later but was still a confirmed alcoholic addict and had edema of the ankles and dyspnea

CASE 4.—*History.*—T. B., a white man aged 53, was admitted on Dec. 25, 1941 complaining of swelling, numbness, tingling and weakness of the legs which had persisted for three to four weeks. A brief hospitalization in 1940 for corneal ulceration revealed that he was a chronic alcoholic addict consuming 2 to 3 glasses of beer, ½ pint of whisky and ½ to 1 quart of wine daily. At that time he apparently showed some signs of mental deterioration.

The present illness began two years before with nervousness and increased consumption of alcohol. Unwarranted dyspnea on exertion was first noted during the previous summer. For three weeks there had been increasing swelling of the feet and angles, and the legs felt numb. Weakness progressed rapidly in this time and made the patient bedfast. His diet had been made up largely of bread and canned soups.

*Examination.*—At the initial examination the temperature was 98 F., pulse rate 90, respiratory rate 26 and blood pressure 150/80. The patient was lying flat in bed and was confused and euphoric. There was diffuse pellagrous erythema of the lower extremities. The corneal ulcer of the right eye was healed with scarring. A few fine rales were heard at the bases of the lungs at the height of inspiration. By percussion the heart seemed of normal size. There were no murmurs. Premature contractions were infrequent. The pulmonic and aortic second sounds were equal. There was rather vigorous venous pulsation in the right side of the neck. A massive soft edema extended above the sacrum. The calves were tender, the knee jerks and ankle jerks absent. There was a stocking type of hyperesthesia of the lower two thirds of the legs and considerable weakness of both lower extremities.

On the second day a teleoroentgenogram of the chest showed the heart to be enlarged, 15 cm. in a chest of 28 cm. There was some widening and elongation of the aorta. There was evidence of pulmonary congestion and of a small amount of fluid in the right hemithorax. An electrocardiogram showed a sinus rate of 80, P-R interval of 0.18 second, an inverted $T_3$ and a $Q_3$. There was a mild macrocytic anemia; red blood cells numbered 2.75 million, the hemoglobin content was 10.7 Gm. per hundred cubic centimeters; white blood cells numbered 4,900 with a normal differential count. On analysis the urine and stool were not remarkable. The reaction of the blood to the Kahn test was negative. Lumbar puncture revealed no abnormalities. The serum protein content was 5.85 Gm. with albumin 3.52 Gm. and globulin 2.33 Gm. per hundred cubic centimeters. The nonprotein nitrogen content was 28 mg. per hundred cubic centimeters. On the fifth day after a struggle the venous pressure was 19.5 cm. of water and the circulation time with cyanide was 14.2 seconds. On the following day under quiet circumstances the venous pressure was 14 cm. of water.

*Course.*—On the first day the patient was given 1 cc. of mercupurin and 10 mg. of thiamine parenterally; the next six days he received 50 mg. of thiamine daily. Niacinamide 150 mg. was also given daily. The diet was high in calories, proteins and vitamins. On this regimen the edema gradually receded. His weight dropped from 159 pounds (72 Kg.) on the third day to 136½ pounds (62 Kg.) on the thirteenth day. On the fourteenth day the total serum protein content was 8.44 Gm. with albumin 5.05 Gm. and globulin 3.39 Gm. per hundred cubic centimeters. After being up and around the ward for two days, edema free, the patient was discharged. Two weeks later he was seen in the medical clinic (blood pressure 144/80) in good condition, but he did not keep a return appointment.

In February 1945, three years later, he appeared in the receiving ward inebriated and nervous. He was given paraldehyde and sent home.

CASE 5.—*History.*—J. K., a Negro aged 47, admitted to the hospital on March 19, 1942, complained of shortness of breath. Previous hospital admissions were related to bilateral detached retinas. In 1937 the blood pressure was recorded as 130/85.

On the present admission he dated his illness from a cold in the head and a cough which began some ten days before. This was accompanied by increasing dyspnea and orthopnea and progressive dependent edema which finally rose to involve the wall of the chest, the neck and the face. There had been some tightness in the chest and little sputum and a subjective sensation of moderate fever at the onset of the illness. He denied all symptoms of previous cardiovascular disease. He had lived alone for years, almost blind, supported poorly by charity. *His diet could not be readily evaluated but was apparently* rather high in carbohydrate and deficient in niacin and thiamine. He had been treated for syphilis some years before and had had gonorrhea in his youth.

*Physical Examination.*—The temperature was 98 F., pulse rate 108, respiratory rate 24 and blood pressure 164/100. The patient showed considerable anasarca. He was orthopneic but seemed alert. There were well demarcated areas of scaly pigmented skin over the ankles, the pellagrous nature of which was disputed by competent observers. The follicular pigmentation of the legs was suggestive of scurvy. There was thought to be some fluid in the thorax, and a few fine moist rales were heard at the bases of both lungs. The heart was enlarged to the left, the apical impulse was 12.5 cm. to the left of the midsternal line. At times there were frequent extrasystoles, but the rhythm was usually regular. A soft systolic murmur which was present at the apex on admission disappeared shortly. The pulmonic second sound was accentuated and louder than the aortic second sound. There was no bounding of the pulses. The liver was engorged and fluid was noted in the abdomen. There was decided hyperesthesia of the soles, mild tenderness of the calves and absence of the ankle jerks.

*Laboratory Examination.*—Venous pressure was 15 cm. of water. The vital capacity was 56 per cent. Circulation times measured on the third day with cyanide and ether were 13 seconds and 7 seconds respectively. The urea nitrogen content of the blood on admission, which was 57 mg., soon fell to 21 mg. per hundred cubic centimeters. The count of red blood cells was 3.2 million, the hemoglobin content 11 Gm., the white blood cells 9,000. There was albuminuria (1 plus) the first two weeks but no other urinary abnormalities. The total protein content of the blood was 5.79 Gm. with an albumin to globulin ratio of 2 to 1. Reaction to the Kahn test was negative. Electrocardiograms on the second, fourth and fifth days showed auricular fibrillation, low voltage, T waves inverted $T_{1,4}$ and low voltage $QRS_{1,2,3}$. An x-ray of the heart was not made at admission.

*Course.*—The patient was given digitalis, an amount considered sufficient for digitalization in three days and continued on 1½ grains (0.1 Gm.) daily through the twenty-first day. Ammonium chloride was given for two days and in addition mercupurin and aminophylline. Symptoms under this management were progressive. On the fourth day observers noted an alteration in physical findings. There was a capillary pulse with pistol shot sounds over the femoral arteries. The blood pressure was 146/88. His weight was unchanged since admission (185 pounds or 83.9 Kg.). An x-ray of the heart showed the transverse diameter to be 13.5 cm. in a chest of 29 cm. At this time treatment with thiamine 50 mg. parenterally was begun and continued through the twenty-second day. Daily weights from this time showed a consistent fall presumably due to water loss: first week, 17 pounds (7.7 Kg.); second week, 23 pounds (10.4 Kg.). He finally maintained a weight of 135 pounds (16 Kg.). After a week of thiamine administration most of the pitting edema was gone. The liver was of normal size. The venous pressure was 8 cm. of water. Circulation times measured with ether and cyanide were 5 and 14 seconds respectively. Blood pressure varied between 180/96 and 130/80. The pulse rate gradually became slower, 76 to 96 being the extremes in the second week. The electrocardiogram showed restoration of normal rhythm, low voltage and a P-R interval of 0.20 second.

On the twenty-first day a cerebral thrombosis resulted in a hemiplegia of the left side. The patient survived this and improved gradually. Shortly before he was sent to the Chronic Disease Hospital on May 18, 1942 an electrocardiogram showed sinus mechanism, a P-R interval of 0.20 second and low voltage $T_{1,2,4}$.

Two and one-half years later on Oct. 25, 1944 a follow-up study showed the hemiparesis of the left side persistent, moderate evidence of peripheral neuritis and a normal electrocardiogram except for a slightly prolonged PR interval. The heart was 2 cm. smaller, the transverse diameter measuring 12 cm.

CASE 6.—*History.*—M. D., a white woman aged 56, came to the hospital May 30, 1940 complaining of dyspnea, edema of the ankles and weakness.

Three weeks earlier she noted the onset of some shortness of breath while walking. This progressed and was followed shortly by swelling of the ankles. The swelling too increased, rising to the thighs, abdomen and chest and finally involving her face. Aching pain appeared in the upper quadrant of the abdomen on the right side, and there was some aching in all four extremities. Because of weakness and dyspnea she took to bed but had to be propped up by several pillows. There was one episode of sensation of precordial pressure. There was no past history relevant to cardiovascular or renal disease.

She had drunk heavily of beer for many years, and this had interfered considerably with the intake of food. In the past year she had included little else than beer in her dietary.

*Physical Examination.*—The temperature was 100.2 F., pulse rate 96, respiratory rate 28 and blood pressure 130/70. The patient was pale and appeared acutely ill. There were anasarca, ascites and bilateral hydrothorax. The edges of the tongue were smooth as the result of papillary atrophy. The gums were soft and bled readily. The veins in the neck were distended. Moist rales were heard throughout the chest. The heart beat was regular except for occasional premature contractions. The heart was enlarged to both the right and the left. There was a soft apical systolic murmur. This disappeared by the next day. The palpable peripheral vessels appeared normal. The liver was enlarged and tender. Peripheral neuritis was readily demonstrated in the feet and legs. The extremities were warm, and pulses of the dorsalis pedis artery were palpable. On admission her weight was 138 pounds (62.6 Kg.).

*Laboratory Examination.*—There was a macrocytic anemia with a hemoglobin content of 11 Gm. per hundred cubic centimeters and a red blood cell count of 2.3 million. Urinalysis revealed no abnormalities. An electrocardiogram showed only low voltage. The urea nitrogen content of the blood was 13 mg. per hundred cubic centimeters. The Kahn reaction was negative. The serum protein content was 6.4 Gm. per hundred cubic centimeters, albumin 3.1 Gm. and globulin 3.3 Gm. There was free hydrochloric acid in the gastric contents. An admission x-ray of the heart was not made.

*Course.*—The patient was given a diet calculated to be low in vitamin B complex. She was allowed salt and fluids to the extent desired. At the end of two and a half days without medication her condition was unchanged. At this time she was started on a course of parenteral thiamine 50 mg. daily and continued for nine days. In a week she had lost 21 pounds (9.5 Kg.) of water and improved appreciably. In the midst of this course of thiamine on her ninth day in the hospital, a teleroentgenogram showed the transverse diameter of her heart to be 14 cm. After nine days of thiamine administration she was given a good diet and continued improvement. Dating from the time of entry in the hospital there was a spontaneous moderate reticulocytosis and, without the aid of liver, the blood picture slowly approached normal after cardiac compensation had occurred. On the twenty-sixth day in the hospital an x-ray showed the greatest width of the heart to be 12.0 cm. The patient was discharged on her thirtieth day of hospitalization. Four months later her anemia was again moderately severe and her diet poor. The blood pressure was 115/65. No evidence of heart failure was found. An x-ray showed the transverse diameter of the heart to be 11.5 cm. Treatment with liver extract resulted in complete clearing of her anemia. A year later she was well and showed no evidence of heart disease.

CASE 7.—*History.*—J. D., a man aged 54, Scottish, was admitted to the hospital on Feb. 18, 1944 complaining of swelling of the feet and legs which had persisted for three weeks.

On hospitalization in 1936 the diagnoses had been cirrhosis of the liver and chronic alcoholism. At that time the patient complained of dyspnea and edema. He showed some vasomotor flushing, blood pressure 140/60 to 152/60, a heart with its greatest transverse diameter (by x-ray) 13.5 cm., a diastolic gallop and a systolic apical murmur which disappeared after a day; rales at the bases of the lungs, an enlarged, tender liver, and edema and ascites. An electrocardiogram showed tachycardia and low voltage of all complexes. The patient was given digitalis for five days only. In twelve days on a routine hospital diet he was well, there were no residual pathologic conditions.

At the present admission he told of edema of the ankles and shortness of breath, which began three weeks before. Although he quit work and rested, the edema and dyspnea progressed. There was no orthopnea. During this interval he noted a decrease in the volume of urine, accompanied by frequency.

As a bartender and janitor he had continued to drink heavily since 1936. A review of his dietary secured in restaurants showed it was fair in thiamine and *poor in niacin, riboflavin,* ascorbic acid and vitamin A. Protein and calories were *adequately supplied.*

*Physical Examination.*—The temperature was 97 F., pulse rate 114, respiratory rate 24 and the blood pressure 96/50 to 110/50. Although able to lie flat, he showed moderate dyspnea. The face was flushed. Along the edges of the reddened tongue the papillae were atrophied. There was generalized soft, mobile edema and ascites. The pulse was *full but not bounding.* The greatest transverse diameter of the heart was 14.5 cm. in a chest of 27.5 cm. (by x-ray). There was tachycardia, with regular rhythm. Over the aortic area there was a systolic murmur, there was also a diastolic gallop; the aortic second sound was greater than the pulmonic second sound. The liver seemed moderately enlarged. Reflexes were hypoactive and were absent at the ankles. The mild sensory changes suggested disease of the cord resembling posterolateral sclerosis in the opinion of the neurologist.

The weight of the patient on the third day was 149½ pounds (68 Kg.) after he had lost considerable edema. On the fifth day the venous pressure was 21 cm. of water and the circulation time with dehydrocholic acid was 13 seconds. Serum proteins measured repeatedly, were in the range of 4.77 to 5.29 Gm. per hundred cubic centimeters, with an albumin-globulin ratio of 1 to 6, red blood cells numbered 3.18 million, the hemoglobin content was 11.5 Gm. and the white blood cells numbered 10,000. The urine showed a trace of albumin, a trace of sugar and a few white cells. Repeated urinalyses in the first four weeks showed sugar. An electrocardiogram, although showing low voltage notched QRS complexes, was thought fairly normal.

*Course.*—For most of the hospital stay the patient received supplemental amino acids. During the first week there was little alteration in his condition. At the end of this time venous pressure was still elevated and circulation time fast. The blood pressure was 120/60. Tachycardia increased in the second week when the patient was febrile, this was attributed to pleuritis. At the end of the second week when he had lost about 10 pounds (4.5 Kg.) of edema fluid (weight 139½ pounds, 63 Kg.), a course of thiamine was begun which ranged from 20 to 150 mg. a day given parenterally. In the following week the patient lost 24½ pounds (11 Kg.) of edema fluid. He was comfortable and edema free. The transverse diameter of the heart had decreased 2 cm. to 12 cm. The liver was no longer enlarged. The serum proteins had risen to between 5.9 and 6.6 Gm. per hundred cubic centimeters. The blood pressure rose to the range of 150/95 for several weeks but in the fifth and sixth weeks fell to 120/75 and 130/75. Various clinical tests revealed poor or retarded intestinal absorption accompanying achlorhydria and a low renal threshold for sugar. (The results of tests for liver function were controversial.)

He was discharged on the fifty-third day in good health except for the neurologic alterations. No digitalis was given throughout his hospital stay. On Sept. 12, 1945 he returned to the hospital again with beriberi heart disease and scurvy. The treatment and course were similar to the 1944 admission and he was discharged twenty one days later in good condition.

CASE 8.—*History.*—G. B., a white man aged 67, was brought to the hospital on May 26, 1944 from a boarding house where he had been living on an old age pension. He was known as a chronic alcoholic addict, drinking ½ pint of whisky daily in addition to beer. He was confused and unable to give a history.

*Physical Examination.*—The temperature was 98° F., pulse rate 96, respiratory rate 32 and blood pressure 138/108.

The patient was well developed and obese, appearing acutely and chronically ill. There was acute pellagrous erythema over the arms, hands and legs, scrotum and perineum, there was purpura about the ankles. A diffuse ecchymosis was noted in the paraumbilical region in addition to an acute cheilosis and severe injection of the bulbar and tarsal conjunctivas. The edges of the tongue were smooth but not red. The gums were dirty and ulcerated but not scorbutic. Anasarca was pronounced. The heart was enlarged. The sounds were feeble. There were no murmurs but a gallop rhythm was noted. Pulses of the dorsalis pedis artery were not felt. There were no capillary pulses. Respirations were periodic. There were signs of fluid at the bases of both lungs and above these areas were fine rales. The liver was thought to be somewhat enlarged. The usual deep reflexes were normally active.

A roentgenogram showed definite enlargement of the heart which could not be measured, since the lower part of the silhouette was obscured by pleural fluid. The serum protein content was 5.29 Gm. per hundred cubic centimeters. An electrocardiogram showed a rate of 90, sinus rhythm with a PR interval of 0.20 second and a QRS of 0.16 second. The $T_1$ was inverted, the T diphasic. There was a bundle branch block on the left side. The hemoglobin content of the blood was 14 Gm. per hundred cubic centimeters, red blood cells 5.12 million, white blood cells 7,200. Urinalysis gave normal results. Serologic reaction to the Kahn test was 3 plus, urea nitrogen measured 48 mg. per hundred cubic centimeters. Cerebrospinal fluid was normal. The icterus index was 25. Circulation time (with dehydrocholic acid) was 52 seconds, a questionable determination. Venous pressure was 12.5 cm. of water.

*Course.*—The patient was given nicotinamide 200 mg. every four hours and 100 mg. of thiamine both parenterally, daily. The pellagrous erythema cleared rapidly. Periodic breathing continued. He died slowly on the second day of hospitalization.

CASE 9.—*History.*—J. B., a white man aged 39, who entered the hospital June 12, 1944 had been a heavy beer drinker for twelve years and ate little. For three weeks he had noticed nervousness, visual hallucinations, anorexia and jaundice. For two weeks his abdomen had been swelling, and this was followed by swelling of the scrotum. For a week he had had a nonproductive cough and was short of breath. His stools had been frequent (three to four a day) for two weeks and they became watery and black a day or so before admission. For three weeks he had lived on beer, tomatoes and cantaloups.

*Physical Examination.*—The temperature was 99° F., pulse rate 100, respiratory rate 24, blood pressure 110/70 and weight 229 pounds (104 Kg.).

He was fairly well developed and moderately jaundiced. There were numerous spider angiomas on the face, chest, back and upper portion of the abdomen. Palmar erythema was moderate. Over the elbows was a chronic pellagrous dermatitis. On the arms and legs the hair follicles were hyperkeratotic. There was anasarca, and the abdomen was tense with ascites. Ecchymoses spread through the skin on the right side of the body. The tongue was red at the tip and edges. There was moderate cheilitis and congestion of the conjunctival vessels. The veins of the neck were distended. One observer thought that the peripheral pulses were bounding, another thought them soft and regular. There were a few wheezes and rales at the bases of the lungs. The heart was enlarged; a teleoroentgenogram gave the greatest transverse diameter as 18.5 cm. in a chest of 31 cm. and revealed some pulmonary congestion. The cardiac rhythm was regular, with no murmurs or gallop rhythm. The liver was decidedly enlarged and smooth. Deep reflexes were present. The extremities were warm.

*Laboratory Examination.*—The circulation time of the blood (with dehydrocholic acid) was 13 seconds, and the venous pressure was 15 cm. of water. There was no anemia, the count of white blood cells was 14,700. Urinalysis showed a trace of albumin and of urobilinogen. The stool was black, liquid and tarry and the guaiac test gave a 4 plus reaction.

*Electrocardiogram.*—There was a sinus rhythm, with a rate of 90, a PR interval of 0.20 second, a QRS of 0.08 second and low voltage. The T wave had low voltage in all leads. The QT interval was prolonged. Serum protein measured 5.53 Gm. per hundred cubic centimeters. The Kahn reaction of the blood was negative. The icterus index was 80 on the first day and 100 on the third. The prothrombin clotting time was 51 seconds. The cephalin cholesterol flocculation test gave a 4 plus reading in twenty-four hours. The urea nitrogen of the blood measured 10 mg. per hundred cubic centimeters on the first day and 47 mg. on the second.

*Course.*—In addition to paraldehyde for his restlessness the patient was given 50 mg. of thiamine and 100 mg. of nicotinamide intravenously daily. Vitamin K was given intramuscularly daily. He did not improve. Death occurred suddenly following an attack of vomiting.

CASE 10.—*History.*—J. B., a white man aged 53, a bachelor, came to the hospital on Jan. 26, 1944 because of "swelling of the privates" of a week's duration.

In the past year the patient had noted some gradually increasing dyspnea on climbing the 105 steps to his home. About twelve months prior to admission he had had edema of the ankles which responded to rest in bed. In the past ten days he had observed the progressive swelling of his body tissue which began in the ankles and spread upward, finally involving the abdomen, thorax and arms.

The only possible relevant past history was that of painful and swollen knees. This rheumatism had occurred in 1924 and lasted three days.

He was accustomed to drinking about 2 quarts of beer a day and supplemented this with wine. He earned $20 a week and lived with his mother and two brothers on a boarding house plan but frequently ate meals at a restaurant. The dietary history, taken and evaluated by an experienced dietitian, was considered unreliable but listed his dietary as poor in all members of the vitamin B complex and in vitamin C and fair in vitamin A, iron, phosphorus and protein.

*Physical Examination.*—The temperature was 101.8° F., pulse rate 108, respiratory rate 28 and blood pressure 142/60. There was extensive soft edema, present even in the wall of the chest and in the arms. The skin was warm however and there was an erythema of the legs extending to the knees, this area blanched on pressure. The veins of the neck were distended. Moist rales were heard at the lung bases and the diaphragm appeared to be elevated. By percussion the heart did not seem enlarged. The rhythm was regular. There was a soft systolic murmur heard over the sternum. The pulses were bounding, and pistol shot sounds could be heard not only over the femoral but also over the dorsalis pedis arteries. The abdomen contained free fluid; the liver was moderately enlarged and tender. There was no tenderness of the calves, paresthesia or alteration of the deep reflexes.

*Laboratory Examination.*—The count of red blood cells was 3.68 million, the hemoglobin content was 10.0 Gm. per hundred cubic centimeters and the count of white blood cells was 20,700, an increase in the polymorphonuclear leukocytes. The urinalysis was normal. Serologic reaction to the Kahn test was negative. Serum protein measured 4.42 Gm. per hundred cubic centimeters. The urea nitrogen content of the blood was 61 mg. per hundred cubic centimeters.

On the first day of hospitalization, January 27, a teleoroentgenogram of the chest showed the greatest transverse diameter of the heart to be 15 cm. in a chest of 29 cm. and revealed some evidence of chronic passive congestion. An electrocardiogram showed all T waves of low voltage and a PR interval of 0.14 second.

*Course*—The patient was given a calculated digitalizing dose in three days along with ammonium chloride There was no improvement, and the temperature varied between 100 and 101 F On the third day the blood pressure was 180/80 venous pressure 17 5 cm of water and the circulation time with dehydrocholic acid was 13 seconds Fever and leukocytosis were attributed to bronchitis and bronchopneumonia

On the fifth day since there had been no response, the administration of digitalis was discontinued and a period of observation was begun The patient weighed 149½ pounds (68 Kg) The total protein content of the blood serum was 4 87 Gm per hundred cubic centimeters with an albumin globulin ratio of 2 42 to 2 45 Gm or 98 per cent At this time the temperature reached normal An electrocardiogram showed the effect of digitalis and a PR interval of 0.26 second. In the next few days, without medication, the patient's weight dropped from 149½ to 115 pounds (68 to 52 Kg) as he lost edema fluid rapidly The blood pressure varied between 185/75 and 135/65 The signs of fast circulation disappeared and the venous pressure reached normal limits The protein content of the serum rose rapidly to 6 16 Gm per hundred cubic centimeters The patient was placed on a maintenance dose of digitalis, but this was again discontinued at the time of discharge on February 21 At this time he was feeling well and able to be up and about without any discomfort Other studies made the day of his discharge showed the heart size to be 14 cm by teleoroentgenogram The electrocardiogram revealed a PR interval of 0.21 second, $T_1$ low voltage, $T_2$ dysphasic $T_3$ inverted The protein content of the serum measured 7 03 Gm per hundred cubic centimeters, with an albumin-globulin ratio of 4 05 to 2 98 Gm, or 1 36 per cent

The patient did not return to the heart clinic as instructed. The record reveals that on May 20, 1944 he was dead on arrival at the admitting ward

CASE 11—*History*—F K, a white man aged 48, was in the hospital in 1934 because of lobar pneumonia and delirium tremens In 1942 he began attendance at the heart clinic because of dyspnea and edema He showed only fair response to digitalis therapy Although he was given diuretics periodically, he was never quite free of dyspnea and orthopnea and frequently had edema Electrocardiograms were either normal or showed low voltage His blood pressure ranged between 135/60 and 172/86

On Nov 29, 1944 he was admitted because of increasing severity of his symptoms For a month he had had some twinges of pain of short duration below the left nipple associated with exertion For ten days his dyspnea had been extreme He had been a chronic alcoholic addict for many years His food was gleaned from the scraps and leftovers at a nearby saloon There was little meat in his dietary He had at times had aching in the legs and some numbness and tingling in the extremities

*Physical Examination*—The temperature was 99 F, pulse rate 118 respiratory rate 36 and blood pressure 140/70

He was orthopneic the skin was warm and perspiration was profuse He displayed considerable acne rosacea over the face The veins of the neck were moderately distended No signs of congestion were noted in the chest The heart was enlarged to the left. The rhythm was regular There was a systolic murmur at the apex, transmitted into the axilla A rough systolic murmur was heard at the base of the heart the pulmonic second sound was greater than the aortic second sound The walls of the radial vessels seemed thickened The pulses were bounding and the extremities warm. The liver was enlarged but could not be palpated. There was slight edema of the ankles The knee and ankle jerks were absent

*Laboratory Examination*—The hemoglobin content was 12 5 Gm per hundred cubic centimeters, red blood cells 3 88 million, white blood cells 11 750 The urine gave a 1 plus reaction for albumin The sedimentation rate of the blood was normal Tests for liver function were consistent, with moderate hepatic damage. Electrocardiograms were normal except for changes due to digitalis therapy A teleoroentgenogram of the chest on the third day showed the heart to measure 16 cm in a chest of 28.5 cm

*Course*—The patient was given digitalis in maintenance doses and a routine diet In twenty-four hours he was delirious, and he remained so for almost a week A tachycardia and low fever continued during this time. On the tenth day the circulation time was 15 seconds with dehydrocholic acid and the venous pressure was 20 cm of water His weight was 150 pounds (68 Kg) The peripheral pulses were still bounding, and pistol shot sounds were heard over the brachial and femoral arteries Within four days without additional therapy the signs of fast circulation had disappeared The venous pressure slowly returned to normal Only a soft systolic murmur remained The blood pressure varied considerably and was recorded at 140/85, 110/88 and 136/94 The pulmonic second sound remained accentuated The greatest cardiac diameter in a chest 30 cm in diameter was 16 cm on admission, 16 5 cm on the eighth day, 14 cm on the eighteenth and 13 cm on the thirty-seventh He was discharged on his forty second day in good condition. In the outpatient dispensary the administration of digitalis was discontinued and the patient was lost Twelve months later he was found in a mental institution with Korsakoff's psychosis There were no symptoms of heart disease.

CASE 12—*History*—C. B, a white man aged 33, was brought to the hospital on May 28, 1945 in a delirious state. He intimated that his legs had been swollen for about six months He was a chronic alcoholic addict, and nothing reliable concerning his diet or previous history could be learned The temperature was 98 6 F, pulse rate 130 and respiratory rate 32 The blood pressure was 130/60 with some question as to the true diastolic level The following day the blood pressure was 115/40 Hyperventilation was notable. There was partial internal ophthalmoplegia Pupillary reactions to light were sluggish. The left pupil measured 3 mm and the right 5 mm There was a bilateral purulent conjunctivitis Cheilosis was slight but definite The gums and tongue were normal except for moderate pallor Observers were not impressed by any increase in the size of the heart Its rhythm was normal There was a questionable systolic gallop A harsh systolic murmur at the aortic area transmitted up into the neck and a systolic thrill over the vessels of the neck and an absent aortic second sound suggested aortic stenosis The peripheral pulse was feeble in spite of the wide pulse pressure There was evidence of fluid in the right side of the chest The edge of the liver extended 2 to 3 cm. below the costal margin Edema involved all portions of the body except the face. There was acute pellagrous erythema over the elbows knees and feet, with secondarily infected excoriations The deep reflexes were absent and there was hyperesthesia to the stroke of an applicator on the legs The snout reflex was positive

*Laboratory Examination*—The hemoglobin content was 10.2 Gm per hundred cubic centimeters, red blood cells 3 61 million and white blood cells 10,150 Urinalysis revealed no abnormalities beyond a few white cells The urea nitrogen content of the blood was 22 mg per hundred cubic centimeters, the test for vitamin C was negative, reaction to the Kahn test was negative, the carbon dioxide content of the plasma was 36 volumes per cent. The plasma chloride content expressed as sodium chloride was 524 mg per hundred cubic centimeters the serum protein content was 5 04 Gm per hundred cubic centimeters Examination of the spinal fluid revealed no abnormalities The circulation time with dehydrocholic acid was 15 seconds The femoral venous pressure was 10 cm of water

*Course*—Although the patient's condition was critical it was not planned to administer thiamine immediately Hyperventilation increased respirations reaching 40 a minute The temperature rose to 102 F Restlessness and delirium were controlled by paraldehyde Twenty-five hours after admission the patient died suddenly

Pathologic diagnoses were pronounced pulmonary edema with pulmonary congestion, cardiac hypertrophy and dilatation with myocardial degeneration and fairly well defined edema, generalized edema, decided fatty infiltration of the liver, serous leptomeningitis, cerebral congestion with slight perivascular hemorrhage, slight cerebral edema

# DELAYED SERUM SICKNESS REACTION TO PENICILLIN

EVERETT J GORDON M D
Washington D C

Although of infrequent occurrence, reactions to penicillin therapy occur with sufficient intensity to warrant their study and investigation This report is concerned principally with the delayed serum sickness type of reaction which makes its appearance after the course of treatment has been completed

Penicillin, born into therapeutics amidst World War II, has only recently been released in sufficient volume to permit its general use among the civilian population As its use becomes even more extensive, reactions which are of relative rarity at present will of course be encountered more and more frequently, presenting diagnostic and therapeutic problems with which the clinician should be familiar

## INCIDENCE

One of the great factors which has led to the popular acclaim of penicillin is its relative lack of toxicity Unfavorable reactions of all types are infrequent, and a fatal reaction is yet to be recorded This lack of toxicity was emphasized as one of the chief characteristics of penicillin in the pioneer work of Florey and Jennings [1]

The incidence of the urticarial type of reaction to penicillin has been variously reported by different investigators Keefer [2] found urticarial reactions in 14, or 2 8 per cent, of 500 patients treated Lyons [3] found urticaria to be the commonest single complication, occurring in 12, or 5 7 per cent, of 209 patients treated for surgical infection Moore,[4] in a preliminary report on penicillin therapy of 1 418 patients with syphilis, noted only 8, or 0 56 per cent, reactions of the urticarial type and only 7 other types of cutaneous rashes attributed to the drug, none of which required interruption of treatment Stokes [5] also studying penicillin in the treatment of syphilis observed but 2, or 1.2 per cent, urticarial reactions among 182 patients treated

Throughout a period of twelve months of routine administration of penicillin to battle casualties in the evacuation hospital to which I was assigned during the Italian campaign, there were only 2 cases in which urticaria appeared with sufficient severity to warrant suspension of treatment Although supportive statistics are not available, the incidence of all urticarial reactions was definitely low, undoubtedly less than 1 per cent The incidence of the delayed type of reaction could not be ascertained as patients were quickly evacuated to base hospitals following initial surgery One such case that did occur during a period of relative inactivity is herewith reported

In a six month period in which penicillin was routinely given before and after surgery of war wounds in a 2,400 bed orthopedic service in a general hospital in the United States there was only 1 recorded case of a reaction of the delayed serum sickness type In addition there was 1 other case among the hospital personnel

The incidence, then, of urticarial reactions occurring during the course of treatment is not frequent, the delayed serum sickness type of reaction occurs even more uncommonly, possibly once in 1,500 or 2,000 cases

## CASES FROM THE LITERATURE

A search of the *Quarterly Cumulative Index Medicus* and the Surgeon General's Index since the clinical introduction of penicillin in 1942 revealed a paucity of literature on this subject The following reported instances of delayed urticaria-like reactions to penicillin have been abstracted

In December 1943 Lyons [3] reported urticaria as usually developing during treatment but found that it may occur as late as nine days after the cessation of treatment He described the latter cases as showing a wide distribution of wheals over the body, swelling of the face and eyelids, swelling of the fingers and pains in the joints of the hands These changes persisted for three to five days independent of the continuation or cessation of treatment, although they were temporarily relieved by the use of epinephrine and ephedrine sulfate He further reported that subsequent courses of penicillin therapy in patients with a history of urticarial reaction during the first treatment period were uneventful and were not associated with recurrent urticaria. Lyons suggested that the symptoms were analogous to serum sickness but noted that neither eosinophils nor heterophil agglutinins were significantly or constantly increased in his patients Tests for cutaneous and ophthalmic sensitivity during and after reactive phases were negative.

An instance of allergy to penicillin was reported by Criep [6] in October 1944 following the administration of penicillin to a veteran aged 23 with chronic suppurative osteomyelitis of the right hip In this case the allergy was manifested as a massive generalized urticaria immediately following the administration of the first dose of penicillin after an interval of ten days following a fourteen day course of 200,000 units The reaction recurred with each subsequent injection of the drug until its administration was discontinued six days later There was no family or personal history of allergy

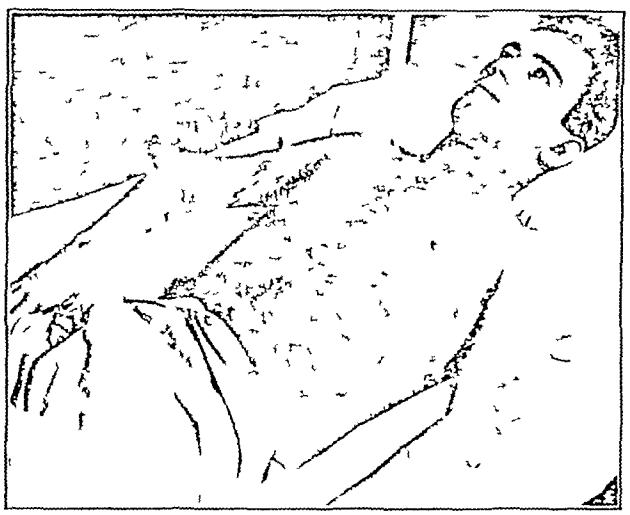
Barker [7] in February 1945 reported 1 case of contact dermatitis from direct handling of the product and a second of persistent urticaria in a wounded soldier treated with injections of penicillin for five days, with large confluent wheals on the trunk and extremities and with dermographism There had been no previous disease of the skin and no evidence of current fungous infection Intradermal cutaneous testing was positive in thirty minutes, persisting for twenty-four hours as an urticarial wheal

Morris and Downing [8] administered 1 million units of penicillin to a patient with postoperative infection, four days after the last injection the patient noted itching of the left arm and hand, followed twenty-four hours later by erythema and edema of the left side of the body and the left arm and hand The next day there was tense, pitting edema of the left hand and forearm, erythema, multiple ruptured and unruptured bullae filled with clear, thin, yellow fluid and multiple wheals on the left side of the face and trunk These manifestations persisted for four days

1 Florey H W and Jennings M A The Principles of Penicillin Treatment, Brit J Surg (supp) **32**: 112 (July) 1944
2 Keefer C S and others Penicillin in the Treatment of Infections J A M A **122** 1217 (Aug 28) 1943
3 Lyons Champ Penicillin Therapy of Surgical Infections in the U S Army J A M A **123** 1007 (Dec 18) 1943
4 Moore J E and others The Treatment of Early Syphilis with Penicillin J A M A **126** 67 (Sept 9) 1944
5 Stokes J H and others The Action of Penicillin in Late Syphilis J A M. A. **126** 73 (Sept 9) 1944
6 Criep L. H. Allergy to Penicillin J A M A **126** 429 (Oct 14) 1944
7 Barker A N Allergic Reactions to Penicillin Lancet **1**: 177 (Feb. 10) 1945
8 Morris G E and Downing J G Bullous Dermatitis (Dermatitis Medicamentosa) from Penicillin J A M A **127** 711 (March 24) 1945

Sullens [9] recently reported that a white seaman aged 21 treated for acute gonorrheal urethritis with 100,000 units of penicillin in two separate courses twenty-three days apart, developed large urticarial wheals on the abdomen back and hips six days after the last course was completed followed later that day by arthralgia of the wrists and ankles moderate edema of the feet and hands, headache a slight elevation of temperature and moderately generalized lymphadenopathy The urticaria spread to the extremities, face and scalp in the ensuing three days and then gradually subsided over a six day period There was no effect from ephedrine but epinephrine gave transitory relief from the pruritus and urticaria Intradermal cutaneous tests showed a positive reaction to penicillin in five hours with negative reactions in 3 controls Sullens concluded that the patient was sensitive to something in the solution, either penicillin or an impurity

Macey and Hays [10] described 3 cases of delayed reaction varying in onset from two to five days after the last injection and characterized by an accelerated pulse rate slight elevation of temperature, edema of the face and hands and generalized giant urticarial lesions There was no dramatic response to the usual drugs such as epinephrine ephedrine and calcium compounds Macey and Hays believed that the reactions were due to a substance used in the preparation of the penicillin



Appearance of patient 2 with delayed serum sickness reaction to penicillin on third day (five days after last injection) Note urticaria of face arms and trunk, edema of upper eyelids and swelling of metacarpophalangeal joints of right hand

## REPORT OF CASES

Three cases of delayed reaction to penicillin are herewith reported The first case was originally reported in April 1945 in the Medical Bulletin of the Mediterranean Theater of Operations (restricted), but because of the limited distribution and availability of this publication it is again presented here in abstract form [11]

CASE 1—*A white soldier aged 23 was admitted to the* evacuation hospital on Feb 1, 1945 with pneumonia of the left hilar area His treatment included a course of penicillin of 25 000 units administered intramuscularly every three hours for five days, a total of 1 million units On the third day of treatment his temperature fell to normal and his symptoms cleared rapidly with a fairly smooth convalescence

Five days after the cessation of penicillin therapy he complained of the sudden onset of itching hives on his arms and legs soon spreading to his trunk Investigaton revealed no unusual contact such as clothes or soap and no deviation from the ward diet The family and personal history was negative for allergy All *medication* had been suspended two days before the onset of symptoms

The following morning the urticaria had spread to involve the face the entire trunk and all four extremities, despite treatment with ephedrine sulfate, intravenous injections of calcium gluconate and epinephrine in tablet (hypodermic) form On the second day of the reaction the patient complained of swelling and persistent aching pain in the phalangeal and metacarpophalangeal joints of both hands and in the joints of both ankles Examination revealed a pitting type of edema local warmth tenderness and painful motion of the affected joints the pulse rate and temperature were slightly elevated

Treatment hypodermically with epinephrine hydrochloride 1 1000 solution was followed by a sharp decrease in the generalized pruritus and mild blanching of the *erythematous* areas but the relief was only transitory In administering this drug it was noted at the time that there was little relief or disturbance from the use of the tablet form of epinephrine, which apparently had deteriorated, whereas injection of the epinephrine hydrochloride solution not only relieved the symptoms of the reaction but also caused appreciable precordial distress and increased nervousness including hand tremors Substitution of epinephrine hydrochloride in peanut oil gave much more satisfactory and prolonged relief

Urticaria persisted for three days but the swelling and soreness of the hands and ankles did not disappear until the seventh day of the reaction on this day an exfoliative type of dermatitis appeared on the palms of both hands lasting three additional days

CASE 2—A white soldier aged 23 was admitted to this hospital as an overseas evacuee from the European theater for further treatment of a compound fracture of the right elbow sustained when the bomber in which he was flying was struck on April 2 1945 by fragmentation bombs accidentally released by an American plane overhead After initial treatment overseas in which he received 2 million units of penicillin he was evacuated to the United States for further care A resection of the right elbow joint was performed on Oct 23 1945 under gas ether oxygen anesthesia following which penicillin was administered a routine measure after surgery on previously compounded fractures He received 25 000 units every three hours intramuscularly for nine days during which time his temperature and pulse remained within normal limits

Two days after the cessation of this course of penicillin, while at home on a week-end pass he noted a small patch of hives first on the left arm but soon followed by extension to the other arm and to the trunk face and back Within a few hours he noted pains in the joints in both hands and both feet. The following day there was *fleeting* pain in both knees not severe the pain in the left hand had subsided somewhat. He returned to the hospital at which time examination revealed generalized urticaria and decided swelling of the fingers of the right hand including the metacarpophalangeal joints there was also swelling of the toes and metatarsophalangeal joints of both feet, more pronounced on the right

The accompanying picture was taken on the third day when the lesions were most intense however the patient had received 0 5 cc of epinephrine hydrochloride a half-hour before reducing the size of the wheals and edema

Symptoms persisted for three days in an intense form despite the use of epinephrine hydrochloride during this time there was pronounced edema with almost complete closure of both eyes The edema of the right foot persisted for several days after other symptoms had subsided a similar condition persisted in the right hand but the recent surgical intervention in the right elbow clouded the mechanism of its production Five days after the onset of the reaction all swelling of the toes and fingers had entirely cleared and the urticaria had not reappeared however an exfoliative dermatitis of both palms had appeared on the third day and this was still present along with a mild generalized pruritus No signs or symptoms were present by the eighth day of the reaction

9 Sullens W E Jr Simulating Serum Sickness Reaction to Penicillin U S Nav M Bull 45 752 (Oct) 1945

10 Macey H B and Hays T G Allergic Reactions to Penicillin Therapy U S Nav M Bull 45 1143 (Dec) 1945

11 Gordon E J Serum Sickness Reaction to Penicillin A Case Report M Bull Mediterranean Theat. Op 3 123 (April) 1945

On questioning, the patient gave no history of asthma, hay fever or other allergies either in himself or in his family. The only other course of penicillin he had received was that given immediately after his injury.

CASE 3.—A girl aged 20, a member of the Women's Army Corps, was readmitted to the hospital in the dermatologic service with severe generalized urticaria which involved all the extremities and the trunk but not the face and was of obscure etiology. She stated that she had been discharged from the hospital seven days before after having been hospitalized ten days for acute follicular tonsillitis. During her previous hospitalization she had received a course of penicillin therapy of 25 000 units every three hours, administered intramuscularly, for a total of 1 600 000 units.

While at home seven days after the last injection of penicillin she first noted a severe urticaria of her trunk, rapidly followed by extension to all four extremities. It increased in severity despite the use of ephedrine sulfate. The following day she noted aching pain in both knees and ankles accompanied by mild swelling. She returned to the hospital where a careful search for possible allergic sensitivities was made including multiple scratch and intradermal tests. The history of recent penicillin therapy was disregarded.

The urticaria cleared three days after its onset, but the pains in the joints persisted in a mild form for an additional week. Seven days after the onset an exfoliative dermatitis of the palms of both hands appeared and this persisted one week. Ten days after the onset the reaction had subsided except for the slight persistence of mild pain in the joints in both knees and mild exfoliation of both palms.

The patient gave no history of previous allergy either personal or within the family. She had never received any penicillin before.

### COMMENT

In these 3 cases there have been certain similarities in the manifestation of the reaction attributed to penicillin. In each case the appearance of the reaction was delayed several days varying from two to seven, following cessation of penicillin therapy. The first appearance in each was an intense urticaria with severe pruritus and wheal formation appearing on one portion of the body either the trunk or the extremities but rapidly extending to involve most of the remaining cutaneous area. In 2 of the 3 cases there was edema of both eyelids, causing almost complete closure. Secondly, pain in the joints accompanied by swelling, tenderness, local warmth and painful function were manifested in each case. Malaise with mild fever and tachycardia were also present at this time. A third feature which was present in all 3 cases in the latter stages of the reaction was an exfoliative dermatitis of both palms, whether or not this was coincidental or an integral part of the reaction could not be determined but it was present and was the last manifestation to disappear in each case.

The urticaria responded to treatment with epinephrine hydrochloride administered hypodermically, but it recurred repeatedly and ran a course of approximately seventy-two hours.

None of the 3 patients had had any previous manifestations of allergy in any form, nor were there any other agents to which the urticaria could be attributed.

The characteristic features of this type of reaction appear to be (1) delayed appearance following the cessation of penicillin therapy, (2) intense, severe urticaria, rapidly extending to become generalized, (3) multiple involvement of the joints, large and small, with serous effusion and intense arthralgia, (4) severe malaise, mild fever and mild to moderate tachycardia, (5) exfoliative dermatitis of both palms in the terminal stages as the urticaria fades and (6) a self-limited course of seven to ten days irrespective of the therapy employed.

Such a composite picture strongly resembles that of serum sickness of the type usually associated with delayed reactions to biologic products such as liver extract, insulin and posterior pituitary injection.

### ETIOLOGIC CONSIDERATIONS

The mechanism of the production of delayed reactions to penicillin is still a subject of investigation.

Barker[2] and Lyons[3] believed that untoward reactions were due to impurities in the preparation of the drug rather than to the active penicillin fraction, the latter investigator found such impurities to constitute 80 to 90 per cent of the final product (in 1943) and to vary from batch to batch even in the hands of a single producer. This percentage has since been greatly reduced as the manufacturers have developed finer processes of culture and extraction which, as at present utilized, result in a content of penicillin varying between 20 and 40 per cent. The remaining material consists of extractives soluble in organic solvents which occasionally produce urticaria and vary in different batches.

The tendency to ascribe reactions to impurities in the preparation and not to the penicillin fraction itself is further observed in the usual current practice of changing to another manufacturer's brands when a reaction occurs with the product of one.

Although undoubtedly there has been good reason to believe that some of the reactions have been a direct result of toxic impurities, evidence is rapidly accumulating to prove that penicillin in itself is a sensitizing agent capable of producing an allergic state in susceptible individuals.

Pyle and Rattner[12] found no reaction from patch tests with the medium (corn steep liquor and lactose) but strongly positive tests with the whole product and slightly positive reactions with the crystalline product, the purest penicillin available. They concluded that the dermatitis was due to the penicillin itself and not to the medium as proposed by Barker and Lyons.

Criep[6] performed several immunologic studies on his patient. Direct cutaneous tests showed the patient to be hypersensitive to penicillin even in dilute concentrations where controls gave no reactions. Using the patient's serum, passive transfer tests yielded a positive reaction with penicillin in 1 1,000 dilution, controls being negative, however, Criep could not demonstrate anaphylactic antibodies to penicillin in the patient's serum. It was his opinion that there was evidence of the presence of some immune substances in the serum of his patient, such as reagins and precipitins, as proved by the positive direct skin test and positive passive transfer and precipitin tests, but he believed that their exact role was unknown. He concluded that the sensitivity was to penicillin and not to the medium, being an allergy similar to that to serums and drugs.

Another factor in this apparently allergic phenomenon is the part possibly played by sensitization by previous fungous infection such as tinea. The prevalence of "athlete's foot" among such a large proportion of the population could easily account for almost universal sensitization to fungous antigens. In both of the cases reported by Graves, Carpenter and Unangst[13] there were histories of fungous infection and sensitivity to trichophytin. In both cases there were recurrent vesicu-

12 Pyle, H. D., and Rattner, H.: Contact Dermatitis from Penicillin, J. A. M. A. 125: 903 (July 29) 1944.

13 Graves, W. N., Carpenter, C. C., and Unangst, R. W.: Recurrent Vesicular Eruptions Appearing During Administration of Penicillin, Arch. Dermat. & Syph. 50: 6 (July) 1944.

lar eruptions occurring three and twenty-four hours after the first dose of penicillin

Using the Schultz-Dale technic in sensitized guinea pigs, Jadassohn (quoted by Graves, Carpenter and Unangst) proved that pathogenic fungi contain a specific antigen as well as another antigen common to all of them Could allergic reactions to penicillin, which is produced from a fungus, be attributed to such a fungus-antigen relationship? There is considerable doubt at present

Some of the most interesting and revealing laboratory studies on the sensitizing properties of penicillin were performed by McClosky and Smith [14] using two series of guinea pigs both sensitized by daily subcutaneous and intraperitoneal injections of penicillin over a five day period One group was used for intracardiac or intravenous injection of antigen after an adequate incubation period the other for tests on the isolated uterus by the Schultz-Dale technic Some of the animals in each group were also sensitized to horse serum to ascertain the extent of the anaphylactic state developed in the animals in the event the reactions to penicillin were negative Sensitization was not uniform and was usually atypical The positive reactions were also mostly atypical in that reactions (such as uterine response) were often delayed and desensitization was often ineffective This led to the opinion that the antibody-antigen combinations of commercial penicillin lack permanence and are more readily reversible than is the case in anaphylactic reactions following sensitization with true proteins

They concluded that anaphylactic sensitization in the susceptible guinea pig can be achieved with penicillin as it is currently prepared and marketed They used penicillin consisting of several commercial lots of the sodium salt manufactured by five different distributors, of the same degree of purity as that used in the clinic They could not state to what extent impurities alone were responsible, if responsible, then the impurities were inherent in the commercial products, in which they were inseparable from the active substance It was suggested that parallel experiments with synthetic penicillin when available would provide the answer

From this excellent laboratory study we have direct evidence that penicillin is capable of anaphylactic sensitization Unfortunately there have been few clinical studies in this direction possibly owing to the present relative infrequency of reactions to penicillin It is suggested that one might attempt desensitization to penicillin when a reaction is encountered and the use of the drug is imperative, in the same manner as that performed for tetanus antitoxin and gas gangrene antitoxin

Although, admittedly, corroborative experimental evidence is not yet conclusive it is my opinion that reactions to penicillin should be regarded as the manifestation of a sensitizing substance with allergic potency and should not be merely attributed to toxic impurities resulting from the commercial preparation of the drug • The problem should not be regarded as merely a matter of switching brands, but it should be approached in the same manner in which one would approach any other allergic condition The advent of penicillin in synthetic form will undoubtedly lead to further investigation and clarification of the present nebulous etiology of reactions to penicillin

14 McClosky W T and Smith M I. Experiments on the Sensitizing Properties of Penicillin Proc. Soc. Exper Biol & Med 57:270 (Nov.) 1944

SUMMARY AND CONCLUSIONS

A search of the literature revealed several reported cases of delayed reactions to penicillin of the type of urticaria and serum sickness

The incidence of delayed, serum sickness reaction to penicillin is low, although exact statistics are not available, the incidence is probably no greater than 1 1 500 or 1 2,000 cases of penicillin therapy

The characteristic features in 3 cases were (1) delay in appearance, (2) severe malaise, mild fever and moderately rapid pulse, (3) severe, intense spreading urticaria, (4) arthralgia with serous effusions of the joints, (5) exfoliative dermatitis of the palms of both hands, and (6) a self-limited course of seven to ten days regardless of the treatment used

Both the preponderance of opinion and the laboratory studies point to an anaphylactic sensitization by the penicillin fraction itself in susceptible individuals, with a resultant true allergic manifestation such as is found with sensitization to true proteins as the cause

The diagnosis of urticaria of obscure origin should always include the possibility of origin from a recently completed course of penicillin therapy

3700 Massachusetts Avenue N W

## FATAL ANAPHYLACTIC SHOCK

### Occurrence in Identical Twins Following Second Injection of Diphtheria Toxoid and Pertussis Antigen

JACOB WERNE M D and IRENE GARROW M D
New York

Deaths related to the injection of foreign protein in man are fortunately few The exact number of such occurrences is difficult to estimate from the available literature By 1942 Kojis [1] was able to find 61 such deaths, and he added 4 more from the Willard Parker Hospital The most complete and most recent study of necropsies was made by Vance and Strassmann,[2] who added 7 autopsy studies from the Office of the Chief Medical Examiner to 19 taken from the literature Park [3] in 1932 recorded the mortality from serum anaphylaxis as 0 002 per cent Kojis [1] in 1942 found it to be just under 0 1 per cent in a series of 6,211 subjects treated for various infections Rutstein and his associates,[4] in their analysis of pneumonia cases treated with antipneumococcus horse serum, found the mortality to be 0 45 per cent In only 1 or possibly 2 of the 25 deaths did they assign significance to protein hypersensitivity as a cause They state that all these persons who died had vascular collapse, that only 2 had asthmatic breathing and that only 1 had hives No characteristic change was noted in the 7 who came to autopsy other than the primary pneumonia from which all the patients suffered at the time of receiving the serum

The inadequacy of our present knowledge of the mechanism in deaths following the administration of

The photomicrographs were taken by Mr Julius Weber

Read in part before the New York Pathological Society Dec 27 1945

From the Office of the Chief Medical Examiner City of New York and the Pathology Department of St. John's Long Island City Hospital

1 Kojis F G Serum Sickness and Anaphylaxis Analysis of Cases of 6,211 Patients Treated with Horse Serum for Various Infections Am J Dis Child. 64 93 (July) 313 (Aug.) 1942

2 Vance B M., and Strassmann G Sudden Death Following Injection of Foreign Protein Arch Path 34 849 (Nov.) 1942.

3 Park W H Deleterious Effects from Serum Injections Am. J Pub Health 18 354 (March) 1928

4 Rutstein D D Reed E A Langmuir A D and Rogers E S Immediate Serum Reactions in Man Arch Int Med 68 25 (July) 1941

foreign protein is evident from Kojis's [1] summary of the 24 necropsies among the 61 he found in the literature "3 showed nothing, 6, only an enlarged thymus, 1, subacute nephritis, 1 a dilated left ventricle, congested kidneys and a slightly enlarged and pulpy spleen, 7, the guinea pig type of anaphylactic death, 3, the canine type, 1 the rabbit type 1, a combination of the guinea pig and rabbit type, and 1, a combination of the guinea pig and canine types" It is evident that the interpretation of some published cases must remain in doubt because of the absence or incompleteness of pathologic study

The cases reported as exhibiting harmful effects from the administration of foreign proteins fall into two groups In one the reinjection of antigen appears to have induced the same state of susceptibility [5] as obtains in the experimental animal, in the other the development of sensitivity is considered spontaneous because it is unassociated with a history of prior parenteral injection

Coca and Cooke [6] considered the mechanism of natural sensitivity in atopic individuals as separate from the one which underlies experimental anaphylaxis Ratner and Gruehl [7] believed that the demonstration of transferable reagin in the blood of asthmatic persons and guinea pigs made such a distinction untenable. The possibility that some naturally sensitive individuals may have had previous contact with an antigen subsequently found capable of producing shock was suggested by the successful sensitization of guinea pigs to inhaled horse dander [8] Of the 65 cases summarized in Kojis's [1] review 16 gave a history of asthma or chronic respiratory disease, and 17 had injections from one day to ten years previously Vance and Strassmann [2] noted a striking resemblance between the asthmatic and the presumably nonasthmatic patients There was similarly no fundamental difference either in clinical symptomatology or in pathologic findings in those who had no history of prior parenteral injection

Although the symptoms and lesions of anaphylaxis are constant for a given animal species [9] irrespective of the antigen, available information discloses no such uniformity in the human being Conditions that surround the clinical occurrence of hypersensitive states in contrast with the experimental are far from standard Among the variables that explain the wide differences in the allergic responses observed clinically are dosage, route of absorption period in the development of sensitivity concurrent disease and individual predisposition Dependent on these various conditions and on the site of antigen antibody reaction we may see [10] the Arthus phenomenon urticaria eczema asthma hay fever, serum sickness periarteritis nodosa, food or drug idiosyncrasy, the 'tuberculin type' of reaction to microorganisms and their products, and sudden collapse and death

With the increasing use of immunotherapy, it is important that serious reactions be made known Where death has occurred, the postmortem investigation should consider (1) the possible primary toxicity of the product in the dosage used, (2) possible contamination of injection materials, (3) symptomatology and pathologic findings with special attention to the role of associated disease, and (4) possible demonstration of passively transferable reagin [11]

## REPORT OF CASES

On June 19, 1945 the death of identical [12] twins after a second injection of diphtheria toxoid and pertussis antigen, alum precipitated,[13] was reported for investigation

*History*—D M and G M., boys aged 10 months, were brought to St. John's Long Island City Hospital (service of Dr James M Dobbins) on June 19, 1945 at 7 15 a. m D M was pronounced dead on arrival, the condition of G M was described as critical He was cyanotic and dyspneic respirations were shallow, rapid and labored. Oxygen was given by mask., suction was applied for aspiration of mucus, 4 cc of nikethamide was given at 8 a. m., 3 minims (0 18 cc.) of epinephrine at 8 15 and 2 cc. of caffeine with sodium benzoate at 8 45 At this time the temperature was 99 F Cyanosis continued to be present at intervals One cc. of

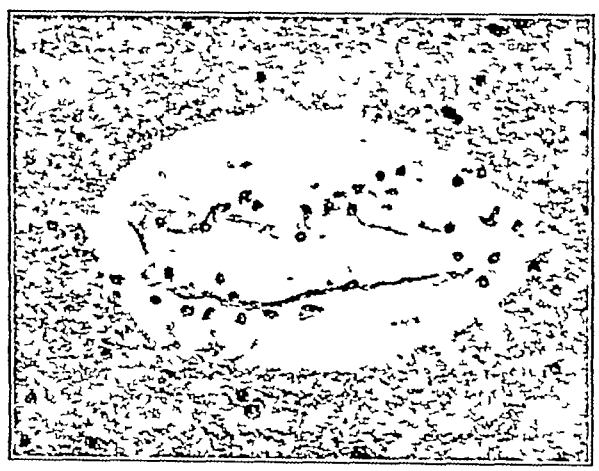


Fig 1 (D M)—Section of brain showing fibrin clot in vein perivascular edema and cellular infiltrate Hematoxylin and eosin Slightly reduced from a photomicrograph with a magnification of 300 diameters.

picrotoxin was given at 9 30, respirations were then noted as being 38. At 10 and 10 30 3 more minims of epinephrine were given, and at 10 45 infusion of plasma was begun Before 40 cc. was given the subject was pronounced dead.

The family physician stated that nothing untoward was noticed immediately after the injections except that I twin bled slightly from the site, necessitating the application of an additional cotton pledget. The parents stated that following the first injections one month before (from another ampule of the same product) D M vomited, had a temperature of 101 F and cried considerably One-half grain (0.032 Gm) of acetylsalicylic acid was given and by evening he was apparently well. G M remained symptom free after the first injection

After the second immunizing injections, both infants cried considerably on reaching home, they vomited and consumed excessive amounts of water, each taking about two full bottles They then 'fell asleep and when next noticed by their parents appeared 'lifeless" Their position in the cribs remained unchanged, and they could be aroused only by loud noises D M had a 'staring" expression, his temperature was 99 F

5 Longcope W T Susceptibility of Man to Foreign Proteins Am J M Sc. 152 625 (Nov) 1916
6. Coca, A F and Cooke, R A Classification of Phenomena of Hypersensitiveness J Immunol 8: 163 (May) 1923
7 Ratner B and Gruehl H L Identity of Animal Anaphylaxis and Human Allergy (Protein Hypersensitiveness) Proc Soc Exper Biol & Med 27 574 (March) 1930
8 Ratner B Jackson H C and Gruehl H L Anaphylactogenic Character of Horse Dander and Its Crossed Relationship to Horse Serum Proc. Soc. Exper Biol & Med 23 16 (Oct) 1925
9 Doerr R Allergie und Anaphylaxis in Kolle W Kraus R and Uhlenhuth P Handbuch der pathog Mikroorganismen Jena Gustav Fischer 1929 vol 1 p 759
10 Rich A R The Different Forms of Hypersensitivity to Foreign Protein in the Pathogenesis of Tuberculosis Springfield Ill Charles C Thomas, Publisher 1944 p 330
11 Lund, H. and Hunt E L Postmortem Diagnosis of Allergic Shock Arch Path 32 664 (Oct) 1941
12 The physician in attendance at their birth stated that they had a common placenta.
13 The product of a reliable pharmaceutical manufacturing company whose name is withheld

At 11 30 p m, when his diaper was changed he was found to be ice cold and wringing wet with perspiration" The parents explained that they regarded these symptoms as expected effects of the injections and therefore did not summon medical aid until 5 30 a m, when D M appeared to be dead and G M gravely ill



Fig 2 (D M)—Section of heart showing paravascular mononuclear cellular infiltration Note the binucleated cell Hematoxylin and eosin Slightly reduced from a photomicrograph with a magnification of 275 diameters

The twins were born at eight months gestation, D M weighing 2 pounds 8 ounces (1,134 Gm) and G M 5 pounds 4 ounces (2 381 Gm) The former was placed in an incubator and developed normally Both continued in good health At 6 months they were vaccinated against smallpox

The mother had been inoculated against diphtheria as a child but did not receive any injections during pregnancy There is no history of allergy on her side of the family The father described a sudden swelling of the lower lip while in the Army which disappeared as precipitously as it came on After receiving his medical discharge he experienced another similar episode which was diagnosed as 'allergic' by a medical officer who happened to be present at the time

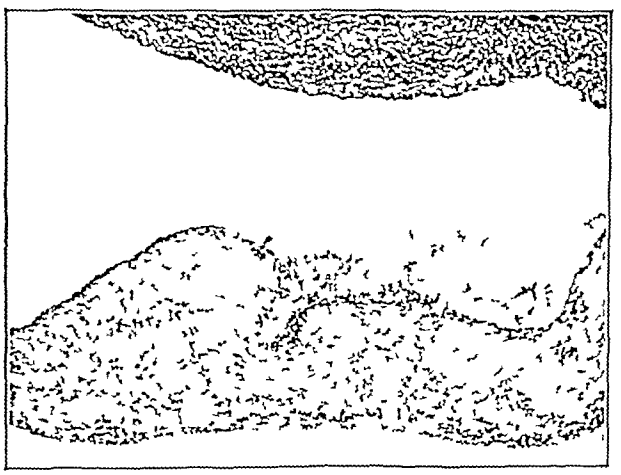


Fig 3 (D M)—Section of aortic valve showing endothelial swelling and increased cellularity of leaflet Hematoxylin and eosin Slightly reduced from a photomicrograph with a magnification of 60 diameters

*Postmortem Study*—At autopsy both twins[14] were well nourished and well developed The sites of recent inoculation in the deltoid region were marked by minute puncture wounds of the skin and a small amount of hemorrhage in the underlying fat There was no gross evidence of significant inflammatory reaction The brain in each case felt softer than usual The subarachnoid space contained excess fluid The meninges mastoids, middle ears and tonsils showed no evidence of infection. There was no regurgitation or aspiration of stomach contents The thymus of D M weighed 28 4 Gm and showed numerous petechiae, that of G M weighed 34 1 Gm The adrenals of D M weighed 3 0 Gm and those of G M 3.2 Gm., they showed no gross abnormalities The heart contained both clotted and fluid blood in each instance. There were epicardial and pleural petechiae The lungs were salmon pink and air containing for the most part In G M the parenchyma on section showed edema, in D M there were conspicuous focal hemorrhages in the dependent portions The mucosa of the larynx trachea and bronchi was pale and free of exudate. The bronchopulmonary lymph nodes were not enlarged The liver of D M weighed 350 Gm that of G M 370 Gm In D M it showed extreme congestion The spleen and kidneys were moderately congested The gastrointestinal tract showed no gross lesions The lymphatic follicles were normally conspicuous as were the mesenteric nodes The pancreas, biliary passages and genital organs were natural There were no skeletal abnormalities Postmortem lung cultures were made and found sterile in each instance, and in addition a sterile postmortem culture was obtained from the spleen of D M

Postmortem serum was tested on four members of the laboratory staff for the presence of reagin after the prior

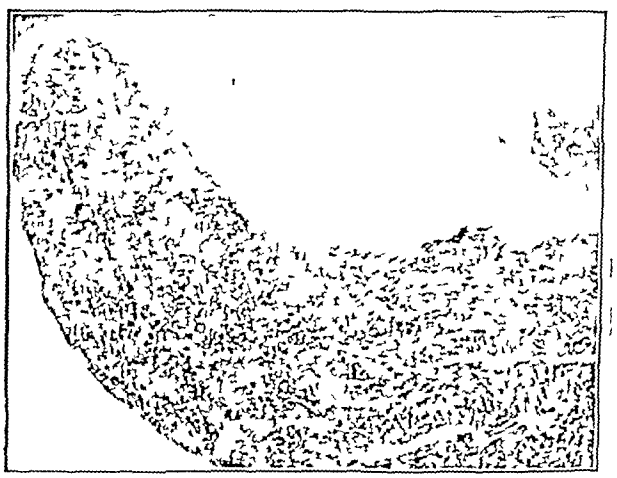


Fig 4 (C M)—Section of cardiac papillary muscle showing necrosis and hemorrhage Hematoxylin and eosin Slightly reduced from a photomicrograph with a magnification of 80 diameters

intracutaneous injection of the biologic product, with negative results[15] This contrasts with the success of Lund and Hunt[11] in eliciting a Prausnitz-Kustner reaction for the first time with postmortem serum It is noteworthy in this connection that negative reaction to passive transfer was also recorded by Walzer[16] in a case of shock following injection of horse serum The attempt[17] to effect passive transfer from postmortem serum in these cases to guinea pigs was also unsuccessful

The contents of the vial used in immunizing the twins, and of the vials bearing the same lot number submitted by the manufacturer, were examined by Dr Jules Freund of the Bureau of Laboratories, Department of Health, City of New York and the following results were obtained The vaccine was found to be sterile that is, the sterility test required by the National Institute of Health for biological products was satisfactory The microscopic picture showed formed elements of the size and shape and staining qualities of Bordet Gengou bacilli Tests carried out on the skin of rabbits showed that there was no free diphtheria toxin in the vaccine The identity test showed that the vaccine contained diphtheria toxoid, that is, combined with the diphtheria antitoxin, 0 5 cc. amounts of the vaccine injected into the peritoneal cavities of white mice

14 Unless otherwise stated the pathologic descriptions apply to both subjects

15 Dr Bret Ratner examined the sites of injection in the 4 volunteers
16 Walzer M New Diagnostic Methods in Asthma Long Island M J 60:85 1932
17 Dr Jules Freund Bureau of Laboratories City of New York.

did not cause obvious toxic reactions (The latter test is routinely done on biologicals for harmlessness)'

The histopathologic study disclosed lesions consistent with death in anaphylactic shock. The skin at the site of inoculation (studied in G M) showed swelling and acute degeneration of collagen, arteriolar degenerative changes, thrombosis and hemorrhage Bacterial stains showed numerous forms resembling Hemophilus pertussis The follicles of the spleen, lymph nodes and gastrointestinal tract showed conspicuous macrophages containing abundant nuclear particles and cytoplasmic debris There were numerous eosinophils in the lymphatic tissues The thymus showed foci of hemorrhage and necrosis, and extremely constricted arteries whose walls showed edema, eosinophilia and endothelial swelling and proliferation

The brain showed capillovenous engorgement, perivascular hemorrhages, arteriolar narrowing and diffuse degenerative changes of some arterial walls, with cellular infiltration of the vessels and the surrounding space, this was mainly mononuclear with occasional polymorphonuclears and eosinophils Many nerve cells showed acute degenerative changes

Heart sections showed focal necrosis of muscle, more accentuated beneath the epicardium and endocardium Constricted lumens, edema and necrosis of some arterial walls were observed, as were swelling and some proliferation of the endothelium Perivascular hemorrhages were frequent in relation to such



Fig 5 (D M)—Hilus of lung showing macrophagocytic activity in lymph follicles constricted artery dilated veins and interstitial edema Hematoxylin and eosin Slightly reduced from a photograph with a magnification of 60 diameters

areas Sections of aortic and mitral cusps showed endothelial swelling and increased mononuclear cells throughout the leaflets

The respiratory epithelium showed excellent preservation with intact cilia (Fulminating respiratory infection the most common cause of unexpected death during infancy was thereby excluded[18]) Extreme narrowing of some bronchial and many arterial and arteriolar lumens was conspicuous Mononuclear, slight polynuclear and slight eosinophilic infiltration occurred in both bronchial and pulmonary arterial walls The pulmonary veins and alveolar septal capillaries were deeply engorged The lymphatics were dilated with abundant protein precipitate There were foci of pulmonary edema, both interstitial and intra alveolar, and foci of hemorrhage and early intra-alveolar exudate, mainly polymorphonuclear especially in the case of D M Fibrinous exudate and bacteria were not seen

The liver sections showed extensive parenchymatous degeneration, most evident in the central two thirds of the lobule, this took the form of granular and hydropic change, with pyknosis of nuclei and chromatolysis The sinusoids contained abundant leukocytes with a moderate number of eosinophils Occasional focal necrosis was seen mononuclears filling the parenchymatous defect, some multinucleated hepatic cells occurred in peripheral portions of some lobules

18. Werne, J Postmortem Evidence of Acute Infection in Unexpected Death in Infancy Am J Path **18**: 759 (July) 1942 Werne J and Garrow I Sudden Deaths in Infancy Bull New York Acad Med **21** 445 (Aug) 1945

COMMENT

The widespread visceral lesions encountered seem adequate to explain the profound shock observed clinically The histological appearances point to acute vascular injury as the underlying cause This results from the basic physiological disturbances that seem

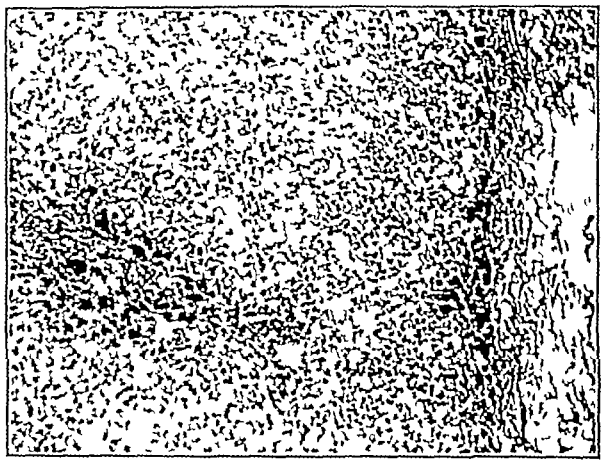


Fig 6 (D M)—Section of liver showing parenchymatous degeneration increased leukocytes in sinusoids and capsular edema. Note multinucleated hepatic cells Hematoxylin and eosin. Slightly reduced from a photomicrograph with a magnification of 60 diameters

adequate to explain the apparently diverse manifestations of the anaphylactic state contraction of smooth muscle and increased capillary permeability[19] The former, if severe enough in bronchiolar or pulmonary arteriolar muscle, is believed to cause death by asphyxia or dilatation of the right ventricle, as in the guinea pig[20] and the rabbit[21] respectively

In 14 of the 19 autopsies taken from the literature and in the 7 they added, Vance and Strassmann noted either a clinical history of dyspnea or the postmortem

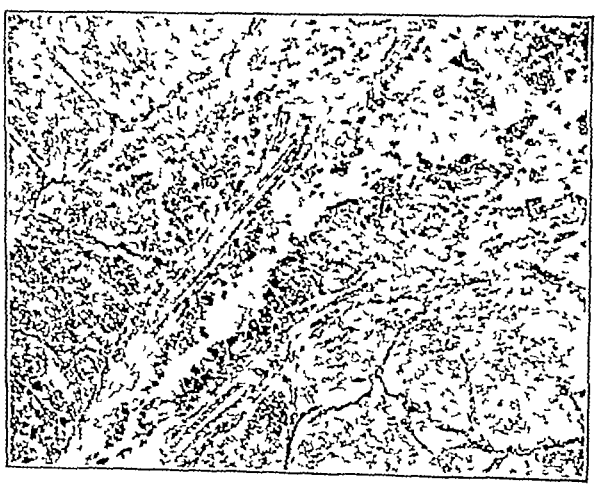


Fig 7 (D M)—Section of thymus showing constriction of artery hemorrhage and necrosis Reticulum stain Slightly reduced from a photomicrograph with a magnification of 40 diameters

finding of emphysema This they interpreted as indicating asphyxial death by bronchospasm In the cases

19 Seegal, B C in Gay, F P Agents of Disease and Host Resistance Springfield Ill Charles C Thomas Publisher 1935 chap 6
20 Gay F P and Southard E E Further Studies on Anaphylaxis III The Relative Specificity of Anaphylaxis J M Research **19** 5 1908 Auer J and Lewis P A The Pathology of the Immediate Reaction of Anaphylaxis in the Guinea Pig J Exper Med **12** 151 1910
21 Coca A F The Mechanism of the Anaphylaxis Reaction in the Rabbit J Immunol **4**: 219 (July) 1919 Drinker C K, and Bronfenbrenner J Pulmonary Circulation in Anaphylactic Shock ibid. **9**: 387 (Sept) 1924

reported here there was neither clinical nor pathologic evidence for significant bronchial obstruction as a cause of death Increased capillary permeability, as emphasized by Manwaring and his associates [22] and by Moon,[23] among others, may lead to reversible shock, protracted shock or instantaneous death Collapse

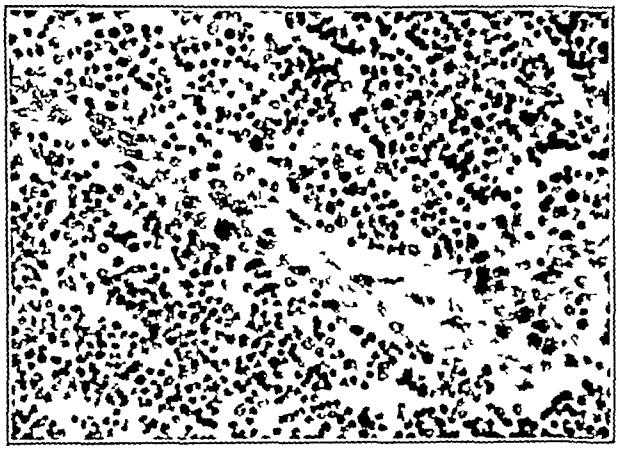


Fig 8 (D M)—Section of thymus showing vascular edema and eosinophilia Giemsa stain Slightly reduced from a photomicrograph with a magnification of 300 diameters

referable to this widespread vascular disturbance is the usual expression of anaphylaxis in the dog and was the conspicuous feature in the cases presented here With respect to the clinical appearance of shock, rather than respiratory difficulty, as with respect to some of the visceral lesions, particularly the hepatic, these cases recall the one reported by Dean,[24] in which death occurred seventy minutes after the fourth injection of tetanus antitoxin

The morphologic appearances are in accord with the direct observations of Abell and Schenck [25] in shocked

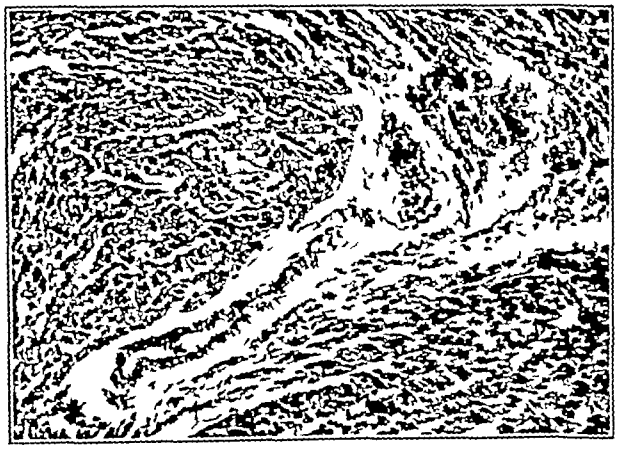


Fig 9 (G M)—Section of heart showing constriction of arterioles and focal hemorrhage Hematoxylin and eosin Slightly reduced from a photomicrograph with a magnification of 150 diameters

rabbits They describe arteriolar contraction with obliteration of lumens and margination and migration of leukocytes, which formed obstructive clumps, thereby stopping circulation Endothelial destruction with hemorrhage was seen in the most severe reactions McMaster [26] similarly observed vascular spasm as a local effect of the introduction of antigen in a previously sensitized mouse Arteriolar spasm has been emphasized by Ratner [27] as explaining the characteristic allergic phenomenon of wheal formation

The sixteen and twenty hour intervals elapsing between the shocking injection and death in the cases reported here contrast with the short interval in the majority of recorded instances In the 26 necropsies reviewed by Vance and Strassmann [2] only 5 of the patients lived from one to twenty-three hours

Waldbott [28] reported 3 cases of allergic shock in which the acute symptoms were followed by signs of bronchopneumonia Recovery occurred in 2 The third showed at autopsy congestion and edema of cerebral and meningeal blood vessels, few cerebellar petechiae, areas of solidification in both lungs, congestion and emphysema, on microscopic study, patchy bronchopneumonia, massive intra-alveolar hemorrhage and edema, necrosis of alveolar epithelium, and emphysema were noted In this case dyspnea, cough and

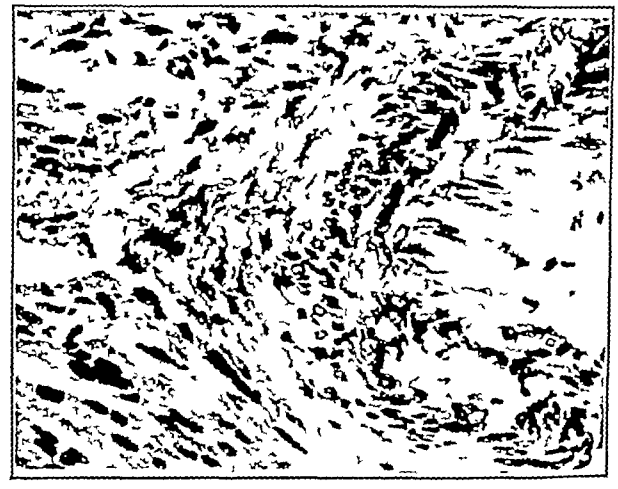


Fig 10 (D M)—Section of heart showing extreme narrowing and edema of arteriole Hematoxylin and eosin Slightly reduced from a photomicrograph with a magnification of 300 diameters

unconsciousness had developed four hours after the intravenous injection of typhoid vaccine, and death occurred on the third day The possibility of delayed reaction should be considered whenever foreign protein is administered Prompt recognition of untoward signs may avert a fatal outcome Successful treatment of anaphylactic shock was reported by Blotner [29] with saline solution and by Raynolds [30] with plasma These important aids in the management of shock should therefore be routinely employed, in addition to such routine therapy as epinephrine

In view of the high mortality that accompanies both diphtheria and pertussis during infancy, it is hoped that the publication of a report of these two fatalities will not deter the profession from continuing to practice immunization It will be recalled that the family history was positive for allergy, the father suffered from what appeared to be episodes of angioneurotic edema

22 Manwaring W H Chilcote R C and Hosepian V M Capillary Permeability in Anaphylaxis J A M A 80:303 (Feb 3) 1923
23 Moon V H Pathology and Mechanism of Anaphylaxis Ann Int. Med 12:205 (Aug) 1938
24 Dean H R Histology of Case of Anaphylactic Shock, J Path & Bact 25 305 (July) 1922
25 Abell, R G and Schenck H P Microscopic Observations on Behavior of Living Blood Vessels of Rabbit During Reaction of Anaphylaxis J Immunol. 34:195 (March) 1938
26 McMaster P D Peripheral Vascular Reactions in Anaphylactic Shock of the Mouse Am J Path 17:457 (May) 1941
27 Ratner B Allergy Anaphylaxis and Immunotherapy, Baltimore Williams & Wilkins Company 1943 p 632
28 Waldbott G L Allergic Death Protracted Shock Arch Int. Med 54:597 (Oct.) 1934
29 Blotner H Anaphylactic Shock with Hemoconcentration Treated Intravenously with Saline Solution J A M. A 118 219 (Jan 17) 1942
30 Raynolds A H Plasma Treatment of Severe Near Fatal Anaphylactic Shock J Allergy 14:495 (Sept) 1943

That heredity is dominant in the anaphylactic state has been emphasized by Ratner and his associates [31] Landsteiner and Chase [32] and Chase [33] demonstrated experimentally the role of heredity in both local (cutaneous) and general hypersensitivity Allergic manifestations in seven pairs of identical twins were reported by Criep [34] It would seem that the influences of heredity and twinning deserve weight as determinants of individual predisposition in the cases reported here A search of the literature disclosed no other fatalities following inoculation with pertussis antigen and diphtheria toxoid, whether separately or combined

After being notified of the deaths, the manufacturer recalled the entire batch from which the biologic product had been dispensed A search of all records of complaint was immediately instituted To date no reports of serious reactions have been received, and all tests on the lot in question were found satisfactory

Kendrick,[35] in a field study of alum-precipitated combined pertussis and diphtheria toxoid, found among records of local and general reactions in 900 children only a few that were described as pronounced Of further interest in connection with the degree of possible hazard attached to some immunizations is the experience of Friedman,[36] who gave 109 allergic children tetanus and diphtheria toxoid without untoward reactions Bigler and Werner [37] observed but 2 instances of allergic response in 300 children receiving tetanus toxoid or combined diphtheria and tetanus toxoids Cooke and his associates [38] reported generalized urticaria following the second injection of tetanus toxoid in an asthmatic patient, and Cunningham [39] reported the occurrence of anaphylaxis following a second injection of toxoid in an adult who had previously had serum sickness The first patient gave positive skin tests to Gerna and Witte peptone, and the second to Witte peptone, both recovered Deaths following the intravenous injection of typhoid vaccine have been recorded [40]

SUMMARY

Identical twins died in delayed anaphylactic shock The widespread occurrence of lesions referable to arterial spasm and increased endothelial permeability contribute further evidence to the basic role of vascular injury in the hypersensitive state [41]

31 Ratner, B Silberman, D E. and Greenburgh, J E Allergy in Childhood Does Heredity Determine Age of Onset? J Allergy **12** 272 (March) 1941

32 Landsteiner K., and Chase M. W Breeding Experiments in Reference to Drug Allergy in Animals, Proc Internat Cong Microbiol 1940 p 772

33 Chase M W Inheritance in Guinea Pigs of Susceptibility to Skin Sensitization with Simple Chemical Compounds J Exper Med **73** 711 (June) 1941

34 Criep, L. H Allergy in Identical Twins Report of Seven Pairs of Twins, J Allergy **13**: 391 (Sept.) 1942

35 Kendrick P L. Use of Alum-Treated Pertussis Vaccine and of Alum Precipitated Combined Pertussis Vaccine and Diphtheria Toxoid for Active Immunization Am J Pub Health **32** 615 (June) 1942

36 Friedman T B Bigler, J A and Werner M A. Immunologic Response of Allergic Children to Toxoid, J Allergy **13**: 114 (Jan.) 1942

37 Bigler J A and Werner M Active Immunization Against Tetanus and Diphtheria in Infants and Children J A. M. A **116**: 2355 (May 24) 1941

38. Cooke, R. A. Hampton S F Sherman W B., and Stull A Allergy Induced by Immunization with Tetanus Toxoid J A. M A **114** 1854 (May 11) 1940

39 Cunningham, A. A. Anaphylaxis After Injection of Tetanus Toxoid Brit. M J **2**: 522 (Oct. 19) 1940

40. Death Following Antityphoid Vaccination Queries and Minor Notes J A. M A **101** 229 (July 15) 1933 Two Deaths After Intravenous Nonspecific Protein Therapy Foreign Letters (Australia) ibid **96** 1161 (April 4) 1931 Two Deaths Following Administration of Typhoid Vaccine Medical News ibid **89**: 801 (Sept. 3) 1927

41 Opie E. L. Significance of Allergy in Disease Medicine **15** 489 (Feb) 1936 Clark, E and Kaplan, B I. Endocardial Arterial and Other Mesenchymal Alterations Associated with Serum Disease in Man Arch Path **24**: 458 (Oct.) 1937 Harkavy, J Vascular Allergy Arch Int. Med. **67**: 709 (April) 1941 Rich A R Role of Hypersensitivity in Periarteritis Nodosa as Indicated by Seven Cases Developing During Serum Sickness and Sulfonamide Therapy Bull Johns Hopkins Hosp **71** 123 (Sept) 1942 Additional Evidence of Role of Hypersensitivity in Etiology of Periarteritis Nodosa Another Case Associated with Sulfonamide Reaction ibid **71**: 375 (Dec.) 1942

# REMISSIONS IN THYROTOXICOSIS AFTER DISCONTINUING THIOURACIL

WILLIAM H BEIERWALTES M D
and
CYRUS C STURGIS M D
Ann Arbor Mich

A review of the literature has failed to reveal information which might serve to evaluate thiouracil as a possible form of treatment for permanent cure of thyrotoxicosis The main reason for this is that too few patients have been followed for a sufficiently long period to warrant definite conclusions The drug is now released for general distribution, and most physicians have the impression that it has no other use than as a preoperative form of therapy Since a review of our series of 80 patients treated with thiouracil for over two months revealed a very definite pattern of behavior, we considered that enough data were now at hand to justify a few important tentative conclusions that might be helpful as a guide in the treatment of thyrotoxicosis with this preparation

REVIEW OF THE LITERATURE

Apparently Palmer [1] is the only author who has differentiated the nodular from the non-nodular toxic goiters when determining the effect of thiouracil in the production of a therapeutic remission in patients with thyrotoxicosis It is our opinion that this differentiation is an important one, first because the nodular goiters respond less satisfactorily to thiouracil treatment, second because, although the toxic clinical manifestations of nodular goiters are more insidious, they possess less tendency to natural remissions, and third because of the recognized possibility that a certain number of adenomatous goiters will develop carcinoma It was observed by Palmer [1] that all the 9 cases of thyrotoxicosis observed by her in which there was no evidence of a recurrence of the disease after the medication had been discontinued for six months were of the diffuse hyperplastic type She also stated that thus far no patient with a nodular thyroid had experienced a remission of more than four months after treatment with thiouracil was discontinued No other information concerning these patients was supplied

Williams and Clute [2] reported 98 cases of thyrotoxicosis treated with the drug for more than four months Thiouracil was administered continuously for more than a year in 10 of these, for more than eight months in 36 and for more than four months in 52 In only 5 was the administration of the drug discontinued and their subsequent course observed during the time when all therapeutic measures were omitted One of these had been treated for six months and the rest for one year One had remained normal for a period of six months and 4 for two to three months Another patient experienced a relapse after two months Other details, such as the type of goiter and the initial basal metabolic rate were not given The 20 per cent relapse in this group was not of statistical significance One other observation of theirs also coincided with the experience of others, namely that at least 2 patients who discontinued treatment of their own accord, on three

From the Department of Internal Medicine University of Michigan
A portion of the expense of this investigation was defrayed by the Upjohn Company Kalamazoo, Mich.

1 Palmer M Virginia Hyperthyroidism and Thiouracil Ann Int. Med. **22** 335 (March) 1945

2 Williams R H and Clute H M Thiouracil in the Treatment of Thyrotoxicosis J A M A **128** 65 (May 12) 1945

separate occasions and after short periods of treatment, had recurrences in approximately one month or less

The administration of thiouracil was discontinued in 18 of 51 cases reported by Astwood [3] In 9 of these therapy had been given for only "relatively short periods" In 1, however, the treatment had been continued for as long as one hundred and fifty-one days The symptoms in all patients recurred "promptly" In the other 9 cases, on the other hand, in which therapy had been continuous for periods of six and one-half to eight months, long continued remissions occurred These patients had been followed, at the time of publication, for periods of from two to nine months Here we again see the tendency to rapid relapse of the disease following short periods of treatment, as contrasted to much longer remissions following the administration of the drug over more prolonged periods

Lastly, Barr and Schorr [4] have reported their results on 70 patients treated from two to twenty-one months Their observations again indicate that a prompt recurrence of thyrotoxicosis will occur when the preceding period of treatment has been short, and more prolonged remissions will be noted when it has been more prolonged Thus of 13 patients who had the administration of thiouracil discontinued after less than six months of treatment, 4 had relapses, whereas in only 11 of 48 patients treated for a longer period did recurrences develop In these 11 the recorded interval between withdrawal and relapse varied between one and seventeen months, 6 relapses occurring after one month The 77 per cent of the 48 patients who did not have relapses had been followed in 6 instances for an average of 6 1 months, while another 6 had been observed less than two months The type of goiter and all the initial basal metabolic rates were not noted

TABLE 1.—*Total Duration of Treatment with Thiouracil in Twenty-Nine Patients with Toxic Diffuse Goiter and Toxic Adenomatous Goiter*

| Time Followed (in Months) | Number of Patients |
|---|---|
| 18 21 | 6 |
| 10-18 | 2 |
| 12 14 | 3 |
| 9-12 | 10 |
| 6- 9 | 3 |
| 4 6 | 5 |

In summarizing this brief review of the literature pertaining to remissions of thyrotoxicosis after treatment with thiouracil has been discontinued, we find that the information thus provided is inadequate in that (1) the number of patients is too small and they have been followed for too short a period of time to provide convincing information and (2) in the majority of the patients *there is no statement concerning the type* of goiter or the height of the initial basal metabolic rate

It should be emphasized, however, that these studies have been of value, since they show that following a discontinuance of thiouracil (1) a recurrence of symptoms is apparent, almost always within a period of two months if the drug is given for only short periods, usually less than six months, (2) there is a tendency for such a therapeutically induced remission to continue throughout the period of subsequent observation if it persists for more than the critical interval of two months after the thiouracil is omitted and (3) of the patients treated adequately for more than six months 80 per cent have a remission lasting throughout the period of observation which has usually been longer than the critical two month period

### CASE MATERIAL

Our series consists of 80 patients with thyrotoxicosis who were treated with thiouracil for more than two months Eighty per cent of these patients have been given the drug initially while confined to the hospital under close observation After discharge their subsequent course has been followed at one to three month intervals in the outpatient department with clinical observations and with determinations of the basal metabolic rate and the cholesterol content of the blood While in the hospital the patients were at rest in bed and received only sedation and brewers' yeast until two determinations of the metabolic rate had been made over a period of five days Thiouracil was then given in a dosage not exceeding 0 6 Gm per day The condition of each patient was then followed with weekly determinations of the basal metabolic rates and of the cholesterol content of the blood, and with leukocyte and differential white blood cell counts, which were performed every other day When the basal metabolic rate reached approximately zero, the thiouracil dosage was reduced to 0 2 Gm per day If on the next return visit in two months the basal metabolic rate was below zero and the clinical picture coincided with this observation, the dosage was reduced to 0 1 Gm per day Furthermore, if on a subsequent visit two months or more later it was again below zero on this reduced dosage, administration of the drug was discontinued In this way the clinical response of the patient served as an indication for the discontinuance of the medication The patient was then observed in the same manner as he had been while receiving the drug in order to check the possibility of a recurrence

Of the 80 patients studied in this manner 31, or 38 7 per cent, had nodular goiters Twenty-four of the 80 patients have had a thyroidectomy Of these patients in whom thyroidectomy was performed, 20 had nodular goiters and 4 non-nodular Our policy is to operate on all patients with nodular goiters as a prophylactic measure against carcinoma of the thyroid The 11 patients with nodular goiters who have not had a thyroidectomy done as yet are still being treated with thiouracil because operation was refused,[5] the patient's condition was unsatisfactory for operation or preparation for thyroidectomy is now in progress

The 4 patients with non-nodular goiters who have been subjected to thyroidectomy, as mentioned, have had surgical treatment at their own request or because of complications associated with thiouracil administration [6]

*In our group of 80 patients there are 45 with* toxic non-nodular goiters who have not had a thyroidectomy performed It is in a study of these patients that we have a special interest because an attempt has been made in them to produce a permanent remission with thiouracil It has been possible to follow 29 of these patients for more than four months since thiouracil therapy was instituted Table 1 shows a chronological breakdown of this group

Thirteen of the 29 patients have discontinued treatment with thiouracil either against our advice or with our consent In general, our conclusions, based on

3 Astwood E. B Thiouracil Treatment in Hyperthyroidism J Clin Endocrinol 4 229 (June) 1944

4 Barr D P and Schorr E. Observations on the Treatment of Graves Disease with Thiouracil Ann Int Med 23 754 (Nov) 1945

5 Beierwaltes W H and Sturgis C C Complications Following the Administration of *Thiouracil* Am J M Sc *to be published*

our observation of these patients, are in accord with those noted in the review of the literature, namely that there is a tendency to rapid relapse of the disease after short periods of treatment, as contrasted to more persistent remissions following more prolonged administration of the drug Thus we find in table 2 that 5 or 38 per cent, of the 13 patients in whom thiouracil treatment was discontinued after an average period of only three and one-half months have had a rather prompt symptomatic recurrence of the thyrotoxic state and an elevation in the basal metabolic rate

On the other hand, in table 3 we find that 8, or 62 per cent, of the 13 patients whose thiouracil medication was omitted have had remissions persisting longer than the usual critical period of two months and, indeed, continuing to date

Our experience indicates, then, that 45 per cent of all patients with thyrotoxicosis of the type observed in a large general hospital in the Middle West could be treated with some degree of success by thiouracil alone After more than twenty-two months' experience with the drug it has been possible to discontinue its administration in 8 patients, which constitutes 22 per cent of this special group or 10 per cent of the initial series, with resultant remissions to date Undoubtedly the criteria that we have outlined for the omission of the drug are more rigid than those of other observers In our opinion, however, these rules were justified by the recurrence of symptoms in 5 patients, which number comprises 13 per cent of the selected group, or 6 per cent of the initial series, who did not follow these criteria Since over 60 per cent of those discontinuing treatment with the drug in this selected group have had no recurrence and since a reappearance of symptoms occurred in those who omitted the drug prematurely and against advice, we must conclude that our data, though possibly not statistically significant, reaffirm the results previously noted in the literature

## COMMENT

Before reaching conclusions regarding the permanence of the results attained by thiouracil medication of patients with thyrotoxicosis, it is necessary to review certain basic considerations The first of these considerations is that the natural history of untreated toxic non-nodular goiter is that of a self-limiting disease characterized by natural remissions and exacerbations In 1913, before the use of iodine in the management of the condition, Plummer[6] reviewed in detail the course of 2 917 patients with goiters operated on at the Mayo Clinic between Jan 1 1909 and Jan 1 1913 Of the patients who had diffusely hyperplastic goiters with thyrotoxicosis he said "If the average course of the intoxication be represented by a curve, the greatest height is reached during the latter half of the first year and then suddenly drops to the twelfth month In many instances it reaches the normal base line during the next six months More often it fluctuates with periods of exacerbation for the next two to four years Secondary symptoms and exophthalmos may remain, but the active course only rarely continues over four years without distinct intermissions" In 1924 Barker[7] stated that the average duration of hyperthyroidism with non-nodular goiter was about two to three years regardless of how it was treated 'medically, surgically or radiologically" In his words "You may, it is true compel a subsidence of symptoms by treatment but rarely a cure until this time has elapsed, moreover, after recovery from one attack these patients are prone to recurrences in later life" More recently Fitz[8] has emphasized this cyclic nature of both the untreated and the treated disease He discusses 1 case which clearly shows the fallacy of referring to the statement "permanent remission" This woman had a thyroidectomy for thyrotoxicosis in 1913, again in 1924, another eight months later and, finally, another in 1932 Each thyroidectomy was followed by a remission in the course of the disease

With this knowledge of the life history of the untreated disease, or even of the treated disease, one readily appreciates the necessity of first reviewing the evidence, which may suggest to some that thiouracil does more than maintain the patient in an asymptomatic state until a natural remission occurs Iodine has been used in this manner when medical treatment alone was

TABLE 2—*Recurrence of Thyrotoxicosis After Discontinuing Treatment with Thiouracil*

| Average Initial Basal Metabolic Rate | Size of Goiter | Length of Preceding Treatment Mo | Recurrence Period Mo |
|---|---|---|---|
| +35 | ++ | 1 | 1 |
| +31 | ++ | 1 | 2 |
| +65 | ++ | 2½ | 2 |
| +83 | ++ | 5 | 2 |
| +29 | + | 8 | 2½ |
| Average | | 3 5 | |

TABLE 3—*Persistent Remission of Thyrotoxicosis*

| Average Initial Basal Metabolic Rate | Size of Goiter | Length of Preceding Treatment Mo | Duration of Remission to Date Mo |
|---|---|---|---|
| +23* | 0 | 3 | 9 |
| +23 | + | 5½ | 12 |
| +21 | 0 | 6½ | 12 |
| +26 | 0 | 11 | 3 |
| +30 | + | 13 | 6 |
| +35 | +++ | 15 | 5½ |
| +29 | ++ | 15 | 4 |
| +41 | + | 10 | 2½ |
| Average | | 10 6 | 6.6 |

* Diagnosis in doubt because of hypertension of 230/90

indicated That the iodine effect on the active thyrotoxic state disappears within a short time after the drug has been withdrawn has been amply demonstrated by Means[9]

In our opinion thiouracil does have an effect different from iodine in that it may produce a change which persists for at least a period of some months after administration of the drug is discontinued The evidence in support of this consists primarily of the data already presented This shows that if there is a recurrence of the thyrotoxic state after therapy is omitted it manifests itself in the great majority of cases within the subsequent two months Thus when remissions persist longer than two months we presume, at least, that some change must have occurred, probably induced by the drug, that permits a more prolonged and more complete remission Since, as noted by Plummer, the average patient with untreated thyrotoxicosis does not experience a complete natural remission in less than eighteen months the fact that our more persistent remis-

6 Plummer, H S The Clinical and Pathological Relationship of Simple and Exophthalmic Goiter Am. J M Sc 146 790 1913
7 Barker L F Exophthalmic Goiter Internat Clin. 1 1 (March) 1924
8 Fitz Reginald A Panoramic View of Thyrotoxicosis, J A M A 125:943 (Aug 5) 1944
9 Means J H Thyroid and Its Diseases Philadelphia J B Lippincott Company 1937

sions occurred in the majority of cases with less than one year's treatment and continued in 8 cases for more than two months is convincing evidence that the remission was induced rather than spontaneous It should be remembered, however, that if treatment is continued for more than eighteen months and then discontinued, the resultant remission might well be a natural one

It has been suggested that thiouracil could not induce a relatively long remission because it produces in the gland a hyperplastic but functionally inefficient state It has been recognized that a hyperplastic state of the thyroid can exist in a patient experiencing a relatively permanent remission of his thyrotoxicosis This has been demonstrated by the structure of the remnant of the thyroid gland after thyroidectomy by Rienhoff[10] and Branch They examined sections of the thyroid gland removed several months after thyroidectomy and found the characteristic evidence of stimulation of the thyroid Even though this state of hyperplasia persists, Preston and Thompson[11] concluded that a single thyroidectomy may accomplish control of the toxic state sufficiently to avoid subsequent operations in 85 per cent of the patients

Treatment with thiouracil has the same effect as thyroidectomy, at least temporarily This is accomplished by reducing the function of the thyroid tissue by interference in the iodine concentration and oxidation process of the gland It is entirely possible that the hyperplastic state of the thyroid induced by thiouracil changes to a state of normal involution after a variable time Evidence in support of this is to be found in the report of Shirer and Cohen,[12] who observed a normal morphologic picture in a thyroid gland removed from a patient previously treated unsuccessfully for seven months with thiouracil

Further evidence of the active effect of thiouracil in producing a more permanent change in thyroid function is found in the case reported by Barr,[4] and in 1 observed in our series in which a thiouracil induced picture of myxedema recovered slowly over a period of six months after treatment with thiouracil was discontinued

In our opinion this evidence indicates that thiouracil does more than iodine in that it produces a change in the thyrotoxic state which persists after the administration of the drug is discontinued

## CONCLUSIONS

Thiouracil may be used in about one third of the thyrotoxic patients only as preoperative treatment, since these patients possess nodular goiters which might develop a malignant condition Another 7 per cent of the total number will require thyroidectomy on account of complications which occur during thiouracil therapy The most serious of these complications to be kept in mind is agranulocytosis[5] About 15 per cent of the patients with thyrotoxicosis will leave the physician's care for personal reasons of the patient, which are in some instances related to difficulties encountered in thiouracil therapy

In the remaining 45 per cent of the total group, made up of those with toxic hyperplastic goiter, thiouracil therapy may be discontinued at the end of a little over an average of ten months with the prospect that 60 to 80 per cent of the patients will experience a relatively persistent drug induced remission For this selected group, at least during the period of observation which has continued to date, this result is as satisfactory as that of subtotal thyroidectomy The majority of patients with thyrotoxicosis, however, must be treated by surgical means Those receiving thiouracil must continue treatment with the drug for indefinite periods For these reasons surgery is still the treatment of choice in the management of this condition Thiouracil is superior to iodine, however, as it is more specific in its action and induces a more complete and permanent remission in patients with this disorder In the treatment of selected cases of thyrotoxicosis, therefore, thiouracil treatment must be considered as a form of therapy which has promise, and ultimately it may prove to be as satisfactory as thyroidectomy in this group of patients

10 Rienhoff cited by Fitz[6]
11 Preston F W and Thompson W O Persistence and Recurrence of Toxic Goiter Following Subtotal Thyroidectomy Arch. Int Med. 69 1019 (June) 1942
12 Shirer J W and Cohen M The Effects of Thiouracil on the Thyroid Gland Ann. Int. Med 23 790 (Nov) 1945

# INDUSTRIAL MANAGEMENT AND OCCUPATIONAL CANCER

W C. HUEPER, M.D
New York

The term "occupational cancer" applies to malignant tumors which originate in persons during the course of and as the result of the regular and usually prolonged exercise of certain occupational activities which entail contact with some exogenous, physical or chemical carcinogenic agent acting in proper intensity Occupational cancers are in general elicited by specific factors which form an integral part of the ordinary working conditions and thus are not the result of some unforeseen, accidental injury sustained while at work

Although a few of the cancers so far recognized as of occupational origin have been known or have existed without correct recognition prior to the advent of the modern industrial era, such as the soot cancer of the chimney sweeps and the cancer of the lung of the cobalt and uranium miners in Schneeberg and Joachimsthal, the great majority of occupational cancers appeared after the start of the present industrial development and as a result of it During the last century there occurred not only a constant rise in the absolute number of these malignant growths but also a decided increase in the types of organs affected by them, in the number of exogenous occupational agents involved in their production and in the variety of manufacturing establishments in which workers were afflicted with them

An analysis of the available data on occupational cancer has shown that the type of the resulting tumor, the length of the latent period preceding its manifestation, the organ affected and the age of the person involved depend on the character of the carcinogenic agent, the type and intensity of exposure and the age of the person when the first exposure takes place The soot cancer of the scrotum found in chimney sweeps, for instance, was observed some hundred and twenty-five years ago even in children, since boys as young as 4 years were used in England at that time for cleaning chimneys The exposure to the carcinogenic soot during this operation was severe, and the degree of cleanliness among these unfortunate youth was very low When, during the middle of the last century, the English government repeatedly raised the age limit of the apprentices of this trade, there followed a gradual rise of the age range at which the scrotal cancers appeared among chimney sweeps At the same time the institution of better hygienic conditions and the improvement of working tools and of chimney construction reduced

From the Warner Institute for Therapeutic Research

the degree of exposure to soot As the result of these changes the scrotal cancer of chimney sweeps in England now appears at the same age as that found in members of the general population affected by cancer of the scrotum of unknown etiology Only the increased incidence of this particular type of tumor among chimney sweeps has remained as evidence of the action of an occupational carcinogenic agent

However, not all occupational cancers have followed such a favorable development Whenever the managers of new plants and their medical advisers have neglected to profit in the construction and operation of their establishments, from the adverse experiences previously had by other manufacturers in the same fields there has appeared some ten to fifteen years later a renewed, acute and sometimes epidemic-like occurrence of occupational cancers in these industries Such a course of events is exemplified by the incidence of cancers of the urinary bladder in workers of the aniline dye industry These tumors were first observed in 1895 in German dye works and were later found among the chemical workers of other countries, such as Switzerland, Italy, England Japan and the United States The time of appearance of cancers of the bladder of this origin followed closely the time of large scale development of chemical industries in the countries mentioned Thus the first cancers of the bladder in chemical workers of this country were noted in 1932, that is, approximately fifteen years after the American dye industry had reached large proportions Within the short period of six years thereafter almost 100 cases of this industrial cancer occurring in men of relative youth were placed on record from one single chemical concern, attesting to the presence of a relatively massive exposure of the workers to the causative agents—that is, betanaphthylamine and benzidine The full significance of this incidence figure becomes apparent from the fact that there were only about 300 cases of this particular occupational cancer reported, according to the statistics of the German government, from the entire German chemical industry within a period of forty years, that is from 1895 to 1935 Although no authentic data are available as to the occurrence and the incidence of tumors of the bladder among the workers of other American chemical concerns, the existence of such cases is known

Cancers resulting from contact with radiant energy—that is, the rays from radioactive substances and roentgen rays, illustrate strikingly the influence which the type and intensity of contact exert on the formation of the ensuing tumor It appears that the inhalation of radioactive gases or radioactive dust causes cancer of the lung, such as that sustained by miners in Schneeberg and Joachimsthal, whereas the local action of radioactive and roentgen energy on the skin causes the development of cancers of the skin, such as those seen in radiologists, roentgenologists, their assistants, and in x-ray tube manufacturers, physicists and engineers The ingestion of radioactive matter, on the other hand, causes the development of cancers of the bones, such as those observed several years ago in girls who applied luminous paint to dials However, in more recent years cancers of the blood, known as leukemias, have been noted in increasing number among physicians and radium chemists exposed frequently to relatively small doses of roentgen rays or rays from radioactive matter These deleterious effects on the blood-forming tissue have their cancerous equivalents in the leukemias observed among persons exposed to benzene This organic solvent like roentgen rays and rays from radioactive substances, causes a destruction of the blood-forming tissue and results in a fatal anemia when acting in large doses, but it may elicit leukemic responses when acting in small doses and in suitable intervals on the blood-forming tissue

In most cases of industrial cancer, experimental research on cancer has succeeded in demonstrating the specific carcinogenic agent involved by using these agents to reproduce similar tumors in animals Definite proof of carcinogenic properties have thus been obtained for arsenic, tar, pitch, soot, crude mineral oil, crude paraffin oil, anthracene oil shale oil, some fuel and lubricating oils, creosote, benzene, aromatic amines, ultraviolet rays, roentgen rays and rays from radioactive substances In recent years, however, cancers of the lung have been noted among workers in chromate plants, nickel refineries and asbestos-manufacturing establishments These tumors are either suspected or recognized as being of occupational origin An interesting feature of these cancers is represented by the fact that the cancers of the lung in chromate workers were observed only in several German plants, while the cancers of the lung in nickel refinery workers were found exclusively in English plants where the nickel carbonyl process was used Although the same process is employed in some nickel refineries located in Canada and the United States, cancers of the lung have not been noted among the workers employed here if full credence can be given to the meager information available on this matter Cancer of the lung in asbestos workers, on the other hand, has been reported from Germany England and the United States The actual causative agent in the production of cancers of the lung in chromate nickel and asbestos workers is still unknown

The rapid increase in the number of recognized and suspected agents causing industrial cancers which have occurred during the last forty years makes it more likely that new and heretofore unsuspected carcinogenic agents of an industrial nature will be discovered during the coming years Such a development is foreshadowed by observations made during recent years by American investigators It was found that cancers of the liver developed in mice exposed to carbon tetrachloride, a commonly used organic solvent The inhalation of ethyl carbonate (urethane), which is employed for anesthetic purposes, resulted in the appearance of cancers of the lung in mice Tumors of the bladder were formed in rats fed diethylene glycol, which is one of the newer widely used organic solvents Tumors of the peripheral nervous tissue were seen in the ears of rats to which crude ergot, a drug extensively used in obstetric practice, had been fed over long periods

Occupational carcinogenic agents produce cancers in numerous organs Cancers of the skin are elicited by contact with arsenicals, tar, pitch, soot or carbon black, crude mineral oil, lubricating oil, shale oil, crude paraffin oil, anthracene oil, solar and ultraviolet rays roentgen rays and rays from radioactive substances The number of industrial cancers of this organ runs into several thousands Cancers of the nasal passages have been noted after occupational exposure to chromates, nickel carbonyl and radioactive substances Cancers of the bronchi and lung have been traced to an industrial exposure to arsenicals, chromates, nickel carbonyl, soot, tar, asbestos and radioactive substances Cancers of the lip have appeared following contact with tar and after prolonged exposure to solar rays, while cancers of the mouth and of the tongue seem to be etiologically related to an industrial contact with tar and arsenicals. Cancers of the bladder, of the ureter and of the kidney have fol-

lowed occupational exposures to aromatic amines such as naphthylamine, benzidine and aniline and occasionally to tar and arsenicals Cancers of the blood, called leukemias, have resulted from contact with benzene, roentgen rays and rays from radioactive substances The latter are also responsible for the occurrence of cancer of the bones

The exposure time necessary for eliciting cancerous reactions in exposed workers varies greatly with the type and potency of the carcinogenic agent, with the intensity of exposure and with the susceptibility of the individual The range is from six months to three to four decades, while the average exposure time is from five to fifteen years In most instances occupational cancers appear in a younger age group than that found for the same cancer of unknown etiology in the general population Age and sex factors do not, as a rule, play any role in the production of industrial cancers The incidence rate of these tumors shows decided variations not only for the different carcinogenic agents but also for the different operations and is directly proportional to the potency of the carcinogenic agent and the intensity and length of exposure Cancer of the bladder thus affects from 30 to 90 per cent of the severely exposed dye workers, while cancer of the lung kills from 75 to 80 per cent of the cobalt miners of the Schneeberg mines Carcinogenic agents eliciting occupational cancers of the skin, on the other hand, have a lower morbidity and mortality rate because the precancerous changes of the skin preceding the appearance of the tumors gives ample warning, as a rule, of the threatening malignant condition while the ready accessibility of the skin to therapeutic measures enhances the prognosis of cure It is of a certain importance from an industrial point of view that the skin of colored workers is less susceptible to the cancerigenic action of solar rays and of tar pitch and similar substances than that of white, and especially of fair-skinned, workers

The total number of occupational cancers placed on record is small when compared with the large number of cancers of unknown etiology It is obvious, however, that the latter group contains an undetermined number of cancers of occupational origin, as many of them either are not properly recognized or are not made a matter of public information

Although today a great deal of evidence on the causes of occupational cancer and the conditions under which it develops is available, relatively little effort has been made to spread this knowledge among parties who are vitally concerned with this information, namely the managers and physicians of industrial concerns, although they carry the main load of controlling this preventable type of cancer This situation is the more deplorable because the present rapid development of industry tends to extend the hazards of the known industrial carcinogenic agents while at the same time creating new ones which may cause the appearance of cancers ten to twenty years hence, unless concerted efforts are made in time to discover and control such dangers by appropriate countermeasures It is essential that industry should devote considerably more effort than heretofore to determining the cancerous or noncancerous nature of such of its numerous products as may be suspected on general grounds of cancerigenic properties As occupational cancers are chance experiments on cancer in man, conducted by modern industry on a large scale, which render direct reliable and conclusive information as to the cause and mechanism of human cancer, the investigative study of these conditions deserves a great deal more consideration than it has been given in the past The experience gained from the study of occupational cancer, and especially of its causative mechanism and its prevention and control, should prove of great value in the future in fighting cancer in general at its source, that is, it should aid in the elimination of the causes of cancer before they are capable of initiating the malignant growths In waging this campaign it should be realized that a well planned, systematic and, probably, prolonged attack must be launched if worth while results are to be expected However, I am convinced that with the necessary perseverance and determination this battle against occupational cancer in particular and against cancer in general can be won, if every one concerned aids in the effort

If industry can be persuaded to finance the foundation and maintenance of an organization exclusively devoted to the study of the causation and control of industrial cancers, not only will industry be the main beneficiary of this move, but also it will greatly advance the fight against cancer in general, which is of direct concern to every one, unless it is forgotten that every tenth adult dies from this disease

## RECOMMENDATIONS FOR THE CONTROL OF OCCUPATIONAL CANCER

1 Plant management officials, industrial workers and members of the medical profession must be made increasingly aware of the fact that numerous agents of our new industrial environment possess carcinogenic properties

2 Construction and chemical engineers should design buildings, machinery and apparatus with this hazard in mind—that is, they should try to favor the closed system of production, the installation of adequate exhaust ventilation, the use of building material which does not absorb carcinogenic substances, the avoidance of nooks, crevices and ledges where carcinogenic dust can be deposited, and the employment of wall and floor covering that can be thoroughly and repeatedly cleaned with water and steam used in connection with cleansers

3 Adequate provision must be made for the removal of carcinogenic material from waste gases, fumes, waters, dust and the like before these waste products are released into the air, public waters or other channels affording the contact of the general population with carcinogenic industrial wastes

4 Carcinogenic material must be packed in leak proof containers

5 Similar appropriate protective technical measures should guard the persons handling roentgen rays and radioactive substances from being exposed to deleterious quantities of radiant energy

6 These measures must be sufficiently extensive to protect also persons working or living in the immediate environment where physical or chemical carcinogenic agents are handled

7 Whenever the use of carcinogenic material in industry cannot be eliminated by the use of substitutes, workers should be protected from contact with carcinogenic agents by suitable protective clothing, gloves masks and the like and by the enforced observance of adequate hygienic measures, such as the use of washing facilities, showers and special rooms for storing street clothes and for taking meals and frequent changes of working clothes

8 Frequent and experienced medical supervision of the workers exposed to carcinogenic material is imperi-

tive for effective control of the hazard This supervision must also extend to workers who have left the employment after having been exposed to carcinogenic agents for a sufficiently long time or who have been shifted to noncarcinogenic operations

9 A nationwide survey by skilled investigators should be made to determine the actual scope of the problem of industrial cancer Representatives of management, industrial physicians, members of the Public Health Service and of departments of industrial hygiene and possibly also representatives of the workers should participate in such a survey

10 Precancerous and cancerous industrial diseases should be made notifiable to the departments of industrial hygiene of the various states

11 Adequate compensation laws for occupational diseases should be passed for the protection of both management and workers against excessive awards or inadequate compensation, respectively, for claims that result from the production of occupational cancers

12 Government inspectors should examine all industrial plants at regular intervals to determine whether or not they meet the essential safety requirements necessary for minimum protection of the workers against the hazards of industrial cancer

13 An institute for the study of industrial cancer should be founded and should be attached to or coordinated with one of the existing large cancer research centers, in order to provide for proper integration of the results obtained by such investigations with those produced by cancer research in general Such an organization would serve industry for consultative and investigative purposes on matters of occupational cancer

14 A committee composed of industrial physicians, cancer research workers, industrial physicists, chemists and engineers, compensation lawyers, members of the Public Health Service and of state departments of industrial hygiene, representatives of industrial management and union officials should be created, whose members should act as a body of consultants and special experts to the Institute for the Study of Occupational Cancer

---

**Art and Anatomy**—Among the great artists who engaged in dissection were Michael Angelo Raphael and Albrecht Dürer Greatest of all was Leonardo Da Vinci (1452-1519) This gifted and versatile artist, a man centuries ahead of his time in original ideas who visualized aviation and modern methods of warfare and who discussed many problems of engineering which were later put into practice, also made discoveries in anatomy such as the maxillary sinus and the moderator band of the heart. He was the first to demonstrate the ventricles of the brain by wax injections and to depict correctly the fetus and its membranes within the uterus Originally he set out to study the bones and muscles in their relation to art, but his interest grew, and he pursued his investigation of the deeper parts, the viscera, the brain the blood vessels and especially the heart. He intended to publish a great work on anatomy in collaboration with Marco Antonio della Torre of Pavia, but this project was abandoned owing to the death of his co worker It is only within recent years that the value of Leonardo s contribution to anatomy has been fully appreciated He made hundreds of sketches and manuscript notes, many of which are preserved in the Royal Library at Windsor and have only recently appeared in print. This apostle of naturalism in art must also be regarded as a leading pioneer in anatomy—Guthrie, Douglas A History of Medicine Philadelphia J B Lippincott Company 1946

# Clinical Notes, Suggestions and New Instruments

## ACUTE SYPHILITIC NEPHROSIS SUCCESSFULLY TREATED WITH PENICILLIN

J H BARR JR. M D H N COLE, M D J R DRIVER M D, ROSCOE D LEAS, M D, MAX MILLER M D,
and
L. G STRAUSS M D
Cleveland

The nephrotic syndrome is defined as a clinical symptom complex characterized by profuse proteinuria, hypoalbuminemia and edema without serious renal insufficiency or hypertension It may be seen in a variety of conditions and has been observed in connection with acute syphilis [1]

### REPORT OF CASE

*History*—J Y, a white man aged 31 was first admitted to University Hospitals July 18, 1945 with a chief complaint of generalized edema and genital ulcerations of approximately one week's duration

In the early part of June 1945 several superficial lesions developed in the coronal sulcus of the penis These gradually enlarged, with subsequent ulceration July 2 he was seen by one of us (L G S), who made the diagnosis of chancroid of the penis and started the patient on sulfathiazole two tablets four times daily This was continued until July 6 when the result of the serologic test for syphilis drawn at the first interview was reported as strongly positive. On July 7 he was given 0 04 Gm of oxophenarsine hydrochloride (Mapharsen) intravenously, with no immediate reaction However eight to twelve hours later he had a shaking chill and temperature elevation to 104 F Within twelve hours the patient was again symptom free July 10 another injection of 0 02 Gm of oxophenarsine hydrochloride was given intravenously, without ill effect. He returned on July 15 and at that time had moderate edema of the face, legs penis and scrotum and complained of general malaise anorexia and low back pain No urine examination was done at this time. On July 17, when he was seen again, the edema of the face, legs, penis and scrotum was more severe The urinalysis revealed 4 plus proteinuria and an occasional red blood cell On July 18 the edema was less severe and the urine contained only an occasional red blood cell He was then referred to University Hospitals for study

*Physical Examination*—The temperature was 37 C (98.6 F), pulse rate 82, respiratory rate 18, blood pressure 124/72, weight 78 1 Kg He was well developed and well nourished He did not appear to be in distress There were no abnormalities of the skeletal system The mucous membranes were of normal color with no abnormal lesions There was slight facial edema, especially noticeable about the eyes There vas no apparent edema of the upper extremities There was moderate pitting edema of the sacrum, external genitalia, thighs and legs The skin was normal in color and texture, with no abnormal lesions There was a well defined, firm, freely movable nontender lymph node in the right inguinal region measuring 2 by 2 cm There were two smaller lymph nodes similar in character in the left inguinal region. There was no other lymphadenopathy

There was moderate periorbital edema The conjunctivis were pale. The corneas and scleras were normal The pupils were equal and regular, measured 4 mm and reacted normally

---

From the Department of Dermatology and Syphilology and the Department of Medicine of University Hospitals of Cleveland and Western Reserve University School of Medicine

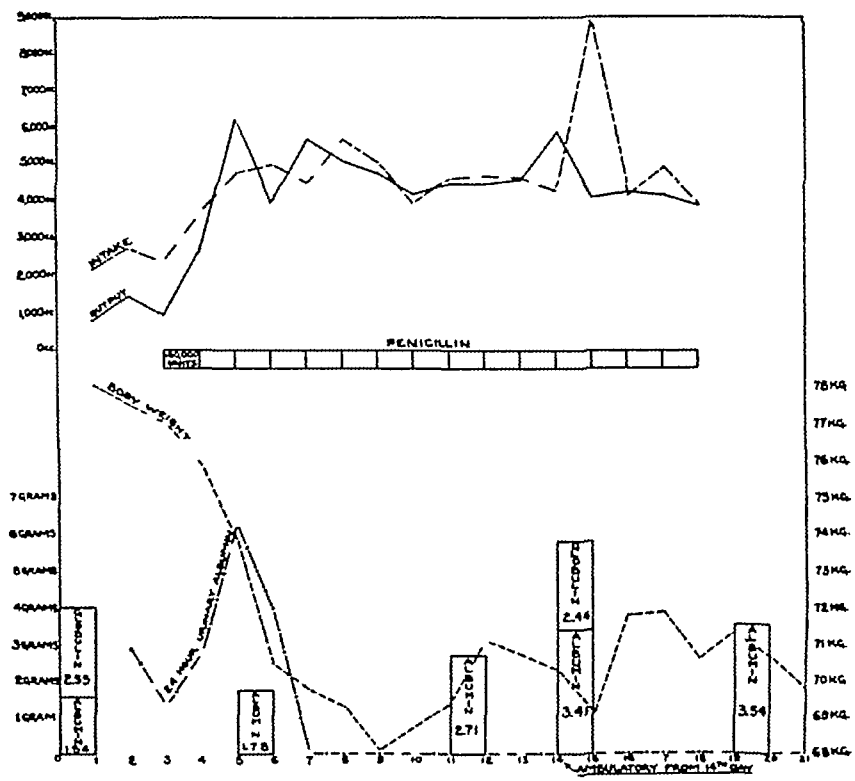
The work described in this paper was done under a contract, recommended by the committee on medical research between the Office of Scientific Research and Development and the Western Reserve University

1 Cole H N Acute Syphilis of Kidney Am J Syph 4 46 (Jan) 1920 Baker B M., Jr The Relation of Syphilis to Nephritis Bull Johns Hopkins Hosp 65 196 1935 Herrmann G and Marr W Clinical Syphilitic Nephropathies Am J Syph & Neurol 19: 1, 1935 Moore, J E The Modern Treatment of Syphilis ed 2 Springfield Illinois & Baltimore Charles C Thomas 1941 Stokes, J H Beerman Herman and Ingraham N R Jr Modern Clinical Syphilology ed 3 Philadelphia & London W B Saunders Company 1944, p 1177

to light and in accommodation The extraocular muscles were normal Ophthalmoscopic examination revealed that the fundi and disks were normal Mouth and throat did not show abnormality

The thyroid gland was normal There was no evidence of venous distention Tracheal tug was not present The chest was normal in size and contour The percussion note was resonant throughout and the breath sounds were normal in intensity and character There were no rales The heart was not enlarged The apex was percussable 10 cm from the midsternal line in the fifth intercostal space. The sounds were normal in intensity and character There were no murmurs The rhythm was regular The peripheral vessels were normal The liver, spleen and kidneys were not palpable There was slight pitting edema of the lower abdominal wall

The scrotum and penis were moderately swollen In the coronal sulcus there were four small shallow superficial tender ulcerations ranging in size from 0 5 to 0 9 cm with well defined irregular slightly undermined borders The bases were clean but covered with a thin seropurulent exudate The tone of




Observations in the case reported

the rectal sphincter was normal There were no hemorrhoids The prostate was asymmetrical The left lobe was abnormally large. The right lobe was normal in size. The gland was freely movable, smooth and normal in consistency

The cranial nerves all functioned normally Muscle strength was normal Vibratory, pain and temperature sensations were all normal The deep tendon reflexes were all equal and normally active There were no pathologic reflexes

*Laboratory Examinations*—The hemogram was normal The urine was yellow and clear, with a specific gravity of 1 030, the reaction was acid albumin was 4 plus, tests for sugar were negative and the benzidine test was negative. Microscopic examination revealed 1 or 2 red blood cells per high power field on the first examination only, a few white blood cells per high power field and a few hyaline casts per high power field The twenty-four hour protein excretion was 2 9 Gm. The twelve hour Addis count revealed a specific gravity of 1 027, 1,600 000 white blood cells and 800,000 red blood cells The serologic test for syphilis revealed a 4 plus Wassermann, 4 plus Kline diagnostic and Kline exclusion of 160 units (approximately 40 Kahn units) Total serum proteins were 4 09 Gm per hundred cubic centimeters, albumin was 1 54 Gm per hundred cubic centimeters, globulin was 2 55 Gm per hundred cubic centimeters and the albumin-globulin ratio was 0 60 Gm per hundred cubic centimeters Serum cholesterol on the first hospital day was 433, on the eleventh hospital day 380 and on the nineteenth hospital day 267 mg per hundred cubic centimeters Urea clearances were 140 per cent of normal the first hour and 82 per cent the second hour Blood urea nitrogen was 10 5 mg per hundred cubic centimeters and nonprotein nitrogen 30 8 mg per hundred cubic centimeters. Lumbar puncture gave normal results X-ray examination disclosed no evidence of a pathologic process in the chest The heart and aorta were normal in size and contour Excretory urograms revealed that diodrast excretion was normal The kidneys were questionably enlarged with no other evidence of abnormality The basal metabolic rate was 4 per cent An electrocardiogram was normal Bacteriologic examinations revealed no Hemophilus ducreyi organisms Repeated dark field examinations of penile lesions revealed no Treponema pallidum Intradermal tests with Frei and Ducrey antigens were negative in forty-eight and seventy-two hours Urethral smear and culture following prostatic massage were negative for Neisseria gonorrheae organisms

On the basis of the history and the clinical and laboratory findings the diagnosis of early acquired mucocutaneous syphilis with associated syphilitic nephrosis was made The patient was given a high protein, low salt diet and was placed on bed rest The proteinuria decreased and diuresis occurred with a 1 Kg weight loss within the first three hospital days Penicillin sodium 20,000 units every three hours intramuscularly for a total of 2 400,000 units in a fifteen day period was started on the third hospital day Improvement in renal status was spectacular, with complete disappearance of edema, a weight loss of 10 Kg and only minimal proteinuria six days after institution of penicillin therapy

On the twelfth hospital day the diuresis was complete and the weight was maintained between 68 and 70 Kg throughout the hospital stay Urinalyses, kidney function tests and clinical examinations were all normal at this time and remained so throughout the hospital stay The penile lesions were completely healed on discharge on the twenty-second hospital day

*Subsequent Course*—Blood pressure and urinalysis at weekly intervals after discharge from the hospital remained within normal limits Clinical examinations and blood serologic tests at monthly intervals showed rapid reversal of the positive serologic test for syphilis to negative.

The patient was readmitted to University Hospitals on Nov 1, 1945, an interval of approximately three and one half months since his discharge. At this time physical examination gave normal results A reevaluation of renal function including urinalysis urea clearances, twenty-four hour Mosenthal concentration dilution test, twenty-four hour Addis count, twenty-four hour urinary protein excretion and serum cholesterol examinations were all normal The patient's weight at this time was 73 9 Kg and his serologic test for syphilis was negative.

## COMMENT

It is our opinion that the diagnosis of syphilitic nephrosis is highly probable in this case It is certain that the picture presented could hardly have been the result of arsenical therapy since trivalent arsenic is usually hepatotropic rather than nephrotropic and in the latter case produces a hemorrhagic nephritis Nor did the symptomatology during the four days of sulfonamide therapy make one think of a sensitivity reaction due to sulfathiazole On the other hand, the patient had a penile lesion, an accompanying nephrotic syndrome and positive sero

logic test for syphilis The diagnosis seemed to be confirmed by his response to penicillin therapy, as indicated by the rapid weight loss, the decline in twenty-four hour urinary protein excretion, the increase in the albumin content of the blood and complete cure in a ten day period, a sequence of events distinctly unusual in any type of adult 'lipoid" nephrosis

In the past it has been found that acute syphilitic nephrosis was hardly amenable to mercury therapy and many of the patients died With trivalent arsenical therapy, results were much better though far from perfect Penicillin therapy theoretically should be ideal for this condition as there have been no reports of renal irritation following its administration This seemed to be true in the case reported

It would, of course, have been desirable to have a pretreatment urinalysis In addition it must be noted that a slight (1 Kg) weight loss occurred in the first two hospital days on bed rest and low salt diet alone The other evidence, however, is so strong that we believe it is justifiable to make the diagnosis of acute syphilitic nephrosis To date the patient has remained clinically well for a period of three and one-half months and the serologic test for syphilis has rapidly reversed from 40 Kahn units to negative.

SUMMARY

A white man having a genital lesion, the nephrotic syndrome and a positive serologic test for syphilis was successfully treated with penicillin Penicillin is probably the ideal agent for the treatment of acute syphilitic nephrosis [2]

1352 Hanna Building, Cleveland 15

# Council on Foods and Nutrition

## ACCEPTED FOODS

*The following additional foods have been accepted as conforming to the Rules of the Council on Foods and Nutrition of the American Medical Association for admission to Accepted Foods*

JAMES R. WILSON, M D, *Secretary*

### PREPARATIONS USED IN THE FEEDING OF INFANTS (*See* Accepted Foods 1939, p 156)

**Beech Nut Packing Company Canajoharie N Y**

BEECH NUT STRAINED PINEAPPLE PUDDING contains milk (raw whole) unsweetened pineapple white rice sugar cornstarch whole eggs egg yolks salt and water

*Analysis* (submitted by manufacturer) —Total solids 22 40% moisture 77 60% ash 0 68% fat (ether extract) 0 86% protein (N × 6 25) 1 70% crude fiber 0 04% carbohydrates (other than crude fiber) 19 12% calcium 0 049% phosphorus 0 059% iron total 0 32 mg per hundred grams iron available (bipyridyl method) 0 30 mg per hundred grams copper 0 07 mg per hundred grams

*Calories* —91 per hundred grams 26 per ounce

| *Vitamins*— | Per Hundred Grams |
|---|---|
| Vitamin A total | 88 U S P units |
| Ascorbic acid | 0.26 mg |
| Thiamine | 0 030 mg |
| Riboflavin | 0 055 mg |
| Niacin | 0 58 mg |

**Clapp's Baby Food Division American Home Foods Inc., Rochester N Y**

CLAPP'S INSTANT OATMEAL is composed of whole oatmeal non fat dry milk solids dried brewers yeast calcium phosphate table salt and iron ammonium citrate.

*Analysis* (submitted by manufacturer) —Carbohydrate 71 5% protein (N × 6.25) 16 3% fat (ether extract) 1.2% ash (total minerals) 4 8% crude fiber 1 0% moisture 5.2% calcium (Ca) 820 mg per hundred grams phosphorus (P) 670 mg per hundred grams iron (Fe) 30 mg per hundred grams copper (Cu) 0 8 mg per hundred grams.

*Calories* —103 per ounce

| | | |
|---|---|---|
| *Vitamins* —Thiamine ($B_1$) | 1 0 mg | per hundred grams |
| Riboflavin ($B_2$) | 0 3 mg | per hundred grams |

2 The results which have been presented in this paper must be interpreted in light of the fact that from June 1943 the date of inception of the study to the present commercial penicillin has been a changing mixture of various substances. The content of impurities has gradually decreased as potency in terms of units per milligram has increased The relative amounts of the several identified penicillin fractions C, F X and K have likewise varied from time to time Those two changes and perhaps others suggest that therapeutic efficacy may not have remained constant and that it may be significantly different today from what it was originally It is not now possible to assess the extent to which these changes may have affected the results here reported

**Libby McNeill & Libby Chicago**

LIBBY'S STRAINED AND HOMOGENIZED CUSTARD PUDDING contains water sweetened condensed milk whole eggs corn starch wheat flour and vanilla concentrate.

*Analysis* (submitted by manufacturer) —Total solids 31 18% total moisture 68 82% total ash 0 76% protein 3 66%, fat (ether extract) 3 44% crude fiber 0 87% salt 0 36% carbohydrates (by difference) 23 42% iron 0 00038% calcium 0 0715% phosphorus 0 122%

*Calories*—140 per hundred grams

| *Vitamins*— | Per Hundred Grams |
|---|---|
| Thiamine | Trace |
| Riboflavin | 0 141 mg |
| Vitamin A | 425 international units |

# Council on Pharmacy and Chemistry

## REPORT OF THE COUNCIL

*The Council has authorized publication of the following statement*

AUSTIN SMITH, M D, *Secretary*

### RUTIN

Recent newspaper articles announcing Rutin as a 'cure" for high blood pressure, based on a release from the United States Department of Agriculture, have again demonstrated the inadvisability of premature publicity concerning new medical discoveries As a result of these articles the office of the Council on Pharmacy and Chemistry has received numerous inquiries concerning the properties and availability of this new drug

The only published report in a scientific periodical about the clinical use of rutin at the time this statement was prepared, is a brief note by Griffith, Couch and Lindauer (*Proc Soc Exper Biol & Med* **55** 228 [March] 1944) describing preliminary observations on 14 patients with increased capillary fragility treated with rutin. The authors concluded that in certain cases rutin appears to have the property of decreasing capillary fragility in subjects in whom this fragility is initially increased"

Rutin is a glucoside found in a number of plants, the principal sources being tobacco and buckwheat Laboratory investigations have been conducted by J F Couch and his associates at the Eastern Regional Research Laboratory of the United States Department of Agriculture at Chestnut Hill, Pa. The clinical work on rutin has been done chiefly at the University of Pennsylvania under the direction of Dr J Q Griffith Jr Although several firms are interested, no commercial production of rutin has yet been made.

Although newspaper accounts state that rutin is a treatment for high blood pressure, the Agriculture Department release stated that, 'according to clinical observations at the Medical School of the University of Pennsylvania rutin is effective in the treatment of conditions arising from high blood pressure associated with increased capillary fragility' This is obviously quite different from saying that rutin is a treatment or 'cure" for high blood pressure. Furthermore, rutin has not been demonstrated to have any effect on the blood pressure of animals or man Also so few data have been presented on variability of capillary fragility in untreated cases of hypertension that assessment of the effect of therapeutic agents is still hazardous

Based on the meager amount of scientific evidence that has been available, it is unfortunate that the hopes of thousands of sufferers from hypertension have been raised by irresponsible and premature publicity Increased capillary fragility is not a common complication of hypertension, and the vascular accidents which are frequently the serious sequelae to this disease may not be due to alterations in capillary resistance. Furthermore, the methods of measuring capillary resistance are crude, and workers in this field are not agreed on the reliability of any of the methods of measurement now employed.

In considering the reports on rutin it is well to keep in mind the experience with "Hesperidin," or "vitamin P," which was alleged several years ago to increase capillary resistance. Carefully controlled experimental and clinical studies on this substance failed to substantiate the claims advanced by the original proponents (Scarborough, Harold *Lancet* **2** 610 [Sept. 10] 1938) It is to be hoped that history will not repeat itself in the case of rutin

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - CHICAGO 10, ILL

Cable Address Medic Chicago

Subscription price Eight dollars per annum in advance

*Please send in promptly notice of change of address giving both old and new always state whether the change is temporary or permanent Such notice should mention all journals received from this office Important information regarding contributions will be found on second advertising page following reading matter*

SATURDAY, JUNE 29, 1946

## THE HEMAL NODES

In man and in certain of the lower vertebrates nodal collections of lymphoid cells occur, they may be classified as those provided with lymph sinuses, or the lymph nodes proper, and those provided with blood sinuses The latter are variously known as hemolymph nodes, splenolymph nodes or more simply and better, perhaps, as hemal nodes Embryologically the hemal nodes are vascular structures that have become modified in the process of development by the interposition of focal collections of lymphocytes in the meshes of a reticulum derived from the walls of blood vessels The hemal nodes are most numerous and best developed in ruminants, particularly sheep, and are scantiest in man They are commonest in the immediate vicinity of large blood vessels, especially the aorta and its branches notably around the splenic and renal arteries They may be found in the prevertebral and neighboring adipose tissues from the neck to the pelvic inlet as reddish or brownish red bodies which seldom are larger than a few millimeters in their longest diameter

Anatomically, the exact nature of the hemal nodes has not been determined, the preponderance of evidence seems to favor the view that they are more nearly related to the spleen, structurally and otherwise, than to the lymph nodes proper According to another view they are not organs *sui generis* but a system of accessory spleens Evidence of relationship to the spleen is furnished by Tizzoni,[1] who, after experimental splenectomy in the dog, noted the occurrence of minute reddish nodules in the abdominal fat that he interpreted, microscopically, as newly formed splenunculi Similar results have been obtained by Winogradow [2] and by Warthin,[3] the latter however designating the bodies in question as hemolymph nodes although recognizing their close structural and functional resemblance to the spleen

Mosler [4] found innumerable small, circumscribed, reddish nodules scattered through the omentum and mesentery in a dog ten months after splenectomy These closely resembled the structures identified by Tizzoni in animals similarly treated as newly formed masses of splenic tissue In Mosler's animal the microscopic examination was made by Roth, who interpreted the reddish bodies as neoplasmic formations and termed them "hemorrhagic telangiectatic lymphomata" In certain lower forms of life the spleen is a divided organ and is widely distributed through the abdomen With some of the invertebrate fish the spleen is strewn through the subserous tissues of the gastrointestinal tract, while in slightly higher forms it becomes separated and distributed in the tissues that run parallel with the stomach and intestine In still higher fish, particularly among the selachians, the spleen consists of more or less completely separated nodules, a fact which tends to explain the occurrence of accessory spleens in man Accessory spleens numbering one or two to a dozen or more or, as in Albrecht's case, four hundred, have been found in human beings Albrecht noted that the splenunculi were highly vascularized, standing out as reddish or brownish red bodies which at first glance suggested the presence of a metastasizing tumor Microscopically these were found to be plentifully supplied with lymphoid collections, their appearance to the naked eye and histologically thus simulating that of the hemal nodes

Functionally, the hemal nodes are active in the destruction and phagocytosis of red blood cells They seem to provide mechanisms of protection against certain infections, especially in cattle, among them forms of piroplasmosis known as African East Coast (hemoglobinuric) fever and as Texas fever, in both of which the spleen is diseased and the hemal nodes are hypertrophied In East Coast fever Meyer was able to transmit the infection to susceptible animals by inoculations from hypertrophic hemal nodes even in circumstances in which parasites could not be demonstrated in the blood or lymph nodes of the same animal in which the hemal nodes were hypertrophic According to Warthin [5] it is not probable that the hypertrophy of hemal nodes which occurs in Texas fever immune steers is a compensatory process He pointed out that in other diseases of cattle corresponding hypertrophy of the hemal nodes does not occur even when the spleen is still more extensively diseased and hemolysis is more pronounced than in Texas fever He believed that hypertrophy of the hemal nodes in Texas fever immune steers is a protective reaction against latent infections by piroplasmas which are localized in the nodes themselves, as they are in the closely related if not identical East Coast fever Unfortunately, only formaldehyde fixed tissues from Texas fever immune animals were

1 Tizzoni cited by Mosler Ueber die Folgen der milzextirpation Deutsche med Wchnschr **10** 337 1884

2 Winogradow K Ueber die Veranderungen der Lymphdrusen und der Knochenmarko nach de Milzextirpation, Centralbl f Deutsche med Wissensch. **20** 900 1882

3 Warthin A. S The Changes Produced in the Hemolymph Glands of the Sheep and Goat by Splenectomy Hemolytic Poisons and Hemorrhage J M Research **7** 435 1902

4 Mosler Ueber die Folgen der Milzextirpation Deutsche med. Wchnschr **10** 337 1884

5 Warthin A S Hypertrophy of the Hemolymph Nodes in Texas Fever Immunes J Infect Dis **22** 331 1923

available to Warthin, so that inoculation experiments could not be made In any event it appears that the anatomically inconspicuous hemal nodes are organs of considerable importance

## ANTHALLAN AND HYPERESTHETIC RHINITIS

Recently newspaper and radio publicity has been given to a report [1] of use in the treatment of 42 patients with "hyperesthetic rhinitis" of a new drug, "Anthallan" Anthallan is a benzofuran derivative, other information on its chemical or pharmacologic properties has apparently not been published, it is said to be marketed by the Medico Chemical Corporation of New York City

The author of the report claims to have coined the term 'hyperesthetic rhinitis" to cover cases of rhinitis in which there is an element of hypersensitivity of the nasal mucosa," symptoms of excessive nasal discharge, excess sneezing and nasal obstruction It is difficult to perceive wherein these cases differ from those which have heretofore been grouped under the term 'vasomotor rhinitis" or "hay fever" Certainly it is unwise to introduce a new term into a field already distinguished by a multitude of ill defined conditions to which a confusing variety of names has been assigned

Appraisal of the effectiveness of anthallan from the treatment of the 42 patients who form the clinical material of this report is difficult The results are obscured by a complicated system of assigning numerical values to the symptoms of the patient, then averaging these and comparing these averages with those derived from similar numerical values assigned at the end of treatment The differences are expressed in percentage of improvement The elements which were assessed by this statistical process were the patient's statement about his symptoms, the color of the mucous membrane, the amount of breathing space and the amount of visible secretion in the nose In a masterly understatement the author admits that "numerical evaluation does not always express the whole clinical impression of the patient's condition " Therefore he assigns similar numerical values to a diagnostic criterion termed a "medical estimate '

This attempt to measure accurately factors which are not measurable is absurd The result of the statistical manipulations described is to make impossible any scientific appraisal of the effects, if any, produced by the drug The statement is made that "every change in the nasal manifestations observed during the period or treatment with anthallan can be attributed to the influence of the drug" The only justification for this statement appears to be that "the anthallan treatment period was considerably shorter than the period during which the manifestations had existed"

The laboratory studies reported included observations on red blood cell counts, white blood cell and differential counts, blood glucose, blood nonprotein nitrogen, electrocardiogram and nasal smear eosinophils Significant changes in these well recognized factors were not observed

Notably lacking in this report are parallel studies on control patients or, in fact, any controls whatsoever There does not seem to be any basis in the author s results for the recent newspaper and radio publicity given anthallan as a new "cure" for hay fever Until more convincing and scientifically controlled investigations are reported, the decision regarding the efficacy and value of anthallan must be deferred

1 Ghselin A D Jr The Treatment of Seasonal and Nonseasonal Hyperesthetic Rhinitis with Anthallan Bull New York Acad. Med 22: 320 (June) 1946

## TOXICITY OF STREPTOMYCIN

Demonstration by Mushett [1] that parenteral administration of streptomycin to susceptible laboratory animals often produces fatty metamorphosis of the kidney and liver parenchyma led Hettig and his associates [2] of the University of Michigan to test its possible toxic effects on the renal, hepatic and hematologic functions of man

Nine patients ranging in age from 15 to 61 years served as his subjects A total dosage of streptomycin of 1.8 million units was administered in divided doses over a period of forty-eight hours or a dosage as high as 72 million units over a period of fifty-six days Six of the 9 patients received the antibiotic by intermittent intramuscular injections at intervals of three to four hours Two patients were given the drug by continuous intravenous infusion and 1 by continuous hypodermoclysis Renal and hepatic function tests were performed just prior to administering the first dose and within ninety-six hours of the final dose Two additional patients both desperately ill of tuberculous meningitis, received 3 to 7 million units of streptomycin before death Postmortem microscopic examination did not reveal any liver or kidney lesions that could be attributed to the action of streptomycin Impairment of hepatic or renal function was not detected by the series of bromosulfate, cephalin cholesterol flocculation and urea clearance studies Neither was a significant decrease of the hemoglobin or erythrocyte levels encountered in any case

Although evidence of serious organic toxicity was not obtained, undesirable reactions were recorded with certain patients These reactions were of two main varieties The first (2 patients) was characterized by facial flushing, headache and fall in blood pressure, a clinical picture resembling the classic response to histamine The second reaction (4 patients) consisted of

1 Mushett C W Personal communication (to be published)
2 Hettig R A. and Adcock J D Science 103 355 (March 22) 1945

fever, accompanied at times with myalgias and arthralgias. Skin eruptions appeared in 2 patients. Three patients showed slight local reactions consisting of pain and tenderness at the site of intramuscular or subcutaneous injection. The local reaction was alleviated by the local application of heat. Most of the undesirable reactions were apparently related to the amount of impurities retained in the preparations, fewer symptoms being recorded with the later, more refined preparations of the antibiotic.

The purified streptomycin is thus of such low toxicity as to be freely usable in human clinical medicine.

## Current Comment

### EFFECTS OF THE COLD WAVE PROCESS

Recently THE JOURNAL published an article referring to cases of poisoning associated by the author with the use of thioglycolic acid in the so-called cold wave process for permanent waving of the hair. In this issue of THE JOURNAL Dr. Carey P. McCord calls attention to certain facts which he believes were overlooked by Dr. Lawrence H. Cotter in his discussion of the cold wave process. Dr. McCord is convinced that it is the hydrogen sulfide which constantly evaporates from thioglycolic acid that is primarily at fault and that it is possible by the use of certain chemical processes to inhibit the creation of hydrogen sulfide in sufficient amounts to be harmful. Dr. McCord believes that damage to the liver by the use of these chemicals has not yet been definitely shown in any instance. He believes that allergic responses are infrequent when materials used are properly prepared. Notwithstanding these statements the fact remains that some fifty different commercial agencies are engaged in the manufacture of materials used in cold wave processes, that there exist no definite standards as to what is safe or harmful, that experimentation before launching such products is for the most part inadequate and incomplete and that it is time for public recognition of the fact that as much careful evidence needs to be accumulated regarding the safety of substances placed on the surface of the body as those taken into its interior before these preparations are released for use to the general public. An editorial entitled "Artificial Halo" published in the *Technology Review* asserts, after an analysis of the cold wave process that "... nothing is added, that is, nothing material, nothing except that immaterial and elusive something. She's gorgeous! She's enchanting! and so forth. Nothing is taken away, not even an atom. The original atoms have been coerced by chemistry into new arrangements giving the hair a new and enduring sinuosity." The editorial, written just about a year ago, would now seem to require some correction in the light of the fact that if not thioglycolic acid at least the hydrogen sulfide or some of the other chemicals associated with this process can be associated with severe allergic reactions in sensitive persons. The dosages of the materials concerned, the duration of exposure, the frequency of the exposure and many similar factors need study. The hair dressers and the employees of establishments in which the process is carried on constantly day after day are much more subject to the risk than the occasional user of materials purchased for application at home.

### CONTINUATION COURSES FOR VETERAN AND CIVILIAN PHYSICIANS

The semiannual listing of postgraduate continuation courses for veteran and civilian physicians prepared by the Council on Medical Education and Hospitals of the American Medical Association appears elsewhere in this issue. These courses begin during the period July 1, 1946 to Jan. 15, 1947. They cover a wide range of subjects, are extensively distributed geographically and vary considerably in duration. The number of courses offered continues at the expanded level of the preceding *six months period, with many more courses than were* given in former years. Many of the new courses were organized primarily to meet the needs of veterans, although most are also open to other physicians. Seventy-nine institutions and organizations are represented in this listing, offering 558 courses, some of which are given more than once in the period covered. Forty-seven medical schools give 491 courses, practically 90 per cent of the total. Many of these are full time and extend for relatively long periods. This invaluable contribution by medical schools was made possible in many instances by the actions of the Army, Navy and Selective Service System, which permitted medical school deceleration and thus freed facilities and faculty members for utilization in this manner. The usefulness of this listing is apparent from the demand for reprints, in addition to the wide distribution effected by the regular publication in THE JOURNAL. Requests for reprints are received at the rate of about one hundred and fifty a week, which is several times the number requested before the war. Institutions and individuals participating in these programs are rendering a great service to the returning medical officers. THE JOURNAL and the Council are indebted to them for making these listings possible.

### VITAMIN E AND HEART DISEASE

Announcement in newspapers and particularly in *Time* that large doses of vitamin E will bring relief from all common forms of heart disease once again prompts discussion of the manner in which the results of medical research should be brought to the attention of the public. Far too often of late there has been overemphasis in the popular press on research too fresh from the laboratory and too inadequate as to evidence to permit evaluation. The reported discovery of new and almost miraculous powers of vitamin E needs careful evaluation and confirmation because the substance had already been investigated by many competent clinicians and found wanting. Nothing in the known pharmacologic actions of vitamin E would lead one to suspect either a vasodilating action, a myotonic effect or an *ability to repair damaged heart muscle in human* beings.

# MEDICINE AND THE WAR

## NAVY

### NAVY AWARDS AND COMMENDATIONS

#### Captain William Edward Eaton

Capt. William Edward Eaton, Washington, D C, was recently awarded the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States as medical officer in command of the United States Naval Hospital Great Lakes Ill, during the early part of World War II Displaying exceptional initiative judgment and professional ability," said the citation, Captain Eaton expertly administered the activities of his command in treating the sick and handling epidemics in this institution and throughout the Ninth Naval District and was in a large measure responsible for the expeditious return to duty of a large number of patients In addition, he directed the establishment of a hospital corps school which trained thousands of hospital corpsmen, including Waves to meet the needs of the rapidly expanding Navy, and conscientious devotion to the varied and complex details of his assignment reflect the highest credit on Captain Eaton and the United States Naval Service." Dr Eaton graduated from Harvard Medical School, Boston, in 1905 and entered the service Oct 15, 1910 He is now on duty at the Navy Department, serving as a member of the Board to Revise Navy Regulations

#### Lieutenant Commander John P Martin

Lieut. Comdr John P Martin Camden, Del, recently received a commendation from Fleet Admiral Chester W Nimitz, commander-in-chief of the U S Pacific fleet, the citation reading "For meritorious conduct while participating in aerial flights as flight surgeon of Carrier Air Group Twelve, attached to the U S S *Saratoga* from Jan 31 to Feb 11, 1944 In order to obtain a better understanding of pilot fatigue under actual combat conditions, Lieutenant Commander Martin requested permission to take part in strikes against the enemy Permission was granted and he subsequently took part in five separate overwater strikes against enemy installations on Eniwetok Atoll Through his outstanding desire to improve his professional knowledge, and courage in accompanying the air crew on these hazardous missions beyond the requirements of his naval status he contributed materially to the physical and mental welfare of the pilots and the successful operations of Carrier Air Group Twelve. His courageous conduct and devotion to duty were at all times in keeping with the highest traditions of the United States Naval Service" Dr Martin graduated from New York University College of Medicine New York, in 1932 and entered the service March 17, 1941

#### Commodore Carlton L Andrus

Commodore Carlton L. Andrus Arlington Va, was recently awarded the Legion of Merit for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States as officer in charge of the War Plans Division Bureau of Medicine and Surgery throughout World War II" The citation accompanying the award continued Qualified for his work by thorough experience in hospital construction, Commodore Andrus rendered invaluable service in expanding the Navy's major medical facilities from sixteen hospitals to sixty and in providing an adequate number of general, special and convalescent hospital beds to insure the highest standard of care for personnel of the Navy, Marine Corps and Coast Guard His skill and initiative were essential factors in developing our mobile, Fleet evacuation and base hospitals and in improving the design of medical and surgical facilities and professional ability Commodore Andrus contributed to the success of our country s war effort and upheld the highest traditions of the United States Naval Service ' Dr Andrus graduated from Stanford University School of Medicine, San Francisco in 1917 and entered the service Jan 1, 1918

#### Commander George H O'Kane

Comdr George H O Kane, New York, was recently awarded a special commendation ribbon for service with the Pacific Fleet Accompanying the award was a citation reading For meritorious service in the line of his profession as surgeon and specialist aboard the United States Hospital Ship *Solace* from Nov 21, 1944 to Sept. 1, 1945 Commander O'Kane displayed outstanding ability and sincerity of purpose in caring for the sick and wounded and contributed directly toward saving many lives and alleviating suffering His professional excellence, mature judgment and devotion to duty were material contributing factors in the successful prosecution of the war against the Japanese Empire and were in keeping with the highest traditions of the United States Naval Service." Dr O'Kane graduated from the University of Rochester School of Medicine and Dentistry in 1931 and entered the service April 6, 1942

#### Rear Admiral Benjamin H Dorsey

Rear Admiral Benjamin H Dorsey, U S Navy, retired, Washington, D C, was recently presented with the Legion of Merit 'for exceptionally meritorious conduct in the performance of outstanding services to the government of the United States as president of the Navy Retirement Board and president of the Board of Medical Examiners of the Navy, prior to and during World War II Demonstrating a thorough understanding of critical problems," continued the citation, 'Rear Admiral Dorsey was personally responsible for the expeditious handling of medical examinations and retirements for the Navy His medical competence, long naval experience and sound judgment were important factors in the successful prosecution of a task of great magnitude and importance to the United States Navy" Dr Dorsey graduated from the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, in 1901 and entered the service March 13 1903

## MISCELLANEOUS

### BETTER PROSTHETIC DEVICES NEEDED

Dr Paul E Klopsteg chairman of the Committee on Prosthetic Devices recently urged inventors and engineers of artificial limbs to submit ideas and suggestions for better prosthetic devices to the National Inventors Council, Department of Commerce, Washington, D C., for analysis and screening He stressed the urgent needs of 17 000 war amputees and an estimated annual minimum of 25,000 civilian amputees

The Committee on Prosthetic Devices was set up in April 1945 under the sponsorship of the National Research Council of the Office of Scientific and Research Development Consisting of three orthopedic surgeons and three engineers, the committee initiates, supervises and lends financial support to research institutes and laboratories willing to undertake special research problems for improving prosthetic devices Members of the committee have prepared a report especially for engineers and investors, summarizing its work over the past year and analyzing problems as yet unsolved. A mimeographed copy of the report will be mailed free of charge on request to the National Inventors Council

The National Inventors Council is cooperating with the committee by soliciting and screening ideas, suggestions and inventions for improving prosthetic devices Proposals submitted to the council by engineers and inventors are carefully analyzed If found meritorious they will be forwarded to the Committee on Prosthetic Devices for further investigation and development Such proposals should be addressed to John C Green Chief Engineer National Inventors Council, Department of Commerce Washington, D C

# PHYSICIANS SEPARATED FROM SERVICE

## ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

### Alabama

| | |
|---|---|
| Anderson Henry L | Sellers |
| Barnes Everett B Jr | Gallion |
| Cain Elisha J | Wetumpka |
| Campbell Thomas M Jr | Tuskegee |
| Davis Luther Jr | Tuscaloosa |
| Dwiggins Horace G | Tuskegee |
| Hargis Albert S Jr | Birmingham |
| Harris, William M Jr | Birmingham |
| Huber Henry S | Jacksonville |
| Melton Thomas A | Atmore |
| Taylor Junius LaFayette | Tuskegee |
| Underwood James W | Birmingham |
| Walker Howard S J Jr | Mobile |

### Arizona

| | |
|---|---|
| Brock Ernest | Yucca |
| Brown Preston T | Phoenix |
| Koerber Frederick L | Ajo |

### Arkansas

| | |
|---|---|
| Aday John L | Little Rock |
| Boydstone Joseph O | Little Rock |
| Cox Vincent M | Huttig |
| Thomas Sherman A | Little Rock |

### California

| | |
|---|---|
| Abbey John D | Los Angeles |
| Adams Pliny A | San Diego |
| Atkinson Russell E | San Bernardino |
| Baker George L | San Francisco |
| Bernstein Theodore I | Los Angeles |
| Birnbaum Walter D | San Francisco |
| Bodner Henry | Hollywood |
| Bruson Solomon | Los Angeles |
| Cole Sidney S | Santa Monica |
| Darnell Clarence A | Hollywood |
| Fish Lester W | Los Angeles |
| Fletcher Elmer G | Oakland |
| Fox Saul L | Los Angeles |
| Gericke Otto L | Talmage |
| Gratiot Charles C | Monterey |
| Grau Eugene C | Niles |
| Griffin Richard A | North Hollywood |
| Gunney Francis J | Los Angeles |
| Hansen Robert McC | Fresno |
| Hiatt Nathan S | Hollywood |
| Holcomb Donald G | Santa Barbara |
| Hull Earl T Jr | Los Angeles |
| Imerman Carlyle P | Los Angeles |
| Jonas Carl H | Riverside |
| Kapstein John A | San Francisco |
| Kirby Frederick G | Los Angeles |
| Levy Edward I | San Diego |
| Lindsay Charles V | Encinitas |
| Lipson Morris | Van Nuys |
| Lowry Milton L | West Los Angeles |
| McChesney Paul | Berkeley |
| McDonald Frank J | Bakersfield |
| McGehee William H | Fresno |
| Maguire Joseph M | San Diego |
| Manchester Raymond D | Wilmington |
| Mandel Jacob H | San Gabriel |
| Mannerstedt Gordon O | Oakland |
| Marcus Simson | Los Angeles |
| Meehan Carl W | Sacramento |
| Mendelsohn Howard A | Los Angeles |
| Mundall Bernard P | Glendale |
| Nichols Jack | Los Angeles |
| O Reilly Francis F | San Luis Obispo |
| Pallette Edward C | Los Angeles |
| Pattison Arthur C | Pasadena |
| Popkin, Roy J | Los Angeles |
| Roe Harold E | Berkeley |
| Roehm Edgar A | Los Angeles |
| Rosenthal Milton | San Francisco |
| Rossi George J | San Francisco |
| Rudy Lester H | Los Angeles |
| Rutherford Findlay de Paul | San Jose |
| Salomon Werner | Los Angeles |
| Sands Robert L | Santa Monica |
| Savage Philip M Jr | San Bernardino |

### California—Continued

| | |
|---|---|
| Schaeffer R C | Palos Verdes Estates |
| Schmidt Philipp E | Glendale |
| Spungin Seymour A | Wilmington |
| Stone Vean M | San Francisco |
| Strauss Ludwig | Los Angeles |
| Swingle Kenneth R | Los Angeles |
| Vogel Philip | San Francisco |
| Wagner Claude F | Gilroy |
| Wallace Arthur J | Sacramento |
| Waller Lorenz McB | Hollywood |
| Ware Edward R | Los Angeles |
| Westdahl Philip R | San Francisco |
| Whitson Claude S | Los Angeles |
| Williams Gordon F | San Francisco |
| Willson Julius L | Santa Barbara |
| Winkler David P | Los Angeles |
| Young Frank W | Patton |
| Zahry Ney J | Bakersfield |

### Colorado

| | |
|---|---|
| Adams Francis S | Pueblo |
| Akers David R | Alamosa |
| Billings, Edward G | Denver |
| Haun Paul | Denver |
| Johnston Walter S | Pueblo |
| Kitto William | Denver |
| Mery Albert M | Denver |
| Perrin, James B | Denver |
| Stidham Paul B | Denver |
| Weinstein Louis J | Denver |
| Wirz Melvin J | Denver |

### Connecticut

| | |
|---|---|
| Anderson Clifton W | Greenwich |
| Andrews Egbert M | Hartford |
| Goergen William P | Danbury |
| Grady Joseph F | Stamford |
| Jaffe Samuel A | New Haven |
| Markoff Abraham | New Haven |
| Reynolds Whitman M | Greenwich |
| Rosen Samuel R | Greenwich |
| Shupis Anthony | Hartford |
| Stewart Lester Q | West Hartford |
| Sundquist Alfred B | Manchester |
| Thompson Bob J | New Haven |

### Delaware

| | |
|---|---|
| Slovin Isadore | Wilmington |
| Wilson Arthur H | Hartford |
| Zaur Israel S | Bridgeport |

### District of Columbia

| | |
|---|---|
| Albert Arnold | Washington |
| April Ellis | Washington |
| Coprew Theodore F | Washington |
| Danish Abraham W | Washington |
| Fong Theodore C C | Washington |
| Footer Marvin P | Washington |
| Gray James C | Washington |
| Herzmark Maurice H | Washington |
| McClintock James K Jr | Washington |
| Manning Wilkins R Jr | Washington |
| Maret Raymond | Washington |
| Mendelsohn Matthew | Washington |
| Passarelli Arthur F | Washington |
| Rapee Lawrence A | Washington |
| Reed Paul A | Washington |
| Stevens Rutherford B Jr | Washington |
| Wallace, Joseph J | Washington |
| Zappala Anthony | Washington |

### Florida

| | |
|---|---|
| Barreras Luis A | Tampa |
| Lancaster Lamar L | Bartow |
| Messner Paul O | Miami Springs |
| Michaels John P | Orlando |
| Nolan Lewis E | St. Petersburg |
| Roush Franklin W Jr | St Petersburg |
| Shell Paul G | Ft. Lauderdale |
| West John R. | Daytona Beach |

### Georgia

| | |
|---|---|
| Agnor, Elbert B | Atlanta |
| Arteaga Oliver | Atlanta |
| Baxley, Warren C | Macon |
| Boling Edgar | Atlanta |
| Peters, James S Jr | Manchester |
| Suran, Roland R | Columbus |
| Yates Theodore M | Augusta |

### Idaho

| | |
|---|---|
| Smith, Marvin C | Idaho Falls |
| Soltman, Donald J | Grangeville |
| Terhune Charles A | Burley |
| Van Sicklin, Roy | Weiser |

### Illinois

| | |
|---|---|
| Adams Eli L | Chicago |
| Albrecht, Armand D | Chicago |
| Aronson, Howard G | Chicago |
| Barton, Edwin G | Streator |
| Benner, William H | Chicago |
| Best Robert B | Paris |
| Bouyer, Harsha F | Chicago |
| Brown Harry E | Highland Park |
| Cameron William G | Chicago |
| Cammerer, Herbert R | Chicago |
| Czaja Zenon G | Chicago |
| Dietrich, Edwin F | Fithian |
| Dobin Norman B | Chicago |
| Eisenstein Milton W | Chicago |
| Fischnaller Joseph J | Chicago |
| Friedman, Seymour W | Forest Park |
| Goodman Maurice | Chicago |
| Greco Vincent J | Chicago |
| Handelman Eugene V | Chicago |
| Hinton Clarence D | Chicago |
| Kahn Morton R | Chicago |
| Kuman Stanley J | Chicago |
| Leader Abel J | Chicago |
| Levine, Edward J | Chicago |
| Lewis Henry M | Chicago |
| Lewis Louis L | Peoria |
| Lipnik Benjamin P | Chicago |
| Lipton, Saul I | Orion |
| McDonald Owen G | Chicago |
| Madden, James D | Chicago |
| Maloney, John E | Franklin Park |
| Marks Arthur R | Chicago |
| Marshall Glenn R | Effingham |
| O'Brien, Thomas V | Chicago |
| Olechowski Henry C J | Chicago |
| Oleck Henry T | Chicago |
| Orloff Morris P | Chicago |
| Papiernak Frank B | Chicago |
| Paul Tom D | Evanston |
| Pfeiffer Carl F H | Quincy |
| Pister, Max | Chicago |
| Purvey John C | Crystal Lake |
| Rattenne E | Chicago |
| Ravenna Paolo | Chicago |
| Richmond Julius B | Chicago |
| Rink Richard A | Beardstown |
| Rose William F | Dupo |
| Rosenblum, Samuel S | Centralia |
| Roth, Harold A | Chicago |
| Schreiber Manuel | Chicago |
| Sehring George H | Joliet |
| Sitney Julian J | Chicago |
| Steinberg Milton | Chicago |
| Steiniche Aage | Dwight |
| Stephens Jerry H | Centralia |
| Tobin John R Jr | Elgin |
| Vesely Harry C | Peoria |
| Vial Alexander B | LaGrange |
| Wagner Merrill W | River Forest |
| Wakefield William J | River Forest |
| Wall Emmett D | Chicago |
| Walvoord Carl A | South Holland |
| Warner Frank B Jr | Chicago |
| Warren Irving A | Chicago |
| Weisbach Philip T Jr | Chicago |

# PHYSICIANS SEPARATED FROM SERVICE

### Illinois—Continued

| | |
|---|---|
| Werch Solomon C | Chicago |
| Whitehead Ira C | Lockport |
| Williams Alfred F | Latham |
| Wolf Abraham A | Chicago |
| Wuesteman Adelbert E | Chicago |
| Wyness John A | Springfield |
| Yaffe, Bernard | Chicago |
| Youngerman, William M | Champaign |
| Zimmerman, Harold W | Chicago |
| Zimring Allan J | Chicago |
| Zolt Nathan | Chicago |

### Indiana

| | |
|---|---|
| Berkebile John B | Peru |
| Brady, Thomas A | Indianapolis |
| Brown Marcel S | Spencer |
| Calvy, William J | Winchester |
| Chambers Alan R | Ft Wayne |
| Compton, Walter A | Elkhart |
| Eisaman Jack L | Bluffton |
| Fleetwood Raymond A | Nappanee |
| Grandstaff Floyd LeLand | Decatur |
| Humphreys John W | Darlington |
| Lundt, Milo O | Elkhart |
| McQuiston Ralph J | Indianapolis |
| Masters John M | Indianapolis |
| Nie Louis W | Indianapolis |
| Pancost, Vernon K | Elkhart |
| Pekarek Edward A | Whiting |
| Renbarger Lester L | Marion |
| Rogers Lloyd S | North Manchester |
| Sandock Louis F | South Bend |
| Smith David J | Indianapolis |
| Stauffer George E | Elkhart |
| Streepey Jefferson I | New Albany |
| Terrill Richard W | Lawrenceburg |
| Warren Carroll B | Marshall |
| Wohlfeld, Julius B | Indianapolis |
| York Dale E | Bloomington |
| Zimmer Henry J | Mishawaka |

### Iowa

| | |
|---|---|
| Amesbury Harry A | Clinton |
| Angell Charles A | Des Moines |
| Arent, Asa S | Humboldt |
| Bone, Harold C | Des Moines |
| Brentan- Emanuel | Ottumwa |
| Byrnes Clement W | Dunlap |
| Hayne Willard W | Paullina |
| Herrick, Richard B | Ottumwa |
| McKee, Thomas L | Keokuk |
| Miller Jay R | Wellman |
| Minkel Roger M | Ft. Dodge |
| Montgomery Albert E | Valley Junction |
| Mullmann Arnold J | Adel |
| Rhodes John M | Ft. Dodge |
| Sorensen Elmer M | Red Oak |
| Toubes Abraham A | Des Moines |
| Updegraff Thomas R | Boone |
| Watters Vernon G Jr | Iowa City |
| Worley Joseph P | Indianapolis |

### Kansas

| | |
|---|---|
| Baird Albert C | Parsons |
| Beauchamp Preston E | Sterling |
| Brown Virgil E | Sabetha |
| Bynum Frank L | Emporia |
| Fritzemeier William H | Wichita |
| Hall, Millard W | Wichita |
| Hostetter Philip H | Wichita |
| Palmer Harold W | Wichita |
| Rost Glenn S | Halstead |

### Kentucky

| | |
|---|---|
| Alexander Alexander J | Lexington |
| Alley, Rufus C | Lexington |
| Berg Harold F | Shively |
| Bernhard Charles M | Louisville |
| Buschemeyer William C | Louisville |
| Hagood William J | Corbin |
| Leatherman Kenton D | Louisville |
| Long Robert C | Louisville |
| McAtee, Ott B | Stanford |

### Kentucky—Continued

| | |
|---|---|
| McLain Ernest K | Lexington |
| Moore Escum L | Lexington |
| Thompson, William R. Jr | Lexington |
| Wallace Jay F Jr | Louisville |

### Louisiana

| | |
|---|---|
| Alessi Carlos D | Hammond |
| De Priest, Frederick E | Shreveport |
| Duhe, Henry M | New Orleans |
| Jones Kenneth B | Shreveport |
| La Nasa Matthew J | Baton Rouge |
| Martin Murphy P | St. Martinsville |
| Packer, James M | Alexandria |
| Prince Kenneth C. | Shreveport |
| Scarle Marshall M | Amite |

### Maine

| | |
|---|---|
| Holland Edward W | Sanford |
| Laughlin Kenneth A | Portland |
| Ottum Alvin E | Portland |
| Semetauskas Stephen W | Lewiston |
| Torrey, Marcus A. | Ellsworth |

### Maryland

| | |
|---|---|
| Ascher Eduard | Baltimore |
| Coughlan Stuart G | Baltimore |
| Crawford, Robert C | Baltimore |
| Drozd, Joseph | Baltimore |
| Dugan Thomas J Jr | Laurel |
| Friedman Joseph | Westernport |
| Gibson, Walcutt W | Takoma Park |
| Glass Albert J | Baltimore |
| Goodwin Thomas C. | Garrison |
| Granoff Hyman L | Baltimore |
| Gross Joseph B | Baltimore |
| Hutchins Thomas M | Cantonsville |
| Larkey Sanford V | Baltimore |
| Mance Andrew E | Oakland |
| Padget Paul | Baltimore |
| Richardson Charles Jr | Bel Air |
| Ross James K. | Salisbury |
| Waite Merton T | Odenton |
| Warner Frank A | Baltimore |
| Worsley Thomas L Jr | Baltimore |

### Massachusetts

| | |
|---|---|
| Antonellis, Carl J | Medford |
| Arenstam Jacob J | Russell |
| Auletta Louis A | Medford |
| Awramik Stanley M | Lynn |
| Bucholz Donald J | Boston |
| Carr Edward C | Somerville |
| Cass Leo J | Brookline |
| Desrochers Bernard C | Adams |
| Duserick William G | South Boston |
| Eidam Carl L | Lawrence |
| Fawcett Don W | Newton |
| Frumson, Solomon L. | Millville |
| Kagan Leon H | Springfield |
| Krans DeHart | Taunton |
| Listernick Sidney S | Everett |
| Litter Julius | Brighton |
| Mac Donald, Milton T | New Bedford |
| Murphy, John J | Westfield |
| Newlander, Harold | Malden |
| Orlov Samuel | Wareham |
| Perkins William L | Brighton |
| Portman Harry | Malden |
| Ravin Iver S | Brookline |
| Rhu Hermann S Jr | Boston |
| Richer, Arthur G | Marlboro |
| Servetnick Abraham | Haverhill |
| Shahon Henry I | Roxbury |
| Swann, William K. Jr | Belmont |
| Weisman William S | Mattapan |
| Wheeler Charles A | Leominster |
| White, Hilary F | Fall River |
| Wilker Sidney R | Roxbury |
| Wise Herman R | Hyde Park |
| Woodcome, Harold A | Attleboro |
| Woodworth, Clyde R | Beverly |
| York, Richard F | Newton Upper Falls |

### Michigan

| | |
|---|---|
| Ale William T | Detroit |
| Anthony, George E | Flint |
| Bateman Lawrence G | Flint |
| Belisle John A | Detroit |
| Britton, George T | Detroit |
| Bruce, William W | Swartz Creek |
| Carstens, Henry R | Detroit |
| Carter Harold G | Detroit |
| Croll L J | Detroit |
| Crowley Robert T | Detroit |
| Fee Manson G | Grand Rapids |
| Hammer, John M | Kalamazoo |
| Hammer Raymond W | Detroit |
| Hanelin Henry A | Marquette |
| Heideman Louis E | Detroit |
| Hodgkinson Charles P | Detroit |
| Inman, John C | Lake City |
| Kinde Matthew R | Battle Creek |
| Levy Joseph | Battle Creek |
| Linden, Victor E | Durand |
| Lowe Adolf W | Detroit |
| McCullough Francis E | Detroit |
| McKean George T | Detroit |
| McKnight, Edwin R | Owosso |
| Marston Leo L | Lakeview |
| Miller Spencer W | Alma |
| Mogill George | Detroit |
| Peck M E | Parchment (Kalamazoo) |
| Pugsley George W Jr | Detroit |
| Richards Ned W | Saginaw |
| Sonnemann Carl O | St Joseph |
| Southworth Maynard N | Schoolcraft |
| Sullenberger Neil H | Detroit |
| Swartz Frederick C | East Lansing |
| Winebrenner John D | Ann Arbor |

### Minnesota

| | |
|---|---|
| Alcorn William J | Minneapolis |
| Anderson Warren R | Cambridge |
| Berkwitz Nathaniel J | Minneapolis |
| Clough David M | Minneapolis |
| Field Anthony H | Farmington |
| Goldner Meyer Z | Minneapolis |
| Kapernick John S | Rochester |
| Kucera Lad J | Lonsdale |
| Leuther Peter A | Mankato |
| Litman Abraham B | Minneapolis |
| Lovelace William R | Rochester |
| Lundblad, Stanley W | Minneapolis |
| Nesheim Martin O | Emmons |
| Remington John P | St. Paul |
| Schleimitz Fritz B | Battle Lake |
| Zagaria James F | St Paul |

### Mississippi

| | |
|---|---|
| Berman Maxwell D | Jackson |
| Chustz James A | Jackson |
| Hull Joseph A | Indianola |
| Lilienthal Allen A | Sanatorium |
| Mabry Edward H | Greenville |
| Parker Ellis D | Laurel |
| Peeler Joseph G | Shaw |
| Sawyer James G | Biloxi |
| Tatum Frank K | Tupelo |
| Verner, Guy C | Jackson |
| Warfield William P | Clarksdale |
| Wilson David T | Louisville |
| Wilson Jack K. | Money |

### Missouri

| | |
|---|---|
| Ahrens John H | St Louis |
| Allen Lee G | St Louis |
| Barnett, Gordon P | Kansas City |
| Bortnick Arthur R | St Louis |
| Critchlow William C. | Matthews |
| Elkins, Ronald F | Springfield |
| Flynn George T | St Louis |
| Gottlieb Leo | University City |
| Jaffe Bernard | Excelsior Springs |
| Martin Aretus D | Sikeston |
| Martini Arthur P | St Louis |
| Morgan Clarence E | Kansas City |
| Mueller, Joseph A Jr | St Louis |
| Rowlette, Avery P | St Louis |

# PHYSICIANS SEPARATED FROM SERVICE

### Missouri—Continued

| | |
|---|---|
| Sheldon, John | Kansas City |
| Skiggs, Thomas R | St Louis |
| Slee, Vergil N | St Louis |
| Stephens LeRoy J | St Louis |
| Sweet Herbert C | Koch |
| Unger, Harold | Kansas City |
| Wasserman Helman C | St. Louis |
| Wensley, John E | Harrisonville |
| Williams George D | St Louis |
| Williams, John W | Oak Grove |
| Williams Oliver B | Kansas City |
| Zellermayer, J | Kansas City |

### Montana

| | |
|---|---|
| Kroeze Robert G | Butte |
| Power, Harry W | Conrad |
| Tichenor, Ernest LaPoint | Harlem |
| Vogel Jesse | Dixon |
| Weber, Richard D | Missoula |

### Nebraska

| | |
|---|---|
| Elias, Houghton F | Beatrice |
| Green, Carl R | Niobrara |
| Hansen, Theodore M | Omaha |
| Nelson Floyd C | Omaha |
| Rathbun, Sanford Mac A | Beatrice |
| Thompson, Lloyd L | West Point |
| Weber Clarence R | Hastings |

### Nevada

| | |
|---|---|
| Fightlin, Harry E | Reno |

### New Jersey

| | |
|---|---|
| Addesa, Albert J | Depew |
| Atkinson John M | Madison |
| Bernhard, Joel A | East Orange |
| Brodkin, Louis A | Irvington |
| Broselow, Benjamin G | Franklinville |
| Cartnick Edward N | Wood Ridge |
| Chaiken, Louis H | Elizabeth |
| Christian Henry A | Jersey City |
| Connell William F | Linden |
| Cortese, Joseph T | Newark |
| Crandell Charles A | Greystone Park |
| Griffey William C | Westmont |
| Grundfest, Philip | Kearny |
| Haldeman Robert E | Mount Holly |
| Horwitz Harry L | West New York |
| Keating Joseph M | Passaic |
| Kooperstein Samuel I | Jersey City |
| Luddecke, Hugh F | Morristown |
| McCall Jesse | Newton |
| Macaluso, Dominic C | Belleville |
| Marshall Irving | Trenton |
| Maxwell Carl A | Hackettstown |
| Miller Theodore R | Ridgewood |
| Offenkrantz Frederick M | Newark |
| Patton Paul B | Blairstown |
| Pleasants Edward N | Marlboro |
| Puller Herbert I | Roselle |
| Reinhorn Abraham J | Paterson |
| Relyea, George McD | Summit |
| Rosenberg Marvin P | Passaic |
| Rudolph, John P | Merchantville |
| Stephenson Daniel H | Camden |
| Stybel, Joseph | Plainfield |
| Ulvestad Lawrence E | East Orange |
| Vanderbeck James J | Paterson |
| Vento, Sebastian J | Trenton |
| Vincent, Nicholas F | East Orange |
| Wakeley William E Jr | South Orange |
| Weiner, Harry S | East Orange |
| Weintrob Joseph | Atlantic City |
| Weiss Fred | Newark |
| Westerhoff Peter D | Midland Park |
| Willner Philip | Newark |
| Woodhall Jerry P | Jersey City |
| Zimmerman Coler | East Orange |

### New Mexico

| | |
|---|---|
| Goodman Sylvan C | Albuquerque |
| Marbry George W | Ft Bayard |
| Sax Max T | Albuquerque |
| Trostler Lewis S | Albuquerque |

### New York

| | |
|---|---|
| Abrams Murray | Brooklyn |
| Adler, Samuel S | Forest Hills |
| Aisenson, Milton R | Brooklyn |
| Appelbaum, Henry | Bronx |
| Apostle, Demetrius K | Brooklyn |
| Aronowitz, Isadore | Bronx |
| Badler, Leon | Bronx |
| Beacher, Abraham I | Brooklyn |
| Belkowitz, Samuel | Dewitt |
| Biondo, T | Freeport L I |
| Blackwell, Richard C | New York |
| Bloome Leonard J | Brooklyn |
| Boroff Alexander | Bronx |
| Bowman Hugh L | Albany |
| Bradley, Daniel J | Amityville |
| Brandstein, Edward | Brooklyn |
| Breindel, Abraham M | Bronx |
| Brown John B | Union Springs |
| Cannon, Edward R | Oneida |
| Casale Walter | Brooklyn |
| Cheim, Erwin | Brooklyn |
| Cohen Abraham | Brooklyn |
| Cohn, Harold | Brooklyn |
| Cole, Joseph G | Mt Vernon |
| Dale, Maxwell H | New York |
| Davidoff, Eugene | Syracuse |
| Del Monte, George A | Hudson Falls |
| Dick Herman J | Syracuse |
| Dolan Gerald J | Richmond Hill |
| Donatelli, Charles | Buffalo |
| Dvoretz David A | Brooklyn |
| Eckstein, Albert | Staten Island |
| Ellsworth, Carl L | Madison |
| Epstein, Harry H | Bronx |
| Ferber, Samuel J | New York |
| Fisher, Alfred J | Jamaica L I |
| Fogel, David H | Brooklyn |
| Fond Morris S | Bronx |
| Francis Edwin H | Maspeth |
| Frank Mortimer | Bronx |
| Franklin, Paul F | Brooklyn |
| Franklin, Roy W | New York |
| Fred Leo | Brooklyn |
| Freund Sidney C | Brooklyn |
| Friedlander, Jackson H | Brooklyn |
| Gentile Lucian F | Brooklyn |
| Getzoff Paul L | Brooklyn |
| Gilman, Howard | New York |
| Glennie, Robert D Jr | Tonawanda |
| Glueck Bernard C Jr | Ossining |
| Goldenkranz Max M | Brooklyn |
| Gordon Isadore | Bronx |
| Greenfield Nathaniel L | New York |
| Gruskin Harry | Brooklyn |
| Hayes, Willard N | Rochester |
| Heffner, Reid R | New Rochelle |
| Henderson Robert A | Melone |
| Horwitz Seymour A | Schenectady |
| Hourigan John J | Oswego |
| Hurewitz Morton M | Brooklyn |
| Ireland Treadwell L | Brooklyn |
| Jennings, Walter F | Fishkill |
| Kahn, Kenneth M | New York |
| Kaicher John J | Glendale |
| Kennedy, Robert H | New York |
| Klein Samuel H | New York |
| Kosmaler, Charles H | Elmira |
| Krom Harry E | Brooklyn |
| Lachterman, Alfred | Brooklyn |
| Lampert, Jacob I | Buffalo |
| Lanzillo, James L | Troy |
| Lau Kimm C K | New York |
| Leban Jesse J | Brooklyn |
| Le Bell Irving | New York |
| Levin Grant | New York |
| Lipton, Benjamin | Bath |
| Lipton Maxwell | Long Island City |
| Litinsky, Henry | New Dorp |
| Littenberg Samuel H | Florida |
| Loomis Willard A Jr | Baldwinsville |
| Lostfogel, L | Brooklyn |
| McCulla Francis J | Jamestown |

### New York—Continued

| | |
|---|---|
| McWilliam, C S | Newburgh |
| Mackie Thomas T | New York |
| MacLeod Norman W | New York |
| Madoff, Irving | New York |
| Malcewicz, John R | Utica |
| Manley Wilber J | New York |
| Markowitz Benjamin F | Albany |
| Maybarduk, Alexander P | New York |
| Mayer Victor | Brooklyn |
| Mirapaul, Sylvern | Oriskany |
| Morrissett, Leslie E | New York |
| Morse, Sidney | Bronx |
| Oddo, Dominick C | Flushing |
| Pardee, Myron L | Fredonia |
| Peeler, Daniel B | Rochester |
| Pennington Glenn W | New York |
| Piazza, Thomas L | Glenmount |
| Pincus Morris H | Brooklyn |
| Pinsky, Abram | Rochester |
| Pollard, William E | New York |
| Pooler, Harold A | Binghamton |
| Pulcino, Michael E | Rochester |
| Raben, Maurice S | Port Chester |
| Rakieten, Morris L | Brooklyn |
| Richards, Gomer | Schenectady |
| Rizzuto, Michael P | Endicott |
| Robinson, Milton I | Brooklyn |
| Roche, John R | Brooklyn |
| Rose, Anthony T | New York |
| Rosenberg, Benjamin | Brooklyn |
| Rosenthal Julius | Flushing |
| Rosenthal, Keeve | Bronx |
| Rosenzweig Joseph | Brooklyn |
| Rosner Francis | Brooklyn |
| Rosner, Samuel | Freeport |
| Rozendaal Hendrik M | Schenectady |
| St John Elmer G | Schenectady |
| Sachs, Nathan H | Bronx |
| Salan Irving | Orangeburg |
| Salpeter Burton F | Rockaway Park |
| Salzman Carl C | New York |
| Sams, Sidney M | New York |
| Samuels Nathan | Brooklyn |
| Schneiderman J | Brooklyn |
| Schwartz Max | Rosedale |
| Scott, William D | Freeport |
| Shea, William I | New York |
| Sheldon, Paul B | New York |
| Shepard, John W | New York |
| Sherman Milton H | Brooklyn |
| Sherman Samuel | Bronx |
| Siegner, Allan W | Buffalo |
| Singer Milton | New York |
| Slapion, Lawrence G | Bronx |
| Smiley, Douglas G | Bronx |
| Smith Carl B | Victor |
| Smith, Morris K | New York |
| Smith, Wallace T | East Rockaway |
| Soble, Ellis B | Rochester |
| Solms Charles | Monticello |
| Spielberg Morris | Brooklyn |
| Stern, Arthur B | Brooklyn |
| Stich, Melvin H | New York |
| Stritzler, Conrad | Jamaica |
| Sweet Willard H Jr | Peekskill |
| Tanz, Stanley S | New Rochelle |
| Testa Nicholas D | New York |
| Thompson, Alexander F | New York |
| Traver Ralph F | Albany |
| Urie Murray G | New York |
| Urstein Harry | Brooklyn |
| Van Amberg, Robert J | White Plains |
| Vinicor H | Norwood |
| Vivona, James I | Brooklyn |
| Vogt, Walter E | Jamaica |
| Volk Benjamin M | Albany |
| Vomacka Henry J | New York |
| Von Salzen, Charles F | Camp Upton |
| Wagner, Aaron | Buffalo |
| Warren, Harold D | Brooklyn |
| Weary Willard B | Flushing L. I |
| Webb, Hamilton B | New York |

# PHYSICIANS SEPARATED FROM SERVICE

### New York—Continued

| | |
|---|---|
| Weber Mortimer W | New York |
| Weinberg Arthur A | Brooklyn |
| Werner William | New York |
| Wexler, Henry | New York |
| Wharton, Raeburn J | Johnson City |
| Winn, James S | New York |
| Witt, Francis L | Brooklyn |
| Woolner William R | New York |
| Yannelli Frank V | Baldwin |
| Zahn Benjamin L | Brooklyn |
| Zawadzki Sigmund A | Buffalo |
| Zierler Kenneth L | New York |

### North Carolina

| | |
|---|---|
| Andes Thomas E | Leaksville |
| Benzing, William M Jr | Asheville |
| Crough Auley McRae Jr | Wilmington |
| Grant Henry B | Garysburg |
| Newbern Walter R | Statesville |
| Spencer Benjamin D | Charlotte |
| Way John E | Beaufort |
| Weathers Ralph O | Goldsboro |
| Westcott William E | Asheville |
| Whicker Max E | China Grove |
| Wilkins Samuel A Jr | Dallas |
| Williams Charles F | Raleigh |
| Woods James B Jr | Davidson |

### Oklahoma

| | |
|---|---|
| Bradshaw John O | Welch |
| Felts Clifton | Seminole |
| Gordon Minor E | Claremore |
| Lattimore Frank C | Kingfisher |
| Lee Judah K. | Tulsa |
| Lingenfelter Paul B | Clinton |
| Rippy Orville M | Seminole |
| Ross George T | Enid |
| Strecker William E | Oklahoma City |
| Thompson Oliver H | Tulsa |
| White Eric McLain | Tulsa |

### Oregon

| | |
|---|---|
| Abrams Edward W | Portland |
| Allen Roland | Portland |
| Biswell Roger Jr | Baker |
| Browning Charles W | Portland |
| Grorud, Palmer R | Portland |
| Jacobson, Leonard D | Portland |
| Le Cocq Frank Jr | Portland |
| Lind Laurie P | Portland |
| Mathews Thomas J | Oregon City |
| Nerseth Marvin | Chiloquin |
| Rogers Richard S | Junction City |
| Snow Eldon W | Portland |

### Rhode Island

| | |
|---|---|
| Beardsley James M | Providence |
| Bernasconi Ezio J | Providence |
| Campbell Henry A | Central Falls |
| Cardi Alphonse R | Cranston |
| Gaudet Albert J | Pawtucket |
| Gormly John A | Providence |
| Littleton Thomas R | Providence |
| Longo Americo D | Providence |
| Pritzker Samuel | Providence |
| Smith Joseph | Providence |
| Thompson Edward R | Pawtucket |
| Zucker Joseph M | Pawtucket |

### South Carolina

| | |
|---|---|
| Baldwin Wofford E | Due West |
| Goforth Augustus J Jr | Greenville |
| Pohakoff Abraham E | Abbeville |
| Stack David R Jr | Charleston |
| Timberlake Lloyd F | Columbia |
| Wallace, William A | Spartanburg |
| Wilson Isaac R Jr | Charleston |
| Wilson Lester A Jr | Pleasant |

### South Dakota

| | |
|---|---|
| Clark Bernard S | Spearfish |
| Meyers Walter W | Colome |
| Nugent, Milton E Jr | Aberdeen |

### Tennessee

| | |
|---|---|
| Atkinson Edward R. | Clarksville |
| Ausherman Howard M | Chattanooga |
| Bennett Hal E | Troy |
| Buckley, Madison H | Martin |
| Burem, Henry S | Kingsport |
| Cate Randolph A | Nashville |
| Cates Haynes B | Newport |
| Copelan, Aubrey I | Chattanooga |
| Creech Robert W | Memphis |
| Davidson, Sam P | Nashville |
| Davis David A | Springfield |
| Day Theodore P | Knoxville |
| Gordon, Thomas G | Fosterville |
| Guffee, Harry J | Franklin |
| Halcomb, Francis J Jr | Nashville |
| Landrum, Orren B | Dyersburg |
| Lassiter James W | Huntington |
| Lord, Jethro D | Memphis |
| Lowry, Harvey McL | Memphis |
| McCrarey, Augustus | Chattanooga |
| McNabb John T | Whitwell |
| Maury, William Poston Jr | Memphis |
| Mettetal, Ray W | Johnson City |
| Migdoll David | Memphis |
| Mortland, Stewart R | Nashville |
| Moulder Max K | Nashville |
| Patterson, Robert F Jr | Knoxville |
| Powers John S Jr | Church Hill |
| Ruble William C Jr | Newport |
| Shultz Glen C | Cosby |
| Steadman, Raymond A | Kingsport |
| Trewhitt Madison S | Cleveland |
| Willien, Leon J | Knoxville |
| Wyatt George B | Nashville |
| Zirkle John G | Greeneville |

### Texas

| | |
|---|---|
| Altaras, Leon M | Cleburne |
| Althaus John W A | Ft. Worth |
| Bennett, Noel T | San Augustine |
| Bourdon Evan C | Uvalde |
| Braden Albert H | Houston |
| Brown, James M | Marlin |
| Bush Walter H | Dallas |
| Byars, Perry J C Jr | Lampasas |
| Cantrell, William H | Van Alstyne |
| Cappleman William P | Honey Grove |
| Carrington Dewitte C | Marquez |
| Casey, John B | McAllen |
| Connally Herschel F Jr | Waco |
| Cooper William H | McCamey |
| Cox, Joseph M | Denton |
| Dornak, Franklin K | Houston |
| Fenlaw, Joseph L | Gilmer |
| Fish John H | Paducah |
| Gardner Wray R | El Paso |
| Gee, Kenneth J | Tulia |
| Golenternek Joe | Tyler |
| Hall Ewin P Jr | Fort Worth |
| Honea Thomas C | Cleburne |
| Hunt Walter E. | Graham |
| Kaufman Carl K | Jasper |
| Lester Stanley W | Port Lavaca |
| Lightbody Kenneth A | Fort Worth |
| McClellan William W | Dallas |
| Mason Porter K | Dallas |
| Orman Forrest C | Houston |
| Phillips Leon | Houston |
| Poore Alfred M | Waco |
| Salley Colvin W | Baytown |
| Standifer Lilburn E | Austin |
| Stevens Robert B | Beaumont |
| Stevens Thomas H | Sulphur Springs |
| Swearingen Robert G | Corpus Christi |
| Timmins Oliver H Jr | San Antonio |
| Wallace Henry G | Borger |
| Watkins Wirter P | Lott |
| Wilborn, Sam W | Austin |
| Woodfin George S | Paris |
| Worsham John W | San Antonio |
| Wysong Charley E | McKinney |
| Zeigler Paul | Shamrock |
| Zeritsky, Samuel A | Legion |

### Utah

| | |
|---|---|
| Crosbie, Robert R | West Provo |
| Jenkins, Harold C | Bingham Canyon |
| Meads, Garner B | Salt Lake City |
| Stearns Horace I | Price |
| Whiting, Quinn A | Price |

### Virginia

| | |
|---|---|
| Ball, William L | Richmond |
| Brown Aaron W | Pocahontas |
| Brown James A Jr | Portsmouth |
| Carpenter, Earnest B | Newport News |
| Corbell Robert L Jr | Portsmouth |
| Fultz, George S Jr | Butterworth |
| Gorman, Cornelius E | Lynchburg |
| Lieberman Lewis | Hampton |
| McConnell Fredrick G | Gate City |
| Porter William O | Roanoke |
| Portman, Harry J | Roanoke |
| Stevens John E Jr | Richmond |
| Sutherland Archie R | Clintwood |
| Tanner Rondell H | Kecoughtan |
| Todd Martillus H | Norfolk |
| Trivett Wiley B Jr | Georges Fork |
| Trout Hugh H Jr | Roanoke |
| Trout Philip C | Roanoke |
| Waddill James F | Norfolk |
| Williams, George H | Petersburg |
| Wolfe, Garland H | Abington |

### Washington

| | |
|---|---|
| Bartels, Bernhardt B | Tacoma |
| Beatty, Jesse J | Walla Walla |
| Chew Eric M | Mercer Island |
| Ginn William S | Yakima |
| Keeler Keith C | Bremerton |
| Kemp Charles E | Tacoma |
| Keyes Ralph S | Walla Walla |
| McElroy West G | Seattle |
| MacMahon Charles E | Seattle |
| Meeske John M | Snohomish |
| Sherwood Kenneth K | Seattle |
| Tipler Robert J | North Bend |
| Weinstein William | Everett |
| Whitaker, John L | Tacoma |

### West Virginia

| | |
|---|---|
| Boiarsky Julius L | Charleston |
| Henry Robert T | Colfax |
| Pickett, Justus C | Morgantown |
| Smith Mendel W | Bluefield |
| Strickland Leonard N | Strange Creek |
| Ward, Charles M | Beckley |

### Wisconsin

| | |
|---|---|
| Adland Abe | Milwaukee |
| Bachhuber, Alois M | Kaukauna |
| Finer, George H | Madison |
| Irwin, Robert S | Milwaukee |
| Jelenchick Erwin J | Milwaukee |
| Jones William E | Madison |
| Kleiman Aaron H | Wood |
| Martin Stevens J | Viroqua |
| Pfeifer Robert H | Sheboygan |
| Polacheck, Walter S | Milwaukee |
| Robinson Francis J | Madison |
| Schrank Raymond E | Waupun |
| Simpson Reed M | Sheboygan |
| Talbot John R | Marshfield |
| Tausend Harold J | Madison |
| Thomley Miles W | Blair |
| Wilson Albert C | Milwaukee |

### Scotland

| | |
|---|---|
| Levack Joseph G | Glasgow |

### Tahiti

| | |
|---|---|
| Posner Sidney | Schofield Barracks |

---

### ADDRESS UNKNOWN

Kalish, Walter B

# ORGANIZATION SECTION

## Medical Legislation

### MATERNAL AND CHILD WELFARE LEGISLATION

The Subcommittee on Aid to the Physically Handicapped, House Committee on Labor, recently held hearings on three identical bills proposing to enact a Maternal and Child Welfare Act. These bills are companion measures to the legislation sponsored in the Senate by Senator Pepper as S. 1318.

Senator Pepper was the first witness and presented arguments similar to those he gave at the hearings on S. 1606 in support of amendments he offered, the effect of which would be essentially to add the provisions of his own bill, S. 1318, to the Wagner-Murray-Dingell bill.

Two representatives of the Children's Bureau testified in support of the legislation. Katharine F. Lenroot, chief of the bureau, and Martha M. Eliot, M.D., associate chief.

Miss Lenroot devoted most of her time to discussing the different phases of the problem presented by the delinquent child and the government's responsibility. Under the proposed legislation, she said, it would be possible for each state, with federal and state funds and local funds in some instances, to provide services in the public welfare department that would be available whenever a child needed help. The needs of these 'socially handicapped' children would be met through the services of well qualified child welfare workers who would bring to bear on their problem all the available resources of the community both public and private. Besides providing for the services of those workers, federal funds would also be available for strengthening the resources of the community for the care of children in foster homes and for other specified types of care. The proposed legislation, she pointed out, would keep federal responsibility in the Children's Bureau, thus continuing to make possible general planning and adequate correlation of maternal and child health and child welfare services to the end that they may effectively meet the needs of children. 'Their lives cannot be divided into separate water tight compartments labeled 'health' and 'welfare.' They must be viewed and served as living, growing human beings,' she said.

Dr. Eliot pointed out that under the provisions of the legislation the state would have to meet certain requirements to be eligible for federal financial participation but expressed the opinion that the actual determination of how the program is to be undertaken and what is to be done at any particular time will be the responsibility of the state agency. She emphasized that in order that the best results should be achieved all health "services must be accessible to every individual with no economic barriers to their use or discrimination on account of race, color, creed, national origin or residence. There must be a sufficient number of trained professional people to make it possible for this kind of service to be made available."

Mrs. Agnes Meyer, wife of the publisher of the Washington *Post*, was another witness. She attacked the administration of the Children's Bureau, charging that 'during the war the Children's Bureau neglected its own important and fundamental reason for existence since all of its spare energies went into the administration of emergency programs." She argued in favor of the President's plan of transferring the Children's Bureau to the Federal Security Agency, contending that leaving it where it is results in much duplication, duplicate state plans, duplicate reports, duplicate budgets and duplicate supervision and audits. She feared she said that if the legislation under consideration was enacted it "could potentially result in the creation in the Children's Bureau of a Health Division larger than the Public Health Service and a Welfare Division larger than that of the Social Security Board."

Dr. Joseph Wall of Washington, D. C., and Dr. Joseph Howard of Bridgeport, Conn., appeared for the American Medical Association. Dr. Wall presented a careful analysis of the provisions of the legislation, pointing out weaknesses. He enumerated the instances where the legislation would give specific authority to the Children's Bureau which would violate the autonomy of the individual state. He called attention to the fact that the bureau would have authority for developing an extensive code of regulations which would carry the authority of the law. He said "The state is commanded to construct 'standards for professional personnel rendering medical, dental, nursing and related types of care or services, such standards to be established by the state health agency.' E.M.I.C. and other experiences prove beyond peradventure that the Children's Bureau and not the state agencies have heretofore established such standards for professional personnel and for hospitals." In speaking of remuneration he said "Who is to establish what is to be considered as 'adequate remuneration'? Past experiences with governmental experimental medical practice indicate that remuneration will be far from adequate and that the fee schedules will be established by bureaucratic edicts which will remain as immutable as the laws of the Medes and Persians and that they will be fixed by remote control almost as distant from some state localities as Iran itself."

Dr. Wall expressed the conviction that the legislation "merits the unanimous disapproval of the medical profession, the members of which, obviously, will be commandeered to become the purveyors of medical care to all who will 'embrace the benefits of the program.' Those physicians who do not 'choose to participate will be left to their own resources to survive or perish in competition with government practice fortified with the bait of free service dangled before the consumer in the form of a federal dole.'

Dr. Howard presented a statement drafted largely from his experiences under the E.M.I.C. program and studies he has made of conditions in other states and countries. He accompanied his statement with a graph showing that the maternal deaths in the present century reached their peak about 1918 and since then have been uniformly decreasing with the exception of a slight interruption in 1927. He said "The United States is a young country. Previous to 1930 the maternal mortality rate remained rather constant in most countries. In 1936 a sharp drop occurred chiefly in the United States, Switzerland, South Africa, Mexico, Scotland, New Zealand, Eire, Australia, Canada, England and Wales. This may have been due to a wider use of transfusions and the introduction of the sulfonamide drugs, but strangely enough the reduction was evident not only in cases of infection and hemorrhage but also in toxemias. This reduction has continued at a more rapid rate in this country than in others." During the ten year period from 1933 to 1943, he continued, "maternal mortality in the United States declined 60 per cent, from 61.5 deaths per 10,000 live births directly due to pregnancy in 1933 to 24.5 in 1943. No other country has made such progress. These figures are more striking when we realize that in this same period there was an increase in births of 30 per cent. The rate for all obstetric deaths was reduced 60.4 per cent, from infection 62.6 per cent, from toxemia 57.8 per cent, from hemorrhage and other causes 59.9 per cent. In 1940 only two states in the United States had maternal mortality rates less than 2.5, in 1942 twenty-nine states had achieved this position. In 1933 Florida had the highest rate, 115 per 10,000 live births. Idaho had the lowest, 43 per 10,000 live births. In 1943 New Mexico was high with 47, which was only slightly higher than the low record of Idaho ten years before—Oregon and Minnesota shared the low record with rates below 15. During these ten years every state has shown a definite reduction, the smallest being 41 per cent in North Dakota and the largest being 76 per cent in Nevada."

In concluding, Dr. Howard stated, "The medical profession is vitally interested in good maternity care for all women. We are proud of the reduction in maternal mortality in our country, a record not exceeded by any other country. We believe that this reduction will continue under the present system of medical

care. We believe that aid should be extended to those states not financially able to carry on an efficient maternal and child health program

'We do not believe that services and facilities should be available to all who elect to participate regardless of economic status We do not believe that authority for such a vast program should be vested in the chief of the Children's Bureau, who would have power to (1) veto any state program and cut off federal aid, (2) force adoption of Children s Bureau standards of medical care and administration and (3) establish maximum remuneration for all professional participants'

Dr V A Getting, testifying as secretary of the Association of State and Territorial Health Officers expressed opposition to the legislation in its present form and submitted a number of amendments 'It is the opinion of the Association of State and Territorial Health Officers' he said "that state health departments are not prepared to undertake a medical care program for maternal and child health unless consideration is given to their ability to expand and participate The association therefore recommends that the bill be modified to permit a gradual development of the program over a period of years, limiting it in the first year to children under 1 year of age and extending it by the tenth year of operation to include all children up to the age of 18 years Preventive, diagnostic, school health and related facilities would necessarily be made available to all children.' He emphasized the need for a coordinated federal health program 'Duplicate reports audits and other inefficient operative procedures could be eliminated,' he said, by the unification of the Children s Bureau of the Department of Labor, the U S Public Health Service of the Federal Security Agency and other agencies of the federal government dealing with public health into a single department of public health or of public health and welfare under the direction of a cabinet secretary"

Dr C L Palmer and Dr James S Taylor testified for the Medical Society of Pennsylvania in opposition to the legislation, but their testimony is not available for condensing

## FEDERAL MEDICAL SERVICES

President Truman Dec 12, 1945, appointed a Committee on Integration of the Medical Services of the Government to make a study of the medical care provided by various governmental services and to make recommendations for improvement and for changes in basic policy[1] The report of the committee, released June 18 is divided into two broad divisions, part I relating to medical service in the Veterans Administration and part II dealing with the broader problem of the desirability of integrating all government medical services

Concerning part I the report, among other things approved the principle of making use of community medical and hospital care for veterans with service connected disability, and it recommended that outpatient care be made available to veterans suffering from non-service disabilities President Truman, however, in transmitting the report to the Bureau of the Budget, expressed opposition to this recommendation In the main, the committee expressed the belief that the procedures authorized and being carried out under the law enacted in December of last year establishing a Department of Medicine and Surgery in the Veterans Administration will result in a better quality of medical care for veterans

Under part II the committee pointed out that the present method of providing medical care by a system of parallel government agencies is considered by many informed persons to be inefficient ineffective and extravagant. Each agency, the committee observed, for all practical purposes now acts as a separate unit resulting in competition for and duplication of personnel and facilities and discouraging their economical and effective utilization. Before there can be an effective reorganization the committee believes that a complete and exhaustive survey of current medical resources is necessary, then a plan can be formulated to provide an integrated and improved system of medical care for the armed forces, the veterans and other charges of the federal government. This conviction was reemphasized in the concluding paragraph of the report

> In conclusion the Committee wishes to repeat its firm conviction that the existing situation in respect to the medical services of the government calls for a thorough and bold restudy It believes that a comprehensive report on the methods of gearing together the federal medical services is not possible until a detailed and painstaking examination of all the problems involved has been completed It is recommended therefore that funds be provided to make possible an authoritative study by a selected committee with adequate staff in order that a report setting forth specific recommendations based on a thorough survey of all factual data may be available as soon as feasible

President Truman in his letter to the director of the Bureau of the Budget, concurred in the foregoing committee recommendation and requested the director to suggest the names of outstanding medical men to serve on a committee to make the study He felt, however that the study should be delayed until after the Army-Navy merger issues are resolved

An intelligent, impartial survey, as contemplated in the committee s recommendation, would seem to represent a scientific approach to the problem involved, an approach not infrequently lacking in suggested governmental programs in the field of medical care

## STATE LEGISLATION

### Louisiana

*Bill Passed*—H 257 passed the house June 7 It proposes that the director of experiment stations of Louisiana State University and Agricultural and Mechanical College be recognized as the state chemist with all the rights conferred and all the duties and obligations imposed on that office

### Massachusetts

*Bill Passed*—H 1822 passed the house June 13 It proposes that any applicant for a license to practice a profession who has served in the armed forces of the United States during World War II shall be subject only to educational and experience qualifications required prior to Sept. 16, 1940

*Bills Enacted*—H 2001 has become chapter 82 of the Resolves of 1946 It increases the scope of a special commission investigating certain matters relating to public education relative to changing the name of the Massachusetts State College to the University of Massachusetts and to establishing a medical school at that institution H 2029 has become chapter 517 of the Laws of 1946 It provides that any container containing DDT be labeled in certain ways so as to protect the purchaser from being poisoned thereby H 2060 has become chapter 524 of the Laws of 1946 It prohibits the removal of nurse employees of the department of mental health, public health, public welfare or correction, who render professional service, except for just cause after such person has served satisfactorily for six months in his position. S 44 has become chapter 93 of the Resolves of 1946 It authorizes the department of public health to investigate and study the causes of poliomyelitis, commonly called infantile paralysis, and the eradication of such disease. S 426 has become chapter 511 of the Laws of 1946 It authorizes the construction of an 800 bed hospital for the care of persons suffering from chronic diseases S 533 has become chapter 71 of the Resolves of 1946 It provides for a departmental study relative to the regulation of certain hospitals, sanatoriums, convalescent homes and nursing homes by the department of public health

## Coming Medical Meetings

American Medical Association San Francisco July 1 5 Dr George F Lull 535 N Dearborn St., Chicago 10 Secretary

American Urological Association Cincinnati July 22 25 Dr Thomas D Moore 899 Madison Ave. Memphis 3 Tenn. Secretary

Montana Medical Association of Great Falls July 18-20 Dr Raymond F Peterson 9 W Granite St. Butte Secretary

1 Membership of committee Dr Harold W Dodds president of Princeton University chairman Major Gen Howard McC Snyder U S Army Dr Basil C McLean medical director Strong Memorial Hospital and consultant to the Secretary of the Navy Rear Admiral Daniel Hunt Medical Corps U S N Dr Charles W Mayo Rochester Minn Dr Howard A Rusk associate editor New York Times Mr Chester I. Barnard president New Jersey Bell Telephone Company and Surg Gen. Thomas Parran of the United States Public Health Service.

# Washington Letter

*(From a Special Correspondent)*

June 24, 1946

## Atom Bomb Plant to Turn Out Materials for Medical Research

The War Department announced that atom bomb plants will soon be turning out radioactive isotopes for use in medical research in hospitals and universities An isotope is a variation of the chemical atom which has atomic weight and physical proportions differing from the original element. It can be produced by bombarding the original atom with other atom particles Scientists say there are more than 400 varieties The radioactive isotope uranium 235 was used in making the atom bomb Isotopes to be made for medical research include those of such elements as carbon, sulfur phosphorus and iodine. The Army indicates that the isotopes can be used for medical research in two ways (1) as tracers to follow bodily processes such as growth of tissue, either normal or malignant, and (2) "possibly, after considerable research" as direct therapeutic agents for treatment of specific diseases The radioactive form of sulfur can be used to trace the reaction of the sulfonamides on the human system and radioiodine can be used to study thyroid functions To check for the presence of tumors or cancers the radioactive elements can be administered in minute amounts in a glass of water As radioactive materials tend to congregate in affected areas, they can be readily seen through x-rays The atomic material will undergo mass production at the Clinton Laboratories in Oak Ridge, Tenn, operated for the Army by the Monsanto Chemical Company Some isotopes were available from cyclotrons before the war in limited quantities

## Work of Voluntary Agencies Criticized by Health Survey

The Metropolitan Health Council, a division of the Council of Social Agencies charges in its eighteenth report that there is a serious gap in the work of Washington voluntary health agencies in control of cancer, heart disease and mental diseases The report cited a lack of community programs in nutrition, dental health and year round public health education On the brighter side the survey reports an increased public interest in health matters, good work by active medical and dental societies and many well organized health agencies, including the Metropolitan Health Council, which made the survey

## Fifteen Seventh Day Adventist Sanatoriums Treat 60,000 Persons

Dr H M Walton secretary of the Seventh Day Adventist Church medical department, reported to the forty-fifth general session held in Washington that 60 000 persons had been treated in the fifteen Adventist sanatoriums in North America Dr E. L. Morel, who has served for twelve years in the South African colony for the leprous, reported that half of the patients admitted were disposed of as "arrested cases" after four years He said "we don t say lepers are cured any more than we say tuberculous cases are cured, other than that no leprosy germs can be determined microscopically '

## Prediction of Heavy Death Toll From Traffic

Franklin M Kreml, director of the Northwestern University Traffic Institute, informed the International Association of Police Chiefs board meeting here that in the next ten years the United States will suffer half a million deaths, 15 million injuries and 1½ million crippling injuries through automobile accidents unless a determined program of traffic control is adopted and followed by the public

## Advocacy of Intensified Cancer Research in House

A House of Representatives committee has granted a request by the U S Public Health Service for $1 772 000 to finance cancer research The disease kills more than 170,000 Americans annually The committee endorsed an intensified attack on cancer, recommending a budget more than double current funds This years appropriation for the work is $548,700 Dr Warren F Draper deputy surgeon general told the committee that cancer ranks second as a cause of death in this country Between Pearl Harbor and V-J day it killed 600 000 Americans, more than twice the number listed as dead or missing in action by the armed forces during the war In the Federal Security Agency appropriation bill for 1947 the Public Health Service also asked for a fund to make larger grants to private research organizations, $500,000 for next year as compared with $75,000 this year Meantime a Gallup poll reports that 87 per cent of persons interviewed approved having the Government spend 100 million dollars to find ways of preventing or curing cancer, and 72 per cent were willing to pay more taxes to provide the money The committee on gastric cancer of the National Cancer Advisory Council, meeting at Bethesda, Md, discussed research projects to be instituted A report by the Metropolitan Health Council, a division of the Council of Social Agencies, charges that the District of Columbia chapter of the American Cancer Society is 'chiefly a paper organization"

## Psychiatric Association Criticizes Changes at St Elizabeths Hospital

Exclusion of military patients from St Elizabeths Hospital in Washington, as proposed in President Truman's reorganization plan, was criticized by Dr Ross Chapman, past president of the American Psychiatric Association Testifying at a hearing before the House Committee on Expenditures of the Executive Departments, he said the association is "deeply disturbed" at the idea of discontinuance of the hospital at a teaching center Dr Chapman said that through its accomplishments in clinical medicine and research the hospital has become "an institution of national significance"

## Research Being Resumed in Pacific Areas

Research, especially in biologic and medical fields, is being resumed throughout the Pacific islands, it was revealed at a conference of seventy-five scientific leaders and governmental representatives at the National Academy of Sciences The war and the presence of Japs on many islands disrupted research programs to the extent that sixteen insects dangerous to plant and animal life have been introduced into Hawaii Scientists are mapping extensive field work through a chain of field stations Army installations will be used, with a start at New Caledonia, where the French government is cooperating to make facilities available to scientists of all nations

## Investigating Board Clears Medical Staff of Ship Zebulon B Vance

An investigating board has reported to the War Department that "lax sanitary methods employed by mothers" may have contributed to deaths of 8 baby patients brought to this country from Europe on the "bride ship" *Zebulon B Vance* The report stated that "no misconduct or neglect on the part of the medical staff aboard the vessel contributed in any way to the cause or spread of the illness nor were any members of the medical staff intoxicated at any time during the voyage, as alleged by several of the passengers"

## New Mobile X-Ray Unit Used by Secretary of Agriculture

Secretary of Agriculture Clinton Anderson was the first person to undergo examination in the U S Public Health Services new mobile x-ray unit, the test showing a healed tuberculous condition The equipment is intended for mass tests of large groups of persons Dr C L. Williams of the Public Health Service predicted disappearance of tuberculosis "within a generation" in accepting the unit from the General Electric X-Ray Company on behalf of Surg Gen. Thomas Parran

## Senate Approves National Institute of Dental Research

The Senate has approved and sent to the House a bill to create a National Institute of Dental Research within the U S Public Health Service with a $2,000,000 building at Bethesda, and funds for research on dental decay and how to combat it. Reporting the bill the Senate Education and Labor committee said that 75 per cent of the people neglect their teeth, and only 25 per cent get "anything like' adequate or regular dental care.

# THE WAGNER-MURRAY-DINGELL BILL

## Hearings on S 1606—To Provide for a National Health Program

(NOTE.—*This is a condensation of the verbatim report of the hearings*—ED.)

*(Continued from page 692)*

United States Senate Committee on Education and Labor

MAY 6 1946

HONORABLE JAMES E MURRAY Presiding

PRESENT Senators Murray and Donnell

### Statement of Rev R A McGowan Director Department of Social Action, National Catholic Welfare Conference

REV FATHER MCGOWAN The Bishops' Program of Social Reconstruction, issued twenty-seven years ago just after World War I urged social security not only against unemployment and old age but against sickness and disability

In order that any national health program can become effective the following requirements are essential

(*a*) There must be an extension of hospital facilities by means of government support or subsidy for hospital construction particularly in the areas sparsely settled and in the areas of low per capita income There can be no extension of services without facilities to implement the program. This proposal is now under consideration by Congress

(*b*) There must be a notable extension of public health centers for the prevention of illness This phase of the program requires federal appropriation and administration and is included in title I of this bill

(*c*) There must be provision for adequate medical and nursing services in areas where such services are now insufficient. Private or voluntary effort will not place doctors or nurses where most needed. Some form of government aid will be required for this purpose. We suggest consideration of this That in such areas a policy of granting government commissions to selected physicians for civilian service on at least a part time basis be carefully explored and also the idea of using the services of physicians attached to the military services

(*d*) There should be federal support or subsidy to the states on a matching basis to provide care for the medically dependent who are entitled to public assistance This too is in title I

(*e*) There should be subsidies granted by the federal government to qualified colleges and universities for medical research

We favor the establishment of a national health program which will provide both hospital and medical care for the citizens of our country We recognize that the voluntary systems of health insurance which have rendered excellent service to our people would require some form of government aid to achieve universal health security

We favor in consequence a national system of insurance supplemented by government tax revenues by means of which all citizens can be protected in matters of health but we consider that this bill as presently drafted is unsatisfactory because of the complicated methods of administration which it creates and because of the excessive governmental control over the health services which are to be provided

Rights of patients doctors nurses hospitals and private health insurance organizations must be protected for the success of the program We do not doubt the intention of the writers of this bill to protect these rights We think that they have gone far in stating these rights But we are still dubious We are dubious about the method of administration

(*Rev Father McGo can suggested many modifications of the proposed legislation*)

SENATOR MURRAY Father am I correct in my understanding of Catholic social thinking in saying that the key thought is the importance and dignity ascribed to the human personality? REV FATHER MCGOWAN Yes, Senator

SENATOR MURRAY Do you believe that a means test, making people dependent on public charity would detract in any manner from that dignity of the human personality? REV FATHER MCGOWAN Yes I think it would Under this bill, which is quite extensive that is not provided

SENATOR MURRAY You think that any system which would provide for any section of our population to take a paupers oath would not be in accordance with good sound Catholic thinking? REV FATHER MCGOWAN Not for health purposes at all no

SENATOR MURRAY Has the church taken any stand during the past century when these problems were being agitated in other parts of the country with reference to systems of insurance, health insurance? REV FATHER MCGOWAN I do not think there has been any formal statement but there certainly has been great encouragement of the private health insurance systems I made the statement in here, however on the matter of advocacy of public health insurance by the Bishops Program years back

SENATOR MURRAY Pope Pius XI, in his Encyclical on Atheistic Communism, dated March 19, 1937, gave his approval and encouragement to a system of insurance against illness did he not Father? REV FATHER MCGOWAN Yes In paragraph 52 of that encyclical he has something on it I will read the whole sentence But social justice cannot be said to have been satisfied as long as working men are denied a salary that will enable them to secure proper sustenance for themselves and for their families as long as they are denied the opportunity of acquiring a modest fortune and forestalling the plague of universal pauperism as long as they cannot make suitable provision through public or private insurance for old age for periods of illness and unemployment.

SENATOR DONNELL I had not seen the Bishops' Program of Social Reconstruction until this morning and I have hastily sketched portions of it while you were testifying although of course I could not assimilate it all in the few moments I have had I observe at page 8 this language The social insurance provided in the Social Security Act is by no means perfect. To say nothing of other defects it fails to provide for workers' insurance against sickness ' Do you understand, Father that that language necessarily means an advocacy of compulsory health insurance of the type under which services medical and surgical services are provided as distinguished from insurance benefits in cash? REV FATHER MCGOWAN No I do not believe that a person could get from that advocacy of either method

(*There was extended discussion of monopolies and minimum wage laws*)

SENATOR DONNELL Mr Chairman, I was not in this questioning primarily addressing myself to the probabilities of economic development in the country but rather to undertake to determine what is exactly the theory of the Bishops Program and as I understand it to quote again this sentence

Hence all forms of state insurance should be regarded as merely a lesser evil and should be so organized and administered as to hasten the coming of the normal condition ' I think that indicates the thought of the writer or writers not that state insurance is itself a positive good but that as it is stated here it should be regarded as merely a lesser evil REV FATHER MCGOWAN Yes

SENATOR DONNELL Now Father McGowan you are not as pessimistic as the chairman as to the arrival at an improved condition which would obviate the necessity of this type of insurance? I am correct in that, am I not Father? REV FATHER MCGOWAN Yes

SENATOR MURRAY I understood you were. REV FATHER MCGOWAN Not so pessimistic.

SENATOR MURRAY You think it may come within the next century? REV FATHER MCGOWAN Well, I hope so

### Statement of John H Hayes, President-Elect of the American Hospital Association, Accompanied by Mr George Bugbee, Executive Director of the American Hospital Association

MR. HAYES The American Hospital Association represents approximately 3 500 hospitals comprising about 85 per cent of the civilian general hospital bed capacity of the nation We also have as members a substantial number of city county, state and federal hospitals We do not appear before you as a commercial group with a vested interest in any present organization for distribution of hospital care We are not under this bill threatened with taxes increased costs or great financial losses Hospitals occupy a unique position in the social structure of America Nearly every hospital performs a substantial amount of charity work, and by far the majority of hospitals

are operated by organizations who do so for the sake of rendering service and not for making a profit

We appear rather as a group having the greatest fund of experience in the administrative aspects of making hospital care and thus medical care available to the sick Hospitals are organized as representatives of the public to provide the skilled personnel and technical facilities needed by physicians and surgeons in rendering care to their patients We who administer hospitals for the benefit of society do so with a strong sense of our responsibility as public servants

We do not claim to have solved all the problems incident to the proper distribution of hospital and medical service. But hospitals have carried a large part of the development of the present high quality of such care in America, and it is therefore our duty to be in the forefront in supporting any program which might bring progress in our field and to lend our voice in opposition to any program which might imperil such progress or impede its further development

As a group we endorse the aims of a program of federal grants in aid to the states to make hospital and health care available to those who cannot pay for it In previous appearances before your committee the American Hospital Association has advocated such measures for indigent care, and to this extent we endorse in general the aims of that part of title I which would make such provision However were any portion of such legislation to be recommended for passage it should be carefully studied, bearing in mind the need for state participation and responsibility decentralization of authority and proper limitation of federal authority But we vigorously oppose the provisions of title II of this legislation, which would place the federal government in such a dominant position in the health field as to lead inevitably to federal control and operation of the entire health system of the nation This bill would give a federal agency complete control of practically all the funds needed to pay physicians hospitals, nurses dentists and others who render care to the sick. Control of the purse strings means control of the program, and we think this is highly dangerous

The development of health care in this country has not followed any fixed pattern Yet nowhere in the world has it made greater progress Literally billions of dollars have been donated by churches, philanthropic organizations, public spirited citizens and various community groups to build hospitals to provide care for the people of this nation Benjamin Franklin was one of the trustees of the first voluntary, nonprofit hospital in the United States and the hospital he helped to found is still in operation as a monument to the civic interest of this great American genius Since that time outstanding citizens in every section of the country have been members of boards of trustees of hospitals in their local communities in recognition of the importance of the hospital to the people of the area These tens of thousands of trustees are the representatives of the general public, organized to supervise the policies of the hospital with respect to the needs of the individual community and to see that the institution renders its fullest measure of service to its citizens Representatives of our various church groups have fulfilled a similar purpose in operating hospitals in areas where they were needed

Within the walls of hospitals in every part of the nation thousands of physicians nurses, hospital administrators and other personnel have individually and collectively contributed to the development of a system of hospital and medical care which draws very little criticism except that there is not enough of it The strength of this system is that it has grown and is continuing to grow according to the needs of the people it has served It is rooted in many soils and has developed along various lines Today's health care system is a living, growing organism which is instantly adaptable to the latest scientific discoveries to the needs of the community or to the individual patient

We are keenly aware of the fact that the amazing development of hospital services over the past two generations has been the result of those incentives which are found only in a free and independent professional group devoting their whole attention and interest to their efforts to be of service to society

If control of the funds of a compulsory health insurance system is placed in the hands of the federal government, the continuing growth of our present system, which has brought such progress will be seriously affected, because administratively the federal government will have to adhere to a single pattern of providing care If our present system had been developed in a single pattern this might be less difficult. But it has not and we have no reason to believe that the federal government will be able to determine such a pattern. Nevertheless, if this legislation be enacted those who administer the law will be obliged to establish some pattern at once. And they will be in position to enforce that pattern—right or wrong—through complete control of funds The terrible inertia of government regulation could easily retard further development of health care in America

Therefore as a group, on the basis of our experience, we are opposed to the legislation which you are considering because it would put the federal government into the position of controlling the whole health field We regard this legislation as a dangerous violation of all that has been learned in the administration of hospitals In a nutshell, hospital and medical care is a personal service, and the more remote the control, the worse the service Please understand that we do not condemn all government activity in the hospital field, for government has had an important part both on federal and on local levels But we cannot believe that the answer to the health problem of our country is to place the federal government in the position of collecting and dispensing practically all the funds needed to pay physicians, hospitals, dentists, nurses and others who supply care to the sick

We are further opposed to this legislation because it has been our experience that government in the health field is seldom able to control its cost of service and, on the other hand is likely to promise greater benefits than funds will permit Between a steadily rising cost of benefits and an increasing demand for more of such benefits the government would soon begin to operate under tremendous financial pressure We do not believe that the potential demand of this program on the taxing power of the federal government has been fully evaluated Certainly this may become one of the most expensive programs the federal government has ever undertaken and the responsibility to be imposed on the federal government for meeting such broad promises to the American people is not easily comprehended

The whole problem of purchasing hospital and health service is still developing Under S 1606 the federal government would be almost the sole purchaser of such service We do not believe it is realistic to assume that the system proposed by this legislation would long continue. Steadily increasing costs arguments as to various methods of rendering such care in different hospitals, would lead to such criticism of the program that the federal government would be constantly taking steps to meet such criticism However, these pressures would be such that before very long the government would be controlling the whole system by regulation, and government operation would be inevitable

State and local governments in their operation of hospital facilities have found no easy answer to these financial pressures In most cases such government institutions offer only minimal and impersonal service The federal government itself has been subjected to much criticism for faulty operation of its own hospitals Its experience in hospital operation is not such as to encourage us to believe that government operation of hospitals will improve the quality of hospital service or reduce its cost.

The sponsors of this legislation do not believe that its compulsory health features will lead to government operation, and they have repeatedly so stated Nevertheless we firmly believe that the pressure for increasing benefits, coupled with rising costs of such benefits, will not only lead to government operation but will further result in serious deterioration of the quality of service, because of the inadequacy of funds Government control of funds will greatly change present incentives for quality of medical and hospital service Quality, under such conditions will be sacrificed for quantity This financial pressure will require detailed control of those to whom funds are paid There is grave danger that imposed standards and sweeping regulations may supersede the present cardinal rule which places the welfare and comfort of the individual patient above all other considerations This control by regulation will have to be established within the range of the average hospital The process of averaging may result very logically in improving the services of substandard hospitals but it will also almost certainly result in the elimination of our present higher cost hospitals This will strike directly at our teaching hospitals and those which now render distinctive service Will this not mean the elimination of leadership in the hospital field? The sponsors of this measure completely overlook the sources of hospital progress

We are fearful of this legislation too because it makes promises which are impossible of fulfilment For example, there are now in this country approximately 130 000 active physicans These men, as you know, seldom work regular hours However, it is reasonable to assume that under a federally controlled administration these physicians like other government employees, would fall back into a five day forty hour week Allowing for the usual two weeks' vacation we find that fifty weeks of such service would make two thousand

hours of medical service available from each physician in a year, and a total of 260 million hours a year from the whole profession Since we have a population of over 140 million people this is less than two hours of medical service a year for each individual In other words, there are not enough physicians in the country right now to provide even two complete physical examinations a year for each citizen The normal output of our medical schools is approximately 5,000 physicians annually which is barely enough for replacement needs If the output was increased to 10 000 a year it would require twenty six years to double our physician census In the meantime, should this bill suddenly become a law the overwhelming load thrown on our medical profession would result in the lowest standards of medical care this country has ever known It is our feeling that the proponents of this legislation have not taken these facts into consideration in their discussion of the vast benefits to be afforded the nation immediately on passage of this bill

As a matter of fact, in all the years during which we have had a social security system in operation in this country a large portion of the employed population is still not covered by present benefits Yet here is proposed a much more complex program which is being promised to the entire population In view of the still partial acceptance of social security provisions, we are unable to envision the establishment of a universal compulsory health program which would even in the distant future accomplish all of the things which are promised

We are fully sympathetic with the aims of those who would like to have more medical and hospital service available to more people That is also one of our aims However we do not believe it can be widely and effectively accomplished in one bold stroke Rather, we believe it requires an orderly, intelligent program which will be more closely integrated to the needs of our people. It takes eight years to train a physician Hospitals can be built more rapidly, but it also takes time to develop the highly trained personnel necessary to provide our citizens with the high quality of hospital service they have come to expect and desire when they are sick Enactment of S 1606 as it is at present drawn would not correct our basic shortages in facilities and personnel Rather it would intensify the existing shortages in facilities and personnel and create confusion by its unrealistic approach to the whole health problem Indeed we believe that the assignment of ultimate authority in the health field to the federal government might well retard its further development because of the stultifying effects of remote control and administration by regulation

The American Hospital Association takes great pride in the progress that has been accomplished by the Blue Cross Hospital Prepayment Plans in protecting more than 21 million people in forty five states against the unexpected costs of hospital care The expansion of this prepayment system which has been sponsored by the association, has been one of the greatest examples of voluntary public cooperation in the world We believe that our government should be actively supporting this program instead of criticizing it because it has not yet covered the entire population. Blue Cross has been a dramatic development and much of its success has been dependent on payroll deduction The federal government, the largest employer in the country has not taken the simple step necessary to offer this protection to its employees through such payroll deduction Instead high officials criticize Blue Cross because no greater a proportion of the population is covered Cooperation from the federal government would be an easy step and most helpful in this voluntary movement to offer hospital benefits to the employed population and their dependents Blue Cross has merited such government cooperation—certainly not its criticism

Blue Cross is low in cost, and its costs of operation are low Only those who are now employed would contribute to the program under S 1606, and these are all eligible to enroll with Blue Cross In our opinion it would be far better that these voluntary plans with their broad coverage for the employed and their dependents be further extended before we consider compulsory insurance as the easy answer to the whole problem of distributing hospital and medical care The "magic of averages' is not the complete answer to all our problems

Incidentally I wonder if you have considered the probable attitude of the veteran to this program of health insurance on a compulsory basis? Under present circumstances you know, the veteran is already receiving extensive health services without cost to himself Yet if you enact this bill you are going to have to tax these veterans along with the rest of us, to pay for benefits they are already receiving for nothing The veterans are a substantial group who have little to gain and a great deal to lose by the passage of this compulsory health bill

As I have said, the American Hospital Association has as one of its primary aims the better distribution of hospital services to our people and the continuing development of better standards of quality and service With this in mind we have actively supported the Hospital Survey and Construction Act, which was studied by your committee last year and passed by the Senate last December That bill is now being studied by a committee of the House of Representatives, and if it is enacted we believe it will go far toward relieving the present shortage of hospital facilities in this nation We wish to compliment your committee for the fine work that was accomplished in the development and passage of S 191

However, the construction of additional hospitals and the extension of Blue Cross will still leave one area which requires the attention of the federal government. We believe that all citizens, irrespective of their ability to pay, should obtain medical and hospital care according to their needs Such a program requires acceptance by the federal government of the responsibility of helping to meet the basic costs of care to the needy We believe this is a primary responsibility of state governments to be administered on a local basis but with federal aid to equalize this assistance among the various states

With Blue Cross plans for those who can pay, federal aid to the needy and a program for construction of additional hospitals in areas where they are most needed we believe adequate and excellent health service can be made available to the whole nation without seriously disrupting the American system of voluntary health care which is admittedly, one of the finest in the world. This broad distribution of care could be achieved without the vast drain on federal resources and without taking the grave risks that are inherent in the program you are now considering Such a program permits orderly development of demand for more hospital and medical service, and these steps will in themselves stimulate an increased supply of the competent professional workers required to staff expanded facilities Hospital progress in this country has not been surpassed elsewhere. It has come about by voluntary action of the American people and without government control or interference It is continuing to grow and will improve at an ever increasing rate if it is not so controlled. Humane care of the sick has been based on local effort and has been developed on an individualistic basis It could not be standardized or regulated by government without losing much, if not all of its value

SENATOR MURRAY Mr Hayes do you recognize the fact that in this country there are a large number of people who for financial reasons, are unable to pay for modern medical care and hospitalization? MR. HAYES Certainly, every one in hospitals realizes that and we take care of them for nothing in practically all our hospitals

(*Senator Murray asked many questions about Blue Cross plans and services rendered free*)

SENATOR MURRAY You have read the circulars of the National Physicians Committee in which they say this is socialized medicine and regimentation, and so forth? MR HAYES All medicine is socialized as far as that goes I would say it is federalized medicine.

SENATOR MURRAY Is it federalized medicine or socialized medicine? It is nothing more than undertaking to give to the people of this country an opportunity to prepare for the medical care that they may need in emergencies MR HAYES They have an opportunity now, Senator in commercial plans and otherwise, that I would believe to be much less than the 3 per cent of $3 600 or whatever the percentage might be There are opportunities for every one to enter into these medical plans on an indemnity basis

SENATOR MURRAY I would like to have you furnish for the record any indemnity plan that would furnish the extent of care medical care and hospitalization that is proposed under this bill

SENATOR MURRAY Would you prefer to see a system where people would come in and have their care paid for by the government in preference to a system whereby they could be enabled under the national insurance plan, to pay for it themselves? MR. HAYES Not if the federal government controlled that system, no sir

SENATOR MURRAY What is the federal control in this system that you are so opposed to? MR HAYES It is written throughout the bill The Surgeon General would determine which hospitals could serve the public We would be obliged to take a maximum rate of $7

SENATOR MURRAY I wish you would point that out in the bill for me. I know of no such provision It provides that

the patient should have the choice of the doctor and of the hospital in which he wishes to be cared for MR HAYES We are not approved by the Surgeon General It mentions "hospitals approved He determined the standard to be applied to the hospital and to the establishment and maintenance of the list of participating hospitals That is included in page 44

SENATOR MURRAY Do you not think it would be advisable, as a provision, to have the government investigate these hospitals and determine the character of their personnel and the ability to give the kind of service that would be needed in our modern conditions? MR. HAYES On a local or state basis I believe that is all right.

SENATOR PEPPER When I conferred with the Veterans Administration about a week ago, General Hawley definitely informed the delegation and myself that it is only service connected disability that they are trying to take care of MR. HAYES They are taking care of them in our hospitals to some extent

SENATOR PEPPER If a veteran received care for non-service connected disabilities in this system contemplated by this bill and if his family received coverage and care, it would be appropriate for him to pay some kind of a compensation, would it not? MR HAYES Yes if his family derived benefit from it

SENATOR MURRAY Is there any reason why similar arrangements under an insurance plan could not be entered into with hospitals? MR. HAYES Well, Senator if you did it on the basis that the Veterans Administration is doing it, paying for the cost that is considerably more than $7 a day in the average voluntary hospital My hospital is rather economically conducted and our costs in ward patients went up over $10 per patient last year for the first time

SENATOR MURRAY I notice you have discussed the effect of this bill on the medical profession Did you prepare this entirely by yourself? MR. HAYES I prepared the statement and sent it out to members of my council and asked for their suggestions, and they scarcely changed a word

SENATOR MURRAY They scarcely changed a word, but you had their advice and suggestions in the matter? MR. HAYES I merely followed the policy of an officer of the association of letting the officers and trustees know what I was going to say

SENATOR MURRAY You did not let the Medical Association know what you were preparing this statement for? MR HAYES No, we are not permitted to speak for the medical profession We speak of the effect on medical care

SENATOR MURRAY Did you talk it over with the staff in your hospital? MR. HAYES No, sir

MR HAYES Under the Blue Cross Plan we are paid the identical amount for each patient and they all get the ultimate in medical care

SENATOR MURRAY They get the highest character of medical care? MR HAYES That is right but the Blue Cross starts off by paying $15 in New York City, $10 for the second and $9 for the third

SENATOR MURRAY So you would get much more under the voluntary system than the federal system? MR HAYES The hospitals get more than is proposed in this law

SENATOR MURRAY That is a very important item of course that you would make more profit under the voluntary system than you would under the federal system? MR HAYES Senator we never make a profit. We always suffer losses

SENATOR PEPPER Mr Hayes, I notice from your statement that there are some *3,500* hospitals that are *members* of the American Hospital Association MR HAYES Yes, sir that is right

SENATOR PEPPER These comprise about 85 per cent of the civilian general hospital bed capacity of the nation? MR HAYES That is right.

SENATOR PEPPER Generally speaking who owns those hospitals? MR. HAYES They are owned by church organizations

SENATOR PEPPER What percentage is that? MR. HAYES That is about a third

SENATOR PEPPER Who else owns them? MR. HAYES The remainder are community enterprises

SENATOR PEPPER They are owned by communities? MR HAYES We have in our membership municipal and state hospitals I am talking about the average voluntary hospital It is difficult to say who owns an organization of that sort It definitely has no ownership It has a control in the board of trustees It is built with philanthropy

SENATOR PEPPER You said about a third of the hospitals composing your organization are owned by church organizations Can you give me a general idea as to what percentage of the whole number is owned by public bodies that is, municipalities counties, states or public bodies of any sort and what percentage are owned by private bodies where public funds do not enter into them

MR BUGBEE I can give you an exact breakdown Senator Pepper I think the third is high There are about 1 000 church hospitals in the country Of our membership, I think it is 700 church hospitals and 500 of municipal, county and of that type Then there are several hundred proprietary, which are, by and large, a small percentage of the bed capacity of the country as a whole, and the rest of this nonprofit type of corporation

SENATOR PEPPER What do you mean by 'proprietary'? MR BUGBEE They are owned by physicians

SENATOR MURRAY Or are they owned by a group of physicians? MR BUGBEE Yes, they are

SENATOR PEPPER You say about 500 are publicly owned by counties and that sort of thing? MR BUGBEE That is right.

SENATOR PEPPER And the others are owned by nonprofit organizations the funds for which are derived by private contributions? MR BUGBEE They are at least nonprofit as to any payment of dividends The building may have been built by philanthropic gift or some of their funds for support of free care may be currently given each year, or the majority of the patients may, in certain instances, pay the costs themselves or indigent patients may be paid by the local community out of tax funds They are nonprofit

SENATOR PEPPER Already a considerable portion of the hospitals of the country serving civilian needs are supported by public bodies and by public funds? MR BUGBEE If you take all beds, mental, tuberculosis and others, that is certainly true by a great majority We are referring to general hospital beds

SENATOR PEPPER Mr Hayes could you give me some idea as to how much charity the hospitals of your association give every year to the patient? MR HAYES Well, I have not the percentage Of course, a good many of the hospitals are city or county institutions that are all charity Every voluntary hospital does a certain percentage of charitable work a little bit less in recent years If people had a little more money it would be different My own hospital averages over the year about 60 per cent of the patients as charity patients

SENATOR PEPPER Taking the needs of the United States what is the deficiency at the present time in the number of hospital beds required? MR BUGBEE There is variation as to the standards required The Hospital Survey and Construction Act suggested a maximum 4½ beds per thousand for general hospitals I believe the census of hospitals in the country is something over 3, with wide variation by areas on some above and some below

SENATOR PEPPER Can you say that all the people of New York City get all the hospital and medical care that they deserve and should have for their health? MR HAYES If they come for it we have certainly more than sufficient beds to take care of them in the city

SENATOR PEPPER You reported that part of your patients paid and 60 per cent get charity? MR HAYES That is right.

SENATOR PEPPER What do they have to show to be classified as a charity patient? MR HAYES The admitting clerk asks them where they live their earning capacity and the rate might be determined as nothing a dollar or $1 50 a day We are required to have experienced and diplomatic people to ask those questions but no one ever signs any oath that he is entitled to it

SENATOR PEPPER Every man's word does not have to be buttressed by an oath They have to meet a means test in order to be classified as a charity patient. That is what they are. MR HAYES That is right

SENATOR MURRAY The reason you can give that service there in New York is because already the hospitals there are on a public basis MR HAYES No, sir New York has about the poorest record of any large city in the country as to what it pays the voluntary hospitals for care. For instance in the hospitals in New York City, New York City pays a maximum of $3.25 per day for a case in the voluntary hospital and that has to be strictly an emergency case, unable to go to a city hospital before they accept that If a man comes in with pneumonia if it is not very acute, they would not even pay for that New York has a very bad record in that respect, and we have made several pleas We are still hopeful that beginning with the first of July we will get a little more assistance.

*(Senator Pepper argued with Mr Hayes at length over the Federal control of hospitals)*

SENATOR PEPPER Are you not thinking more of how it will affect you and your pleasure and your interests in the matter

than you are of those people out there in this country to whom this offers the only hope of getting the kind of medical and hospital care that they should? MR HAYES I think that is an unfair statement I have been twenty years in the hospital business and I could have earned an easier living elsewhere

SENATOR PEPPER I do not say that you have no right to think of it from your point of view but every time we think of the balance of good it will do to the one group as to the detriment of another we have to consider those things When we ask for taxes for a public purpose we are balancing interests against one another Now, that is what we have concluded some of us, in respect to this legislation There may be a certain amount of inconvenience until we can learn by experience a better method It may have faults in it and I am sure it will We are saying that when you balance up the inconvenience it may cause somebody in the hospital or maybe even the bad effects it may have with the fact that it will give life and health to millions of men women and children in this country who cannot otherwise get it, then we feel that we are entitled in that balance of interest to side with the needy rather than with somebody who from his particular experience may not think it is a good thing Do you see our point of view? MR HAYES Yes I see it very clearly except that we believe in evolution This bill is entirely too much in the nature of being revolutionary without sufficient people to carry out its purposes

SENATOR MURRAY Do you mean to say there are better opportunities today for people to get the best modern medical care the fullest and most complete modern medical care than there were twenty-five years ago? MR. HAYES There is a tremendous improvement. You can take for instance the lengthening of the span of life and everything else

SENATOR MURRAY The hospitals do not have anything to do with that Hasn't that gone through Social Security to a very large degree? MR. HAYES That was here before Social Security was ever enacted The lengthening of the span of life and certain hospitals have had a great deal to do with that and the research in hospitals has had a great deal to do with it.

SENATOR MURRAY Hasn't that research taken place in laboratories, and haven't the greatest advances taken place as a result of experts and scientists working apart from the medical profession and apart from the hospitals in developing these modern scientific ideas? MR HAYES No that always is with hospitals and sick patients

*(Senator Murray Senator Pepper and Mr Hayes discussed at length the comparative costs of government and voluntary plans)*

*(Senator Pepper and Mr Hayes discussed the control over hospitals under the Wagner-Murray Dingell bill)*

*(Senator Donnell questioned Mr Hayes as to his education and career)*

SENATOR DONNELL Was Senator Wagner one of the authors of this bill recently a patient at your hospital? MR. HAYES Yes sir

SENATOR DONNELL Has it [the house of delegates of the American Hospital Association] expressed itself as being in favor of compulsory health insurance administered by the federal or any state government? MR. HAYES Never

SENATOR DONNELL Now Mr Hayes, this morning Senator Murray our chairman who has devoted a tremendous amount of time to this subject, referred many times to what he considered to be the effort of this bill S 1606 to guarantee the best quality of modern medical care I ask you if you have found anywhere in this bill in the first place any such language as that best quality of modern medical care ? MR HAYES I do not recall it I have read it about three times, and I do not recall it

SENATOR DONNELL And may I call your attention Mr Hayes to page 68 to the fact that there is a limitation there to which reference was made this morning of the amount of the expense which hospitalization benefits may include under the bill? I read Not less than $3 and not more than $7 for each day of hospitalization not in excess of thirty days which an individual has had in a period of hospitalization and not less than $1 50 and not more than $4 50 for each day of hospitalization in excess of thirty in a period of hospitalization and not less than $1 50 and not more than $3 50 for each day of care in an institution for the care of the chronic sick.' Would you tell us please, Mr Hayes, whether or not hospitalization frequently in order to have the highest quality the best quality for I will quote the Senator again the best quality modern medical care administered whether hospitalization would require a greater expense per day than any of these limits specified in this bill MR. HAYES Definitely a greater expense

SENATOR DONNELL Considerable emphasis this morning was made on the subject of whether or not this was federalized medicine Also Senator Murray called your attention to the fact that some literature has gone out calling it socialized medicine, and you would call it federalization I take it I am correct in this, Mr Hayes According to your analysis of this bill, the provisions of title II, namely that portion of it which relates as it is entitled, to prepaid personal health insurance benefits or what you and I may term compulsory health insurance, that is to be administered not by the states but by the federal government that is correct, is it not? MR. HAYES That is my understanding

SENATOR DONNELL It is true there is a provision in here to the effect that, and I call your attention to page 37 and following in the administration of this title the Surgeon General shall in so far as practicable give priority and preference to utilizing the facilities and services of state and local departments or agencies on the basis of mutual agreements with such departments or agencies" et cetera That is in there all right? MR HAYES Yes sir

SENATOR DONNELL But the fact is that the Surgeon General is the man who gives the priority and the preference and makes the decision MR HAYES That is right

SENATOR DONNELL And the Surgeon General as I understand it and as we all understand it is exclusively a federal officer that is true, is it not? MR. HAYES That is correct

*(Through his questions Senator Donnell emphasized the nature of federal control under the Wagner-Murray Dingell bill)*

*(Senator Donnell brought out that the Surgeon General would make the contracts pay the bills and determine the pattern of hospital services under the Wagner-Murray Dingell bill)*

SENATOR DONNELL So it would appear would it not Mr Hayes, that in the first place the contracts are made by the Surgeon General with the hospital second he directs payments of moneys over to the hospital in the third place, he selects what hospitals meet his approval under the bill MR HAYES And writes the rules and regulations

*(Senator Donnell brought out that there is really no free choice of hospital under the Wagner-Murray-Dingell bill)*

### Statement of Rev John G Martin, Past President of the American Protestant Hospital Association

REV MR. MARTIN From very early history treatment of those suffering from illness has been a traditional function of the Christian Church Church hospitals today are an important segment of the hospital field I do not believe it is the purpose of the sponsors of this legislation to find fault with the quality of service that has been rendered in any of these church hospitals

However it now appears that in spite of the admittedly excellent service that is now being rendered this legislation would interject the federal government into a position between the hospital and the patient There would be a strong tendency to substitute adherence to the standards fixed by the governmental agency in place of concern for the patient's welfare If this happens the federal government then becomes the dominant force in the whole health field and will tend to squeeze out the religious influences which have contributed so much to present day developments

We are concerned about the entry of the federal government into this picture in place of private philanthropy and human service which has done so much for the health of our nation

In this discussion I would not want to make the impression on you that we do not favor government interest in the health field Government has had and still has a very important function to perform in safeguarding and improving the general health of its citizens It is our point that government should do this not by destroying a soundly developing system and substituting one of its own. Instead the government would be wiser to take advantage of the program that has so far been so successful and improve on it by supporting and developing further the best features of the present system I am sure you are aware of the great strides that have been made in recent years and are still being made today in the health field.

The system we have in America today has served us well and has made notable progress It is strong and healthy and continues to grow We believe that the answer to the health problem of our country is the further development of what we have. We greatly fear that if attempt is made to spread this present system of hospital and health care too thinly and too suddenly great loss of essential values will inevitably result. For that reason we believe the legislation before you should

have the most careful and thoughtful study before any action is taken on it

*(Senator Pepper questioned Rev Mr Martin on statistics of health and hospitalization)*

SENATOR PEPPER Are you aware of the fact that 40 per cent of our counties do not have a full time public health officer? REV MR. MARTIN Those figures should be open to interpretation There are a great many counties that do not even rate a hospital, but because of the great ease in transportation the patients in those counties could easily have access to the existing hospitals and the hospitals created by S 191

SENATOR PEPPER If you could save the lives of men and women and children in this country, aren t you willing to make a few concessions and a few legalistic compromises and help the people of the United States get a national insurance system if that will save human life? REV MR. MARTIN My belief is that real development of our present system would accomplish that better than a compulsory system

### Statement of Alphonse H Schwitalla, S J, President of Catholic Hospital Association, Accompanied by M R Kneifl, Executive Secretary, Catholic Hospital Association

REV DR SCHWITALLA These institutions are the most compactly organized group within the voluntary hospital field, being bound together, as they are, by a common purpose, a common outlook on life, a common attitude toward the patient, a common motivation that is spiritual and religious and a common desire to retain in and, if it should not be there, to introduce into the care of the sick not only the highest scientific and professional but also the very highest spiritual and religious influences

SENATOR MURRAY I am sure we are all satisfied with that, Father I think we are all absolutely in accord with that statement which you have made

*(Father Schwitalla called attention to participation by the Public Health Service in planned parenthood clinics)*

REV DR SCHWITALLA After having held out this hope for a future expansion of their opportunities to the members of an association specially interested in parenthood planning and lest there be any misunderstanding of his meaning, a representative of the U S Public Health Service went on to discuss the mode of operation of the health centers as part of the venereal disease and tuberculosis control program but also as a part of a possible planned parenthood program He said 'In states like North Carolina, Alabama and several others which have decided that child spacing programs should be part of their public health activities, these health centers would house clinics for that purpose It is the policy of the Public Health Service to cooperate with the health departments of the state in the programs they carry on for the protection and advancement of the health of their people Any state deciding to develop a planned parenthood program could expect from the Public Health Service the same consideration that would be given to any other proposal in connection with its state health work"

The speaker was, of course, not alluding directly to S 1606, because at that time the bill was not in its present form but he was summarizing the "Postwar Planning of the Public Health Service" which has for its purpose "to make available to every family the health services it needs and should have" Besides, the definition of public health work as contained in the present bill is in complete harmony with the understanding of the public health official whom we have here quoted.

I know I am here raising extremely difficult issues I know too that the Public Health Service has committed itself as a policy to cooperate with the various public health programs in the various states, so that, if in a state planned parenthood is defined by statute or regulation to be part of the state's public health program, the policy to which I have just referred in the quotation is carried out that is, "It is the policy of the Public Health Service to cooperate with the health departments of the state in the programs they carry on for the protection and advancement of the health of their people. Any state deciding to develop a planned parenthood program could expect from the Public Health Service the same consideration that would be given to any other proposal in connection with its state health work '

On behalf of those citizens of our country who regard planned parenthood as practiced through contraceptive procedures or preparations as basically subversive of the moral law, as destructive of the welfare of the nation and of individual morality, I recommend and request changes in the content and the language of the bill, so that grants from the federal government to the states for public health services may not be used for the furtherance of programs which, no matter how contraverted the issues might be, are still condemned by the Criminal Code of the United States and are offensive to the convictions and beliefs of large percentages of the population of these United States

SENATOR PEPPER Excuse me, Father Do you not think, having quoted the statement, you should give the author of the statement for the record? REV DR SCHWITALLA I would be glad to give it to the secretary and to you, unless the chairman rules otherwise.

SENATOR MURRAY That is satisfactory

REV DR SCHWITALLA If that is satisfactory, I do not see any special purpose in publishing the name of the author

SENATOR PEPPER If you are going to quote the statement and say that the person is within the Public Health Service, I think you should

SENATOR MURRAY I think if he gives it to us it is all right.

SENATOR PEPPER Is there any reason for that? REV DR. SCHWITALLA I have a little feeling about that, Mr Chairman, unless you want it done

SENATOR MURRAY We will not insist on it.

REV DR. SCHWITALLA I will give it to you right now and if you will give it to the secretary, he can take the name right now It is rather a high official in the Public Health Service

SENATOR PEPPER As far as I am individually concerned, I might not have an objection to the statement, but some one might have objection to the statement. It is attributed to the Public Health Service and to an official, so that if it is an objectionable statement it is the basis of a complaint against the department and yet who the person is or the position he had or the authority he had is not revealed in the authorship of the statement I thought if you were going to use it at all, it would be fairer to the Public Health Service to disclose who the person was

REV DR SCHWITALLA It was not a secret quotation at all, because it was made in a public address at the Waldorf Astoria Jan 24, 1945

SENATOR MURRAY I submit myself Father, you are willing that the committee should have access to it That will be satisfactory

REV DR. SCHWITALLA Yes I think a lot of people probably know this gentleman

SENATOR MURRAY Yes

REV DR SCHWITALLA I regard him as a friend of mine. He knows I am going to quote him The amenities have been taken care of I do not believe it is wise to spread this name abroad among other people Some of the Sisters are in here and some of the Sisters know this man There is no necessity of putting him into a certain category I have a feeling that the Sisters might have a certain resentment about the statement. Why increase that?

SENATOR PEPPER I cannot lend my acquiescence to the quotation of a public officer, and then a declination to give the official s name in a public discussion of the matter I do not want to be in any sense of the word objectionable, but I just do not think it is of propriety to quote in the record in a prepared statement a public official of the United States Public Health Service and not disclose who the official is

SENATOR MURRAY Well, the committee will have access to it, and it seems to me that that will be sufficient If, after further study I should change my mind—

SENATOR PEPPER As far as an individual member of the committee is concerned, I will not agree to be bound. If I determine that I desire to disclose the name of the person, Mr Chairman, I shall feel free to do so as a member of the Senate and a member of this committee. I do not think this is a secret session and unless there is some special reason, I do not see why we should do that.

SENATOR DONNELL Mr Chairman, I find myself in accord with the Senator from Florida I do not mean to embarrass Rev Dr Schwitalla, but I do believe it is a matter of public concern, and I should feel exactly as the Senator from Florida has expressed himself

SENATOR MURRAY Well Father, if you wish to comply with the request of the Senators you may do so

REV DR SCHWITALLA Well, I certainly have no wish to stand on any constitutional rights here. I think I have them, but if the committee wants them, it was an address by R C Williams, M D Assistant Surgeon General, Bureau of Medical Services, Public Health Service. The address was made before the twenty-fourth annual dinner meeting of the Planned Parenthood Federation of America The title of the pamphlet is "Responsibility for the Health of Tomorrow s Family The

place was the Waldorf Astoria, New York, Jan 24 1945 I made it my business to find out whether the policy of which Dr Williams here speaks, namely that it is the policy of the Public Health Service to cooperate with state plans without discriminating with reference to individual phases of a public health program, was or is the policy of the Public Health Service. I understand, from several inquiries, that it is and that when funds are given by the Public Health Service to the states for the extension of public health services it is the state's program that is accepted. Now, that evidently is at the bottom of this whole situation, and I think it is not without some bearing on the whole situation here that we are discussing in this committee.

The Catholic Hospital Association regards it as one of the desirable features of this bill that it actually makes provision for the medical care of needy persons Such a provision is of course, indispensable in any comprehensive national health program The question may however, still be raised legitimately whether the indigent should be taken care of in his illness through the special provisions of a public assistance program or whether we should not rather make efforts to take care of the needy through the same program through which the contributor to the program, in this case the wage earner is taken care of As a matter of fact, at the present time, if the situation is carefully analyzed the hospitals and the physicians who are most keenly alive to their obligations draw no line of distinction between the paying patient and the nonpaying patient. Even if the sarcastic cynic or the scoffer sees that such idealism is all too rare to constitute a real factor in the health care of the nation, it still remains true that the physician and the hospital and the nurse must treat a human being as a human being according to the basic requirements of any reasonable system of ethics irrespective of the paying capacity of the patient Such has been the standard which the Catholic Hospital Association in conjunction with the other Hospital Associations has always held up as a basic principle for ensuring proper medical care of the indigent

It is true that our public hospitals have been the bearers of the obligations of society to give hospitalization and medical care when it is needed to the completely or partially indigent, but in doing this I wish to visualize their functioning not as agents of government but as agents of society, assuming the obligations of society for its most needy members and thereby sharing with the voluntary hospitals which are also agents of society this prime and indispensable duty—a duty which arises from the fact that society has been inadequate to supply the needs to all its component members for food housing clothing, employment, recreation this neglect, no matter how inevitable it might be resulting in the sickness or disability of the indigent or the medically indigent.

It is worthy of note that S 1606 sedulously avoids all direct reference to compulsion The extent of the personal health service benefits are specially defined and these consist of general and special medical benefits and so on all purchasable through funds authorized to be allotted to the Personal Health Services Account,' to which there is to be credited by the Secretary of the Treasury amounts equivalent to 3 per cent of the wages paid after a stipulated date with respect to employment but for wages only up to and below $3,600 per annum

While, therefore, the compulsory element is understressed it is clear that, through the tax on wages the legislation becomes definitely compulsory and it becomes compulsory moreover with specific reference to health insurance as the procedure through which the contributing wage earner is to purchase his health protection

Now the interesting point about all of this to me is that there is really a compulsory or an obligatory feature in health care It is man's duty to take care of his health and of the health of those who are dependent on him, and that duty is binding on him by virtue of the natural law which obligates every reasonable and rational human being and which exercises compulsion over man within the full limits of his financial and physical capacity to obey it This obligation is the same kind of obligation as man's loyalty to his country, man's obligation to worship God man's obligation to respect the rights of his neighbors The compulsion arises from the full effectiveness and force of the natural law and from its universality Hence man is a trustee of his life and health and not the owner of them, a trustee for the health of the members of his family and not the owner of that health If man wilfully and maliciously or through culpable negligence disregards his own health or that of his family he is subject to severe censures before the tribunal of God no matter what individual persons might think of him. The compulsion in this obligation, like so many of the obligations of the natural law, though binding on the individual, still leaves the individual free, leaves him free in the full enjoyment of a vast freedom because the obligation is not specific with reference to this or that method of living up to his obligation

Man is not obligated to choose one method rather than another of safeguarding his health. Man is not even bound to use the best possible means or allegedly the best possible means of safeguarding his health He may, as a matter of fact choose to safeguard it at the cost of seemingly disproportionately large inconveniences or sacrifices Moreover, the obligation of man safeguarding his health may have to yield to higher obligations, as for example when a man deliberately chooses to expose his life to danger in the defense of health or life of a dear one or of his country This means also that health and, for that mater, even life is not an absolute good but only a conditional and a contingent good All of this means that the observance of man's obligation to safeguard his health, though the obligation is a compelling one is still subject to the prudence the good judgment, the free choice of the individual who conforms to the basic law There is compulsion, therefore, with reference to the safeguarding of man s health, there is no compulsion arising from the natural law to choose this rather than another form of providing for his health

Is it apparent that the system of private initiative in medicine has so completely failed as to justify this extreme compulsion? Moreover is it apparent that a compulsory system is going to be effective in remedying the alleged or even the acual shortcomings of a system of private initiative? Is it apparent that all the individuals whose payrolls are going to be put under contribution are so dissatisfied with the present methods of taking care of one s health that they will willingly undergo the serious inconveniences which are implied in a compulsory system such as is here projected? Is it apparent that society is so seriously endangered by the system of private initiative as to make this compulsory system immediately imperative? These are the questions which I believe must be answered before we can justifiably pass a law such as we are here discussing

The compulsion of which we are here speaking implies the giving up of considerable freedom and the relinquishment of considerable responsibility We cannot create an intelligent and enlightened and a responsible citizenry unless we entrust duties and obligations to that citizenry To remove responsibilities from man is not to elevate him but to degrade him To take away from him the obligations of maintaining himself and his family in a state of refinement and fuller living is not to foster that man s character but to weaken it unless the removal of responsibility from him is accomplished with a clearer understanding of the reasons why that relief is given to him To make a strong nation requires that man must be given responsibility rather than to have responsibility taken away from him

If society could not create and could not maintain the processes by which the human being can meet this obligation of his health care, then the government would have to give aid to society and ultimately to the individual so that society might meet this obligation But even in that case the government would not be permitted in any reasonable interpretation of ethical principles to ride rough shod over the obligations of citizens but would have to respect the rights of human beings as far as this is possible under the concrete circumstances of each given situation

Two questions present themselves in the face of all this 1 Can society create and maintain the processes by which in our present question the health of the nation can be safeguarded? 2 What particular characteristics and capacities of the individual must be protected if government feels itself obligated to interfere in the individual's responsibility for his own health care and the care of his dependents?

With reference to the first question can society really create or maintain the processes necessary for safeguarding the health of the nation? If our question pertains to American society, my answer is unhesitatingly and unqualifiedly an emphatic yes It has done so and one by one disease entities have received mortal blows from the votaries of American medicine, from the research workers who understand the biologic processes that have yielded such amazing triumphs It is now said that through the aid of government our schools of medicine can be still better protected just as our research can be more emphatically fostered and the pertinent sections of S 1606 are significant and at the same time most valuable contributions to afford the proof that society and government in their wisdom have realized that through federal aid in these two important

areas much more can be accomplished than has already been achieved It would seem, therefore, that with miracles such as we are here discussing already accomplished no one would dare say that limits have been set to the effectiveness of private initiative Through the glorious pioneering of our American investigators, and through the discoveries and the daring aggressiveness of those who widen the horizons of man's thinking it should certainly be possible to bring the whole American people under a voluntary health program, since problems of so much greater difficulty have already been successfully solved The proof, therefore, cannot be brought and to my thinking, will not be developed to show that society is incompetent to cope with this problem through the processes that have already been employed in the solution of much greater problems If we can achieve our purpose through the encouragement of voluntary initiative we shall strengthen the sense of responsibility of the individual we shall safeguard the dignity of the individual as that of a person who is intellectually and emotionally competent to make his own choice concerning the manner in which he obeys the natural law to which he is subject From all of this it becomes apparent also what features must be preserved in the reemphasis on the importance of each one's obligation to fulfil this basic responsibility

Once it is admitted that a compulsory national health program is to be initiated then it can easily be seen that such devices as are contrived in S 1606 for the administration of a national health program become all but necessary If there is to be, as S 1606 contemplates, a compulsory national health program, I for one would have to insist that responsibility for it should be centralized, that there should be drafted rules and regulations which would ensure a measure of uniformity in the whole program that these rules and regulations should be such as to be more or less universally applicable and that the rules and regulations be written so as to simplify administrative procedure I can easily understand that routinization mechanization standardization of the procedures should be effected so that the costs of the program may thus be minimized and so that furthermore, the most easy approach be made to the generality of the people whom the program is devised to protect Hence I can see why so much power should be entrusted into the hands of the Surgeon General and why there should be the special kind of an advisory council which the bill creates and why there should be certain kinds of appeal bodies and why the Surgeon General should himself be the arbiter legally constituted of controversies which his own actions may have evoked and why all the other numerous provisions of the bill should follow as necessary corollaries from the necessary concentration of administrative power

But think of what all of this is doing first of all, to the ensured person secondly to the professions of medicine, dentistry and nursing, thirdly to our hospitals, and, fourthly, to society at large It has been said and we must pay our respects to the writers of the bill for at least thinking of this concept that the methods of administration should be drafted so as to ensure the prompt and efficient care of individuals, promote the personal relationship between physician and patient provide professional and financial incentives for the professional advancement of practitioners, and encourage high standards in the quality of services But frankly, I cannot help but wonder whether the relationship between physician and patient can possibly be promoted through such a system as S 1606 proposes It would seem to me that at ever so many steps in the contact between patient and physician there would be injected into the patient-physician relationship extraneous considerations of the most diverse kinds The physician would be expected to make reports to his government to maintain records quite different from the case histories which he now maintains and which would be prescribed for him he would lose a great deal of contact with his patients through the fact that he receives a stipulated sum from government sources Since he is being paid on a service basis and on the basis of a fee schedule he would be bound to lose the proper attitude toward professional remuneration, which in any true concept of medical care is regarded only as a token payment and not in any sense as a wage or salary or stipend but only as an honorarium All of these consequences would be found to follow as I see it, and from all of them there would also necessarily be found to result a deterioration in the character of medical practice. There would almost of necessity be a commercialization and the material outlook on practice which would thus be fostered might actually result in serious consequences to the whole concept of medical care for the American people

As for the professions, I wish again to express my appreciation of the fact that the hope was formulated in the bill that there would be no enslavement of the medical profession or of the other health caring professions through S 1606 I wish I might be able to share this optimism, but, as I see it centralized control would be inevitable and that means control through regulation, and control through regulation means a curtailment of freedom of action, and such a curtailment in turn means a loss of interest in one's professional activities And so a chain of successive causes and effects would be initiated the end of which, taking human nature as it is, would lead to nothing else but what has been eloquently envisaged by others who have testified before this honorable committee

There is a surprising, astonishing and unique feature in S 1606 the full import of which I have thus far failed to fathom In the old age and survivors program as well as in the unemployment program I find that the benefits all take the form of a direct cash payment to the beneficiary In this way the dignity of the beneficiary is safeguarded The government indicates to him or to her that the beneficiary is trusted to use his ingenuity or his initiative or his honesty to provide for himself through the medium of purchase with these cash benefits such commodities as the beneficiary chooses to purchase For some reason or another that I cannot understand, the situation is quite different in this health insurance The benefits take the form of services to the beneficiary The strange thing is that the services are not furnished by government officials, at least according to S 1606, but by those doctors, dentists nurses, hospital administrators, laboratory technicians who have signified their intention of obeying certain regulations laid down by the Surgeon General in pursuance of which they will furnish their respective services to, not the government, but the patient

In the old age and survivors program and in the unemployment program there is a relatively simple contract, a contract between the employee who in cooperation with his employer pays a certain amount of money into the federal treasury, and the federal treasury in turn, on the occasion of a predefined contingency, makes a corresponding payment to the individual citizen In the health care program, however, there is a tripartite and probably a multipartite contract The least complicated situation is a contract between the governmental agency, the physician or hospital or nurse or dentist and the patient To make matters worse, this tripartite agreement is superimposed on a basic and fundamental mutual contract the contract existing between the patient and the nurse. There are complexities developing from this pyramiding of responsibilities which are most difficult to understand. Let us take the patient-physician relationship, as an example, particularly apt since in the bill itself one of the purposes is defined to be the fostering of the patient-physician relationship In its simplest form that relationship demands a man to man contract, with the patient having a certain priority of rights because he is in need and the doctor having a priority of privilege and obligation because of his professional standing and his ability to give the patient what the patient needs

Over and above this relationship the patient who is a wage earner and is employed has entered into another contract with his government by virtue of which the government will supply funds to an as yet indetermined individual under certain contingencies That is contract number two Now the patient chooses a physician, let us assume within the panel That contract is something quite different from the ordinary contract of the patient-physician relationship and hence it is contract number three The reason why this contract is different from the ordinary contract implied in the patient-physician relationship is that an extrinsic agency, now the government, makes itself responsible for what is definitely called 'pay' in the bill and because another extrinsic agency, the Public Health Service under the Surgeon General makes itself responsible for regulating in a number of very specific ways the relationship between the patient and the physician There may ensue a contract number four, if a patient is sent to a hospital and the hospital is chosen under the provisions of the bill with contract number five if the patient requires a nurse, and contract number six if the patient requires the need of a consultant or specialist and probably contract number seven because the bill makes special provision for laboratory benefits And all of these different contracts are modified and influenced by the other provisions of the Social Security Act, particularly eventual compensation for the wage losses due to illness

Why all of this is necessary is very hard to see and I still feel that if there is to be any compulsion with reference to the elimination of a choice as to the method by which I secure

my health protection I should prefer a straightforward cash indemnity basis I do not see why the freedom of the professions must be endangered in order to safeguard the health of the nation, nor do I see why we have to endanger one of the most splendid relationships in our democracy, the relationship between the private agency and a governmental agency nor do I see why we have to inaugurate this complicated system of appeals in order to get justice for the patient or the doctor or the nurse or the hospital nor do I see why we have to create the complicated snarls in our responsibilities which arise from an unnecessary multiplication of contracts

There are other benefits that will come from a cash indemnity, the elimination of complicated administrative machinery, the conservation of the freedom of choice of the individual, the justifiable and reasonable compliment paid to the citizen when we treat him like a matured adult capable of self determination and capable of managing his own affairs rather than treating him as a helpless ward of the government

I might add, gentlemen, that giving up freedom might be too great a price

Finally the question must be raised Is it really the function of government to make itself the guardian of its citizens to the extent that would be implied in such a vast health program? There is so much to be done by government so much stimulation to be given to all kinds of projects and interests, that one wonders whether government should invade the intimacies of one's home and family life to the extent that would be necessary I know there have been countries in which all of this is said to have worked successfully but the transplantation into this freedom loving country of ours of foreign and exotic patterns of social behavior has been tried recently enough, and surely not one of us has had his love for this democracy of ours weakened or diminished by the experiment We respectfully recognize the successes of other countries and sympathetically try to understand their social procedures but that sympathy will not blind us to our own needs and wishes or to our own character as a nation any more than the contemplation of the alleged successes of other lands would stimulate our greed or our envy

In place of subjecting S 1606 to further analysis, I should like to make bold to suggest that we can all probably agree on a set of criteria by which we would measure a national health program and convince ourselves and others of its feasibility or its desirability or even its complete effectiveness

1 I would say, first of all, that a national health program must take into account the moral and the social obligation of each individual to provide for his own health as far as his financial resources the circumstances of his life, his physical strength might permit him to do

2 I would insist that the method by which he carried out this obligation should be a matter that is to be left to his own prudence and initiative and, let me add responsibility

3 I should wish to insist that it is the duty of government to facilitate my observance of my obligations when and if the fulfilment of my obligation becomes too onerous This means at least two things first, that the government will really grant me a subsidy of some sort when I am really in need and secondly that in periods when I am not in need I shall recognize and carry out my own obligation to provide in advance for a moment of emergency Only when I cannot carry out that obligation will the government really grant a subsidy

4 Facilitation however, in the observance of an obligation should not and must not mean an exemption from a responsibility it must not facilitate the individual's shirking of his responsibility but rather must it assist the individual to the fuller realization of his own obligations

5 I should like to insist that the obligation to safeguard one's own health and that of one's dependents is not an absolute but a conditional and a contingent one. A national health program must take this into consideration and demand not too great a price for health security

6 I should like to insist that, since the personal relationship between patient and physician is basic and fundamental in the ethics of medical practice, the administration of a national health program must be simple, uncomplicated direct so that as few as possible extrinsic influences might be injected between the patient and the physician.

7 It would seem to me that a national health program should not be a substitute for the procedures and the methods which have resulted in the present high standard of health care of the American people but should be a supplement to the existing procedures and methods This implies the preservation of many tangibles and intangibles in our culture and civilization the concepts of professional life the freedom of professional action for the physician and the dentist and the nurse, the maintenance of intimate relationships confidential in character in the patient-physician relationship the freedom of the patient's choice of a doctor and of the doctor's choice of patients, the concepts of professional competence as implying ever so much more than merely formal schooling and success in skills, the place of the hospital in the community and its relationship to the individual patient whom it receives These and ever so many other similar features of our present exalted heritage in health care deserve the utmost caution in their evaluation and in their possible modifications for fear that, by precipitate and imprudent changes, we may not so much change but rather destroy them

8 The highly desirable social purpose of universal coverage must be secured by a program which will embrace the individual who can fulfil his obligation through his payment for his health security as well as the individual who by reason of his circumstances cannot pay and for whom society has made itself responsible

9 Finally, it is assumed in all of this that government will aid in the creation of health facilities and that the development of health caring personnel will under the demands of the moment, be looked on as the joint responsibility of the voluntary and the governmental agencies in a program of mutual respect and cooperation

I have no objection to a national health program But, if you come along and ask me about a national health insurance program, that is dangerous The moment you get into that insurance question you are intermingling issues—unless it is insurance on a cash indemnity basis—and the moment you get into the benefits as to services to a hospital, patient and the doctor I cannot go with you

SENATOR DONNELL In regard to this book from which I read, and I am not undertaking to vouch for it or detract from it, this is a book, however, that was issued by the International Labor Office and distributed in the United States by the International Labor Office, whether or not the conclusions I drew from it are correct, I don't know I was greatly impressed by your comment at page 19 of your statement about the danger from a financial standpoint I refer to the results in the voluntary hospital from this effort to hold down these expenses and require them to consider $7 full reimbursement for the cost of essential hospital service I think you have given us food for thought which I confess never occurred to me I can see $7 not being enough, but I did not have enough of a far seeing eye to see the matter you point out as to the danger to the hospital service

REV DR SCHWITALLA When Blue Cross began we had 10 per cent of our patients from Blue Cross, and the rest of them let us say 80 per cent, were paying patients and 10 per cent were entirely free patients It did not make much difference whether we took them from Blue Cross at a little less than hospital costs, but now, when Blue Cross is getting to be a larger and larger factor and when you are running up to 60 and 70 and 80 or even 90 per cent on Blue Cross patients unless Blue Cross gives you the cost of the hospital, who is going to give you the rest of it?

SENATOR PEPPER About how much a day do you think would be a proper figure if we were to adopt this bill?

REV DR SCHWITALLA We have figures on different localities Our costs in some areas in different hospitals run quite definitely as low as $6 per day There are areas in the United States like that, if you can make the areas small enough There are also other areas and other hospitals where the cost runs to about $20 a day Take the unearned value of real estate If you have a hospital located in one of the most costly places in New York, it is uneconomical to tear it down and put it some other place That is one of the problems that varies In our hospital we need an encephalograph but I have not had enough money to buy one It costs $1,400, but there are other things that I need more

SENATOR DONNELL May I put into the record one item from the International Labor Office studies and reports, issued in Montreal in 1942? 'Compulsory social insurance began nearly sixty years ago in Germany and the legislation of 1883-1889 associated with Bismarck has more than any other, influenced the development of social insurance."

REV DR. SCHWITALLA I think that is true

SENATOR MURRAY I wish to offer in the record at this point a statement by Kenneth C. Crain vice president and eastern editor of *Hospital Management* a magazine of general circulation among hospitals, on Senate Bill 1606 I am sorry I cannot vouch for the citizenship of this gentlemen in Missouri, but I believe it is not necessary

MAY 7, 1946

HONORABLE JAMES E. MURRAY Presiding

PRESENT Senators Murray, Aiken and Donnell

### Statement of Right Reverend Monsignor John O'Grady, Secretary, National Conference of Catholic Charities

MONSIGNOR O'GRADY Before entering into a discussion of the question of universal coverage against the hazard of ill health it would be well for us to keep in mind a few fundamental principles of social philosophy In our society—in fact, in any society that is based on a clear understanding of the infinite worth of human personality—it must be assumed that our first objective must be to encourage the individual to provide health protection for his family through his own effort. It follows that we must also encourage the individual to enter into associations and organizations of his own choosing for the purpose of providing health protection for himself and his family Government should encourage and promote such voluntary efforts on the part of the individual It should not seek to supplant the efforts of these organizations, for in doing so it would be striking at the very foundations of a democratic society Government, therefore, has to proceed very carefully in the implementing of voluntary effort in the field of health protection

The federal government through the Social Security Act is now providing grants-in-aid to the states to enable them to provide assistance for the needy aged and for dependent children in their own homes and the homes of relatives If the federal government is willing to aid the states in providing food, clothing and shelter for the aged and for dependent children, it should also be willing to aid them in providing medical and hospital care for these two groups

In building a program of health security we should be sure from the very beginning that payroll taxes are sufficient to support an adequate system An inadequate health security program will be of little benefit to the American people Many of the problems that we are now facing in the consideration of this program center around the assumption of inadequate funds Why do we have to have so much centralized control over administration? Why do we have so many rules in regard to hospitals and in regard to medical fees? Is it not due to a desire to spread an inadequate fund thinly over a very large number of people? I believe, therefore, that it is most important that we should begin our national security program with adequate benefits based on an adequate payroll tax And I think the people studying the technical end of it should be required to explore the thing fully Our experience is limited

In the field of health security the federal government is entering into a new field and yet those who are thinking of it in terms of administration are people who have been patterned by a public health background and at times I have been critical of the public health service and I am still critical of it in lots of respects It does, at times, tend to become very bureaucratic even in its own hospitals They think in terms of a program administered entirely by government They think of a government official rendering decisions without much respect for democratic processes, and here again you have to think more and more about democratic discussion with the various groups concerned Of course it will be quite clear that, if a government official tries to impose his views without respect to democratic processes, the people and their representatives will not accept them so one gets political pulling and hauling as a substitute for democratic processes on a factual basis with the groups that are immediately concerned

SENATOR DONNELL Monsignor, I understand that not merely do you regard these voluntary methods and programs of insurance as of historical value, as the chairman put the question to you in substance a few minutes ago but you responded you hope that they will be of continuing value in the future, is that right? MONSIGNOR O'GRADY That is right.

SENATOR DONNELL And you do not favor the dissolution of these voluntary programs That is correct? MONSIGNOR O'GRADY That is right

SENATOR DONNELL And then your judgment is that they can be organized in as a part of the governmental program? MONSIGNOR O'GRADY That is right

SENATOR DONNELL Now Monsignor, one question was asked by the chairman of you a little while ago as to whether the government has not in every way encouraged these voluntary organizations I am not saying that the government may not have done so in some instances I do not know about that. But there is one instance, is there not, Monsignor, in which the government might very well have had additional encouragement, namely, by providing for payroll deductions for the voluntary agencies from the compensation paid the governmental employees? That would be quite a considerable encouragement to them, would it not? MONSIGNOR O'GRADY That is right. I think that is one important step They ought to be encouraged to keep the chance of surviving They will have to provide for some sort of reimbursement

SENATOR DONNELL Monsignor, may I ask you this question I understood you to say something to the effect a few minutes ago that you would not favor the idea of compelling a man to pay twice That is, if he is in a voluntary system and adequately insured, I understand you would not favor requiring him to pay again for insurance he would not need? MONSIGNOR O'GRADY That is right There should be some plan for reimbursing that man or encouraging him to continue his association with his present group I think that this is the whole question of rates, that this should not be written into a bill I think we ought to work that out We shall have to work it out an adequate system of compensating hospitals Otherwise, if we are going to have a sort of system that simply pays the hospital for all their patients, let us say, $4 a day you are going to put the hospitals out of business There is no question about that SENATOR DONNELL Yes

MONSIGNOR O'GRADY Now, as it stands at the present time, a lot of the hospitals go along with that, because most of their care is not in that field They find they go along with an inadequate system of compensation under workmen's compensation in the states It simply means that the hospitals are subsidizing private industry, because, after all, that affects the industrial accident rates in the states

SENATOR DONNELL Monsignor, have you worked out in your own mind the machinery of working into this governmental plan these voluntary organizations? Have you gone into that? MONSIGNOR O'GRADY I have in some detail I have been discussing it a good deal with a number of the people concerned SENATOR DONNELL Yes

MONSIGNOR O'GRADY Now, I think that there are some details When I showed this testimony of mine two weeks ago to a well known expert in the field, one of the best known he said "I think you have something there." And he said "I think you need to spell out the details of your organization a little bit more. You need to spell out the details of the local organization a little bit more" You notice I believe in a national local system instead of a national state system I think if you get into dealing with states it becomes sufficiently complex, and I think on the whole the general principles of my underlying point of view are that I think that is rather clear

SENATOR DONNELL On this matter of advisory committees, I noted your comment, which I think is well taken that there is a tendency on the part of appointive power to appoint advisory committees to appoint persons he thinks will agree with his views He is not apt to appoint antagonists MONSIGNOR O'GRADY And he presides in the meetings

### Statement of the Honorable Arthur Lewis Miller, A Representative in Congress from the State of Nebraska

DR MILLER I am a physician For the past six years I have been in Congress I have been state health director I was president of the State Medical Association in Nebraska and a fellow of the American College of Surgeons and I think I know more about being a physician than I do about Congress

I have read the bill carefully and wish to address my remarks to title II of the bill, which is the prepaid personal health service benefits It is my humble opinion that, if this section of the bill was adopted, the family physician of every citizen would be a memory of the past There would be a new character on the scene—Uncle Sam, M D I believe that this section of the bill would not only regiment the citizen and all health activities but would provide a political and socialized medical care program It would provide for a form of regimentation of medical service administered from the national level It would be expensive, wasteful and time consuming It would be ill suited to the care of the sick in general and medical emergencies in particular Such a program could not be administered in a democratic manner, pleasing either to the patient or to the physician

The quality of medical service to the patient would be strained and inferior in the beginning and would rapidly deteriorate. Medical research would be curtailed Medical education would be static, and medical progress in general would be set back many years I say this, Mr Chairman, because that has been the experience in those countries where regimentation of medical services has been tried

Speaking of experiences with socialized medicine, I have had the privilege of making three trips to Europe

*(Dr Miller stressed inferior medical service under European plans)*

I am certain, Mr Chairman, that this national health bill does not spring from our traditions or from the public spirit. It is an offspring of foreign ideology, first brought to perfection by the German statesman Bismarck In every country where Fascism Nazism and Socialism prevail there is socialized medicine

I would remind the committee that the United States gained its leadership in medical education and care by methods that have been tested in the crucibles of time and economic hardship This national health bill would abolish the voluntary control and inspiration that have brought medical education, hospital management drug purity research and medical service to their present high level The best medicine in the world is practiced in the United States We have the finest hospitals medical equipment and technics in all the world This bill would completely revolutionize medical practice, medical schools, hospitals and technical research Should we not consider carefully the progress made in the United States under our free medical enterprise before we adopt a system controlled by salaried political bureaucrats? Certainly this bill would put the life of every citizen in the hands of a medical czar not necessarily run by doctors, but controlled by politicians who hang around the court houses of the country

I have read the statement of the sponsors and authors of the national health bill

1 They state There is complete freedom of choice of doctor by patient.

This is incorrect. If either the patient or the doctor named on the panel by the Surgeon General declines to accept the other, the patient is assigned to some other doctor

2 They state There is complete freedom of choice of hospital by patient

This statement is incorrect There is no provision for freedom of choice of hospital The entire system is under regulation by the Surgeon General

3 They state There is freedom of medical practice for the doctor

This is misleading The plan is so extensive that in time there will be no private practice

4 They state There is freedom of types of remuneration for the doctor

This is misleading The doctor is forced on a salary or on a fee basis or on a combination of the two, as determined by the Surgeon General who approves the fee tables

5 They state There is freedom of types of remuneration for the hospital

This is incorrect. Hospital rates are determined by the Surgeon General with the approval of the Social Security Board

6 They state No doctor is forced into the insurance system

This is misleading He must go into the insurance system or be forced economically to cease the practice of medicine.

7 They state No doctor is forced on a salary basis

This is misleading The doctor is forced on a salary or on a fee basis or on a combination of the two, as determined by the Surgeon General

8 They state Arrangements for obtaining medical laboratory or hospital care would be essentially as they are now in this country except as to payment out of insurance fund

This is entirely incorrect The whole medical system is supervised, regulated and controlled by government

9 They state Voluntary hospitals are eligible to participate in the plan

This is misleading They may participate if selected by the Surgeon General

As the state health director in Nebraska for two years, I know that we have advisory committees We were called in occasionally to Washington but merely to O K some plans that had already been drawn up We had no force in objecting I would object to a number of things, but the plan was drawn up and here it is You must take it.

In the state health directory in Nebraska we had a maternal child health department in the Labor Department and the United States Public Health Service We had to keep two sets of books They were competing with each other as to how much money they would offer the state, overlapping and duplicating efforts of each other We had immunization vaccination and so forth The United States Public Health Service has been doing it for years The Childrens' Bureau comes in and offers you a little more money "Accept this and we will give you a little bit more"

We had two sets of nurses and inspectors, who would come around and inspect the work that you were doing under the Children's Bureau and the United States Public Health Service Both of these agencies had their advisory councils, which were merely figureheads to O K that which was already set up in Washington

SENATOR DONNELL I wanted to read a couple of paragraphs here from a statement by J G Crownhart, who was secretary of the State Medical Society of Wisconsin, located at Madison This was published in 1938 and I want to ask you whether or not this concurs at all with your view as you personally saw conditions in Europe.

He says "Again and again the observer is impressed that the standards of medical and hospital service in Europe are not generally those of America The director of one of the large public health institutes in Denmark pointed out this fact and referred to a lessening in the quality of teaching service in their medical school as one of the by-products

' 'Sickness insurance is a leveling disease,' said this professor who had visited this country on occasions It assures the mediocre physician just about the same reward as he would gain for outstanding service if he were to have time The incomes tend to be leveled but that is not all—the tendency over the years is to level the service to something that is neither bad nor good But the incentive is gone and we develop fewer brilliant minds in our teaching centers and America catches the lead in health and methods to regain' "

Generally speaking does that accord with your observations, Doctor? DR MILLER Senator, I was shocked when I saw some of the treatment being given to the patients in Europe, treatment that would not be followed in this country even in our poorest hospitals The term "disability' and 'neurotic" came out of Germany when they adopted compulsory health insurance. Patients were paid when they were unable to work, supposedly, and many of those folks developed a disabling illness Neurosis of various types developed. This was in order to get the physicians to issue a certificate that they were unable to work. Europe lost its position of importance in postgraduate work at about 1920 Before that time many American physicians went to Europe I went because I thought it would give me a little prestige in saying that I had attended a clinic in Budapest, Heidelberg and Hamburg, which I did, but I found in 1927 and again in 1935 that we could get far better training in America than we could in European countries

SENATOR DONNELL You referred also in your statement to the number of bureaucratic administrative officers and so forth who were necessarily to be involved in a plan of this kind I am going to read you just one more paragraph, if I may, from this same article by Mr Crownhart appearing on page 15 He says 'It is also to be noted that in the experience of Europe there will be an employee in the system outside of the delivery of actual medical service for at least every 100 persons insured' While the nature of the work of such employees is held for later discussion, our concept of this legislation in its basic proportions is that it must include the government as *both* the agent for the collection and the disbursement of the premiums and, furthermore, as a vast employer for its necessary administration

I assume, Doctor, that your observations and views are that there would be a great number of employees necessary in the administration of the system which undertakes to require a compulsory payment on the one hand by from 107 to 112 million persons and on the other hand the rendition of service to the equivalent number and perhaps even more Do I correctly state your views? DR MILLER There must be necessarily many many federal employees to handle such a system

SENATOR DONNELL I observe remarks along those lines in a book entitled "Compulsory Health Insurance in the United States" issued in 1943, the author of which is Herbert D Simpson, emeritus professor of public finance at Northwestern University The following statement appears therein "One such consideration is the fact that if we assign this problem to the sphere of governmental responsibility it will mean probably the greatest expansion of the federal bureaucracy that we have ever witnessed in *peacetimes* The number of employees required to administer such a system would be difficult to estimate. There are between forty-five and fifty-five million gainfully employed persons in the United States at the present time. This, with members of families and dependents, would swell the number of potential beneficiaries to over 100 million, depending of course on the type of coverage

embraced in the system. The number of illnesses per hundred members in Germany ranged over the period 1925 to 1934 from 0.6 to 52.4 which would suggest something approaching 50 million cases per year in the United States. All of these cases would have to go through the process of certification, filing, inspection, payment, complaints and adjustments. If an adequate field and inspection staff were not provided, it would mean wholesale profiteering at public expense. If an adequate staff and organization were provided it would mean an army of government employees." Doctor does your general opinion coincide with the statements made in the book I have just read from? DR. MILLER: Yes, there must necessarily be a large number of federal employees to supervise this system.

DR. MILLER: Senator, you would not change the shape of your nose or the color of your hair because you happen to be born of a certain group. You cannot change that in medical illnesses. You are born with a crack in the convolutions of your brain or you are not. When they get out of a groove and get into something else they crack up and go to pieces.

SENATOR MURRAY: But a lot of people crack up in this country because of the system that we have to live under whereby two or three hundred corporations rule the country and great masses of our people are denied adequate income on which to live and maintain their families and educate and care for their children and give them proper medical care. People crack up under that kind of a system too. DR. MILLER: Oh yes indeed they do. But the thing I am getting at in this compulsory medical program why confine it to medical care? Why not go the whole gantlet and give housing and food and completely regimentize and sovietize the American people. If that is what the majority want that is what we will do.

SENATOR MURRAY: The majority want a democratic system. They do not want a system whereby two or three hundred corporations rule the country or whereby monopolies are expanded to such a degree that the great masses of the people are unable to live with any degree of prosperity and good health. I think the trend toward collectivism in this country has been brought on by industry. The great growth power wealth of corporations and the monopolies of the country they are things that have brought these conditions to prevail in this country more than the people have. The people are seeking to avoid it. They want to live under democracy.

SENATOR DONNELL: Mr. Chairman, pardon me a second. I would like to have the record show that my silence here is not any agreement to the proposition that this country is ruled by three hundred corporations.

SENATOR MURRAY: I do not think that is necessary because the record is pretty well filled with evidences of your desire to oppose and I have given you full liberty to oppose and I welcome all of your cross examinations and your efforts to examine the problem thoroughly.

### Statement of Leonard W. Mayo, Chairman, National Commission on Children and Youth, Accompanied by Henry F. Helmholz, M.D., Section on Pediatrics, Mayo Clinic

MR. MAYO: I appear in behalf of and with the authority of the National Commission on Children and Youth, formerly the National Commission on Children in Wartime. This commission is composed of approximately 100 men and women prominent in education public health, medicine, social service labor and civic activity. Such groups as the American Association of University Women, the Child Welfare Division of the American Legion, the National Council of the Young Men's Christian Associations, the National Committee for Mental Hygiene, the National Congress of Parents and Teachers, labor unions and the American Farm Bureau Federation are represented on the commission, plus some other organizations. The original commission was appointed in March of 1942 following a meeting called by the United States Children's Bureau of the Department of Labor to consider the critical and emergency problems of children during wartime.

*(Mr. Mayo presented data compiled by the commission with respect to the need for increased maternal and child health services and for services to crippled children.)*

The members of the commission are persuaded that every child born under the American flag is entitled to the best and most skilful medical care our country can provide, regardless of the size of his father's pocketbook. The commission has estimated that for the fiscal year 1946 the maximum authorized for appropriation from federal funds for grants should be raised by approximately 50 million, 25 million of which should be allocated to maternity care and care for infants and preschool children, 15 million to preventive and corrective health services for children of school age and 10 million for dental care. It is further recommended that federal funds for crippled children's services should be increased by at least 25 millions broken down as follows: for orthopedically crippled children, including those with cerebral palsy, 5 million, for children with other physically handicapping conditions, 5 million for children with rheumatic fever and heart disease 15 million.

*(Senator Donnell brought out that the group was selected by Miss Lenroot.)*

SENATOR DONNELL: Had there been some criticism you had heard of directed against the commission on the ground that it was the organ of the Children's Bureau in lobbying affairs lobbying matters? MR. MAYO: I never heard that. As a matter of fact the commission had not lobbied, and I did not hear that criticism.

SENATOR DONNELL: Was its function at or about 1944 and from then until the present time largely the influencing of legislation? MR. MAYO: I would say not. I would say that its purposes and functions throughout have been largely to bring together information with the hope that that information would so inform and equip competent and knowledgeable persons and groups in the country that they might on their own, take such steps as their wisdom and discretion indicated in providing more adequate services for children.

*(Senator Donnell brought out that Miss Lenroot's appointee acts as secretary for the committee headed by Mr. Mayo.)*

MR. MAYO: She is on the staff of the bureau.

SENATOR DONNELL: Except that she is on the staff of the Bureau and is paid by the Bureau and not by the Commission? MR. MAYO: That is correct.

SENATOR DONNELL: You have stated that the commission has no funds, I believe. Am I right in that? MR. MAYO: That is right.

SENATOR DONNELL: Who pays the expenses of the National Commission on Children and Youth? MR. MAYO: The printing of such material as you see here has been done by the Children's Bureau.

SENATOR DONNELL: Do you know who paid the expenses of the circulation of it [a pamphlet]? MR. MAYO: I take it that the Children's Bureau did. I do not know to the contrary.

SENATOR DONNELL: With the exception of the traveling expenses to which you referred, and the expenses of mimeographing your own testimony here today, is it a fact, Doctor, that all the expense of the National Commission on Children and Youth within the last year has been paid for by the Children's Bureau of the United States Department of Labor? MR. MAYO: I would add there are other office expenses borne by the Child Welfare League carried on in my office, such as mailing out letters. I take care of the postage and we share it in that way.

SENATOR DONNELL: But the Children's Bureau of the United States Department of Labor has paid the expenses along the lines of what you have indicated? MR. MAYO: That is right.

SENATOR DONNELL: And the commission itself has no resources whatsoever is that right? MR. MAYO: Has no resources of its own.

SENATOR DONNELL: Doctor, do you not think it would be somewhat more fair to the general public to reveal in the name of the commission the fact of its very close connection financially and otherwise with the Children's Bureau, so that the country might understand clearly that this commission is actually extremely closely related to a governmental organization the Children's Bureau of the Department of Labor, which understanding of course is not obvious at all from the name which the commission now bears? MR. MAYO: From the reports from the paragraph you read in this booklet, which, as I stated has been distributed all over the country, it is pretty clear, of course.

SENATOR DONNELL: Well, I do not think Doctor, with all due respect that the name of the organization namely the National Commission on Children and Youth is at all descriptive of the fact that this organization is very closely affiliated with the Department of Labor, and I do not mean this critically. MR. MAYO: That is all right.

SENATOR DONNELL: Following a meeting but I do not observe any statement here as to who it was appointed the commission nor any of the facts that have been developed this afternoon as to the financing of the commission. I simply present to your consideration the query for your own judgment or response, such as you may deem proper as to whether you do not think it would be somewhat more fair to the public

if the name given to your organization preserved, as it did at the outset, the name "Children's Bureau" as a part of the name so that everybody could know that this was closely affiliated with a governmental department That would be a policy of utmost frankness, would it not, to the public? MR. MAYO Mr Chairman I think there are a good number of rather distinguished precedents in the country by which organizations that have been promoting the same general purposes and goals of other organizations have continued without a name which indicated originally affiliation of some kind I think that both ways are perfectly honorable and above board, and I really have no apology for the name of the commission as it now stands

SENATOR MURRAY Doctor, all these men whose names have been mentioned by the Senator examining you are men of high standing and reputation in the United States, are they not? MR. MAYO The highest sir

SENATOR MURRAY I noticed that in your statement here you say that the original commisison was brought together for the purpose of considering the critical and emergency problems of children during wartime? MR. MAYO Yes sir

SENATOR MURRAY Was there any other and sinister, motive in bringing those people together at that time? MR. MAYO There was no motive, sir other than the one you have stated To get an objective view from persons throughout the country who had some knowledge of the situation of what this nation was doing by way of furnishing adequate protection for its children during wartime That was its stated open purpose

SENATOR MURRAY That organization was not built up for the purpose of perpetuating any officials in their term of office in the Children's Bureau, was it? MR MAYO Not at all and I would say there is no one on the commission that has the least interest in such a matter

### Statement of Dr Helmholz, Chief of Section of Pediatrics, Mayo Clinic, Rochester, Minn.

SENATOR MURRAY I wish you would tell me whether your work at the Mayo Clinic should be classified as the practice of medicine DR HELMHOLZ I do not see how else you could classify it.

SENATOR MURRAY What is your work there? DR HELMHOLZ My work consists in seeing patients, some of them at their home, most of them at the clinic, as I would see patients in private practice anywhere.

SENATOR MURRAY Are you paid on a fee system or on a salary basis? DR HELMHOLZ I have been on a salary ever since I entered the Mayo clinic in 1921

SENATOR MURRAY Does the fact that you are on a salary instead of on a fee system have any effect of bringing about a deterioration in your services or your ability to render services? DR HELMHOLZ Only as twenty five years may have decreased my efficiency I might say that our department has grown from an original registration of about 1,800 to about 7 500

*(Dr Helmholz described the work of the Mayo clinic)*

SENATOR MURRAY Doctor you have given a great deal of study to the care of children have you? DR. HELMHOLZ Yes

SENATOR MURRAY From your experience in the Middle West do you think that children get all the medical care they need? DR HELMHOLZ No

SENATOR MURRAY In what way is the care defective or deficient? DR. HELMHOLZ I think probably as important as anything is the distribution of the pediatricians There the pediatrician is in a dilemma because he says that only the pediatrician can give good care to the child and yet he as a group has taken care of only about 10 to 20 per cent of the children of the country, and the other 80 to 90 per cent are taken care of by the general practitioners This distribution in rural communities communities of 10 000 and less, contains 4 per cent of the pediatricians In cities of 10 000 and over, 96 per cent of the pediatricians are practicing

SENATOR MURRAY Are there other diagnostic clinics like the Mayo Clinic, where children are seen by a pediatrician? DR HELMHOLZ Yes, university clinics are possibly the best example of places where good pediatric care is given. That is a point I think we should stress That a university clinic is a clinic in which the best possible things are don and the attempt is made to do things better another way of saying that research is one of the fundamental necessities for good medical care. You will find wherever research is being done, there good medical care is being given

SENATOR MURRAY Are there enough diagnostic clinics to meet the need for this kind of care for children? DR. HELMHOLZ I think that was well covered before a Senatorial committee that made its report, I think in 1944 That probably the entire country should be subdivided into units the center of which would be a diagnostic clinic, in which all the very complete medical services can be given In extending to the periphery, where you finally meet the general practitioner who has available a health center of some kind, there is a gradual increase in the availability of procedures that are helpful in diagnosis In other words, the entire country should have available a diagnostic clinic, wherever necessary And I might say that according to Dr Bachmeier, the director of the Hospital Survey, probably from 75 to 80 per cent of medical care can be given at the level of the general practitioner In other words, it is 25 per cent that need greater diagnostic facilities than are available to the general practitioner who is practicing in a small health unit

SENATOR MURRAY Do you believe that we should have some kind of a national system whereby medical care could be brought within the reach of people at the present time denied proper care because of financial conditions? DR HELMHOLZ I think so definitely As to how that shall be done I will admit that in my study of it I have not been able to arrive at anything It looks as though it could be done in a number of ways, but to me it always comes back to the fact that some agency other than the individual will have to step in and help if we are going to take care of all children and all mothers, and that is what we are trying to do

In that connection I think this might be interesting because the Senator mentioned the study that is being made at the present time by the Academy of Pediatrics I might say that I was chairman of the committee of nine representing the Academy of Pediatrics, the American Pediatric Society and the agency of the Children's Bureau I might say that that survey is at present being conducted and a study made of personnel, physicians health officers and technicians in all the counties of all the states in the country, as well as of all facilities hospitals, health centers and health departments in these same areas

*(Senator Donnell asked questions comparing European and American medicine and Dr Helmholz described the growth of pediatrics in the United States)*

SENATOR DONNELL And that level has risen in our own country more rapidly has it not than generally speaking in the other countries of the world? DR HELMHOLZ Exactly The advantage of the German system, which was leading the world before World War I was not dependent on the good service that the average man was getting I had an opportunity in Hardman's clinic to see what I would have considered a fourth year medical student at Hopkins who stood there and did not know a thing The education they got was inferior even at that time to what we were getting at Johns Hopkins But their system of assistanceships in the clinics developed a superior group of men who were outstanding who did the research of the time who were leaders in the profession There were a dozen men in Germany that were way above any one that we had in this country as to their contributions to medicine But it was not the level of their general practice even at that time

SENATOR DONNELL Doctor getting back to our own country there has been a very great advance in medicine in our own country, has there not? DR HELMHOLZ Yes

SENATOR DONNELL And today the medical profession in our country certainly compares favorably with the medical profession in any country in the world, does it not? DR HELMHOLZ Yes

SENATOR DONNELL And by "favorably" you mean, do you not Doctor, that our medical profession in this country excels generally speaking the medical professions of the other nations in the world? DR HELMHOLZ As far as I know, they are giving better service.

SENATOR DONNELL I am correct in my statement, am I not that the medical profession in the United States does excel over the medical professions in other countries of the world? Is that correct? DR. HELMHOLZ Yes I would like to put it this way though That that is no reason for not continuing to do even better work. That is why I introduced that element of the Minnesota maternal mortality statistics

SENATOR DONNELL I think we can all agree that in the professions of law medicine and any other we should strive for greater achievement than we have had in the past The point I make is that the medical profession has, by the policy of personal initiative and enterprise and desire to excel in this country shown the ability to make itself superior to the medical professions of other countries of the world. That is true is it not Doctor? DR. HELMHOLZ Yes

*(To be continued)*

# Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH)

## CALIFORNIA

**Personal**—Dr Philip K Gilman, San Anselmo, has been named to direct a statewide survey of California hospitals which was authorized by the recent legislature at the request of the governor

**Wallet Size Birth Registration Card**—Persons born in San Francisco may now obtain a new certification of birth registration card, 2½ by 3½ inches in size, from the department of public health, 101 Grove Street San Francisco The new card, available June 15 gives information concerning the name, date of birth, sex and race as shown on the original birth certificate and the date on which the certificate was filed Medical details and personal information regarding parents are not transcribed from the original certificate The wallet size certification is made on green safety paper and may be used for identification proof of citizenship and establishment of age It is issued as an alternative to the complete copy of the birth certificate The usual legal fee of one dollar is required for either the card or a detailed copy of the birth certificate Applicants should specify the type of record desired and should furnish the name of the child as it was given on the original certificate date of birth name of father and maiden name of mother

## CONNECTICUT

**Survey of Medical Service**—The committee on rural medical service of the Connecticut State Medical Society has undertaken a study of the availability and adequacy of medical service for residents of rural areas in the state Questionnaires sent to over three hundred physicians engaged in predominantly rural practice will provide data on need for general practitioners and specialists, ambulance service, hospital beds, extension of public health services and school health services Participation of the rural population in Blue Cross and interest in a voluntary prepaid medical service plan will also be determined The committee members are Dr Norman H Gardner, East Hampton chairman Dr David H Bates, Putnam, Dr Gert S Gudernatsch Sharon, and Dr William H Upson, Suffield

## GEORGIA

**Public Health Meeting**—Dr Millard E. Winchester, Brunswick, health commissioner of Glynn, McIntosh and Camden counties, was named president-elect of the Georgia Public Health Association at its meeting in Atlanta in April Dr Abram J Davis, Augusta health commissioner of Richmond County, was inducted into the presidency and Mr Louva G Lenert, associate engineer, division of public engineering, Georgia Department of Public Health, was reelected secretary

## LOUISIANA

**Personal**—Dr Hiram W Kostmayer, professor of clinical gynecology Tulane University of Louisiana School of Medicine, New Orleans, has been elected to honorary membership in the Tulane History of Medicine Society——Dr Julius M Fernandez, Lafayette, has been appointed superintendent of the Charity Hospital in Lafayette succeeding Dr Paul H Kurzweg Jr, Lafayette, who has resigned to enter private practice

## MAINE

**Aid for the Physically Handicapped Children.**—The Maine Department of Education announces a group of summer courses designed to aid teachers in the education of children with physical handicaps The courses will be conducted between the summer sessions of Gorham State Teachers College and the University of Maine. The general courses will deal with learning and teaching problems connected with the education of children who are handicapped by infantile paralysis, cerebral palsy, epilepsy, rheumatic fever, heart diseases tuberculosis or diseases of the eyes or ears, and special courses will include psychology and rehabilitation of the hard of hearing adult, theory and technics of teaching lip reading, practice course in teaching lipreading, speech pathology clinical methods in speech correction and education of physically handicapped children

## MARYLAND

**Medical Director Named for Seton Institute**—Dr Cuthbert H Rogerson, formerly medical superintendent of Cassel Hospital, Swaylands, England, has been elected medical director of the Seton Institute, which was formerly known as the Mount Hope Retreat, Baltimore. The name of the institute was changed in a reorganization (The JOURNAL, Dec. 15, 1945 p 1112) The rehabilitation of certain sections of the hospital has been completed, and patients are now being admitted under the new organization There are several vacancies on the staff especially for junior psychiatrists and for interns who are seeking opportunities for training in psychiatry The institute cares for acute and recoverable cases

**Fellowship for Study of the Rh Factor**—A fellowship has been established in the departments of medicine and obstetrics of the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, for study of problems relating to the Rh factor This fellowship will carry a stipend of $2,500 a year and will begin approximately September 1 The fellowship is sponsored by the obstetric and gynecologic section of the Baltimore City Medical Society Work is to be done in a special laboratory established for this purpose at the University of Maryland School of Medicine Interested applicants should communicate with the director of the Baltimore Rh Typing Laboratory, Dr Milton S Sacks, University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore 1

## MASSACHUSETTS

**New Director of Mental Deficiency**—Dr John T Shea, Foxboro secretary-treasurer of the Massachusetts Psychiatric Society, has been appointed director of mental deficiency and statistics in the Massachusetts State Department of Mental Health Dr Shea graduated at Queens University, Faculty of Medicine, Kingston, Ont., in 1929 He began his work in the state institutions in Belchertown as assistant physician and senior physician He was transferred to the Foxboro State Hospital and became its assistant superintendent in 1942

## MICHIGAN

***John Dorsey Heads Department of Psychiatry***—Dr John M Dorsey, director of the child guidance division of the Children's Fund of Michigan, has been appointed special professor and chairman of the department of psychiatry of Wayne University College of Medicine, Detroit, effective July 1 He succeeds Dr Heinrich A Reye, professor of neuropsychiatry, who is retiring after thirty years' service on the staff of the college of medicine, serving as chairman of the department for the past twenty-four years Dr Reye has been designated professor emeritus Dr Dorsey, who graduated at the State University of Iowa College of Medicine, Iowa City in 1925, has been associated with the Children's Fund since 1938

**Medical Veterans Organize**—The Medical Veterans of World War II has been organized in Wayne County with Dr Grover C Penberthy as president, Dr William Bromme vice president, Dr Nathan Brooks secretary and Dr James E Lofstrom treasurer, all of Detroit. Membership is composed of members of the Wayne County Medical Society and of members in good standing of adjacent county medical societies who are veterans of the medical departments of the recent war The objectives of the group are to assist medical veterans, further comradeship and perpetuate the ideals for which the medical veteran served his country There is at present an active membership of 650 with a potential membership of 1 100 when further demobilization of medical officers is carried out Twenty-five per cent of the delegate group from Wayne County to the state medical society house of delegates comes from this group

## NEW YORK

**Harold Himwich Joins Chemical Warfare Service**—Dr Harold E Himwich has resigned as professor of physiology and pharmacology at Albany Medical College, Union University, to become research physician, chief of clinical research branch Chemical Warfare Service, at the Edgewood Arsenal, Md, effective July 1

**Personal**—Dr Maurice L Tainter director of the Sterling-Winthrop Research Institute, Rensselaer, was elected a vice president of the Sterling Drug Inc May 23——Dr Arthur S Broga, Oneida, has been appointed coroner of Madison County, succeeding Dr Lee S Preston, Oneida, who resigned——Dr David E Bigwood Jr, assistant district health officer for the state department of health, with headquarters in Hornell, has been appointed health officer of Utica

### New York City

**Memorial Meeting for Simon Flexner**—A meeting was held at the Rockefeller Institute for Medical Research June 12 in memory of Dr Simon Flexner, who died May 2 The speakers were John D Rockefeller Jr, Learned Hand, LL D, Raymond B Fosdick, LL D, Dr Peyton Rous and Dr Herbert S Gasser

**Rockefeller Gift to Proposed Medical Center**—A gift of securities has been received from Mr John D Rockefeller Jr personally for the New York University-Bellevue Medical Center Campaign Fund and with it Mr Rockefeller's promise of a similar gift after $7 500,000 has been raised from other sources it was announced June 9 The present value of the securities received is approximately $500,000 It is the understanding that the half-way mark must be reached not later than Dec 31 1947 to meet the conditions of the second gift. The campaign goal is $15 000,000

**Report on Contraceptive Services.**—A report has been issued by the committee on public relations of the New York Academy of Medicine covering integrated studies on various aspects of contraceptive services In 1931 the committee reported the existence in Greater New York City of nine hospital contraceptive services in addition to several unlicensed extramural clinics and recommended the establishment of more services for contraceptive advice in connection with hospitals so that there would be no need for unattached extramural clinics that experienced gynecologists be placed in charge of these clinics and that medical centers as well as hospital clinics instruct physicians and students in modern contraceptive methods and in the indications for their use In 1945 a resurvey was made with emphasis on contraceptive services with attention in addition given to the sterility clinics because the two types of services are often integrated and because the Planned Parenthood organizations are beginning to emphasize this part of their program Of the eighty-nine general hospitals in Greater New York excluding Catholic hospitals to which a questionnaire was sent replies were received from seventy one A follow-up letter was sent to the administrative head of institutions from which there was no answer to the first letter and this resulted in nine additional replies From the total of eighty replies it was ascertained that there were only five hospitals in Greater New York which had special contraceptive clinics and that ten voluntary hospitals offered contraceptive services in connection with their gynecologic departments No contraceptive advice was being given in the other hospitals All the clinics were visited The medical part of the study was carried out by Dr Harry Aranow with the guidance and advice of a special subcommittee The recent report discusses the results of a survey of the five clinics and the type of services in each A total of 1 119 patients attended the five contraceptive hospital clinics during 1944 253 were new patients and 866 old patients At the Margaret Sanger Bureau located in a business district there were more than 30 000 patients during the same year it was stated. The report points out that the number of patients seeking contraceptive advice in hospital clinics is comparatively small in New York because it is generally believed that this procedure is illegal and therefore that such advice would not be available. New York law specifically permits physicians to give contraceptive information to cure or prevent disease The report presents statistical analyses of the contraceptive clinics planned parenthood centers Margaret Sanger Research Bureau the birth control clinics of the National Workers Order and the Judson Health Center and the sterility clinic in fifteen hospitals of Greater New York. In all these units suggest about twenty-eight organized places where a woman may apply for contraceptive advice instruction and the necessary supplies The report recommends among other things that child spacing should be recognized as a medical indication and that contraceptive advice should be given by well trained physicians both in their offices and in hospital clinics only when on the basis of a thorough medical study they are professionally and morally satisfied that such action is justified As family advice is a health service private physicians and hospitals as well as the proper health authorities should assume the responsibility of providing it. When contraceptive services have become a recognized part of hospital service in New York the Planned Parenthood centers should confine themselves to the education of the public and all education should be under medical supervision the report states Until such time as the hospital clinics take over contraceptive clinic service the Planned Parenthood organizations should continue to maintain contraceptive centers which conform to standards set up for licensure of dispensaries by the state board of social welfare, and the New York Academy of Medicine should strongly urge on the board that these centers be licensed because they are an important part of preventive medicine and because they cannot be otherwise controlled Other recommendations offer standards for financing, staffing and treatment

## OHIO

**New Institute of Nutrition**—Thomas S Sutton Ph D of the department of animal husbandry at Ohio State University has been appointed director of the newly established Institute of Nutrition and Food Technology to be operated by the university and the Ohio Agricultural Experiment station at Wooster The creation of the institute was authorized to coordinate research and studies in the fields of nutrition and food advances

## PENNSYLVANIA

**Physician Honored**—On May 11 a portrait of Dr Harold L Foss Danville, Pa, was presented to the George F Geisinger Memorial Hospital, Danville by the Association of Resident and Ex-Resident Physicians of the Geisinger Hospital Dr Foss has been surgeon in chief of the George F Geisinger Memorial Hospital since it was opened in 1915 The presentation was made by Dr Patrick J Kennedy Wynnewood president of the association and accepted in behalf of the hospital by Mr Frederick J Platt Scranton, chairman of the advisory board Dr William L Estes Jr Bethlehem president of the Medical Society of the State of Pennsylvania was the guest speaker for the occasion The portrait was painted by John Johansen of New York

**Schireson Case Still in Court**—On June 10 no opinion had yet been handed down in the case of Henry Junius Schireson and the Pennsylvania State Board of Medical Education and Licensure recently argued before the Supreme Court of Pennsylvania in Harrisburg A delay in bringing about the revocation of Schireson's license to practice medicine in Pennsylvania occurred in 1945 when an injunction was obtained restraining the state board from action This injunction was dissolved Nov 2, 1945 by Judge Karl E Richards in the court of common pleas of Dauphin County Through this action the court upheld the contention of attorneys for the board that a state licensing body had the inherent right to revoke a license obtained by fraud (THE JOURNAL Nov 24 1945 p 895) The court also refused to accept Schireson's contention that the board was guilty of laches in attempting to revoke a license which had been issued some thirty years earlier In a subsequent hearing the Dauphin County Court overruled and dismissed the exceptions filed by the plaintiff

### Philadelphia

**Faculty Changes at Woman's Medical College**—The title professor emeritus has been granted to Drs John S Rodman Julia F S Fetterman and Margaret C Sturgis Dr Lewis K Ferguson who at one period during the war served as chief of surgery on the U S S *Solace* and who recently has been clinical professor of surgery at the University of Pennsylvania Graduate School of Medicine has been appointed professor of surgery succeeding Dr Rodman Dr Stanford W Mulholland associate professor of urology at the college since 1939 has been appointed professor of urology to succeed Dr Fetterman An official release indicated that Dr Mulholland will also fill Dr Fetterman's position as medical director on the faculty Dr Mary D Pettit instructor in gynecology and obstetrics Albany Medical College Albany N Y has been appointed professor of gynecology succeeding Dr Sturgis Marion S Fay Ph D is acting dean at Woman's Medical College, having served in that capacity in the absence in military service of Dr Margaret D Craighill dean, who has now resigned

## TENNESSEE

**Twenty-Five Year Postgraduate Program.**—At the 1946 session of the Tennessee State Medical Association in Knoxville recently the committee on postgraduate medical education and the board of trustees approved a twenty-five year financial plan leading to permanent establishment of postgraduate study in Tennessee. The committee is now calling on medical societies throughout the state to make a complete member canvass for contributions from physicians to the program The plan calls for $1 000 contributions from one hundred doctors as an initial effort. Receipts will be issued for all contributions because they are deductible from income tax returns Other plans and sources of revenue for the creation of this fund will be described in a small booklet which will shortly be printed and placed in the hands of the entire profession All will be given an opportunity to make some contribution. Dr W C Colbert, Memphis was elected as the next chairman for the

postgraduate committee for the program "Neuropsychiatry for the Years 1947-1948' The Commonwealth Fund of New York sponsored a pilot course in psychiatry at the University of Minnesota which, it is hoped, can be duplicated in Tennessee In the medical state journal credit is given to the Commonwealth Fund for its many years of support to postgraduate education consisting of more than $100 000 in Tennessee and for its offer to continue assistance with a reduced amount for the next program in neuropsychiatry until the profession can set up its own funds

**Committee Named on Unauthorized Practice**—A committee on unauthorized practice of the healing art has been created through legislative resolution Members of the committee are Dr Robert H Hutcheson Nashville state commissioner of public health, and four lay persons Mr Carmack Cochran, Nashville Trust Building, Nashville Mr George Sheats, Baptist Memorial Hospital Memphis Professor J E Windrow Peabody Demonstration School Nashville and Mr W P Taylor 514 South Gay Street Knoxville The committee will undertake to ascertain whether or not there is 'unauthorized practice of the healing art and various branches thereof" in Tennessee The joint resolution on which the legislative action was based indicated that because of an acute shortage in Tennessee of persons licensed to practice the healing art in its various branches and a similar shortage of hospital facilities including nurses technicians and others brought about by the response of Tennessee to patriotic appeals, unscrupulous persons have unlawfully been holding themselves out as licensed to practice the healing art

## TEXAS

**C A Selby in New Position**—Dr Claude A Selby, until recently director of health of Nebraska is now medical supply officer with the District Office U S Public Health Service Dallas Covering Texas New Mexico and Oklahoma Dr Selby s work will be to survey and evaluate military establishments with respect to their conversion to civilian use by state city and government agencies

**Three Year Fellowship Awarded to James Baxter**—The Welch Fellowship in Internal Medicine has been given to Dr James H Baxter Jr assistant professor of medicine Southwestern Medical College Dallas beginning July 1 The fellowship is administered by the medical fellowship board of the National Research Council Washington, D C and is open to a limited number of United States physicians under 40 years of age who have demonstrated unusual aptitude and promise of outstanding achievement in internal medicine teaching and investigation The fellowship provides funds for a prolonged period of advanced training study and investigation in the medical sciences as well as clinical experience teaching and research in internal medicine Dr Baxter's first year s program will be in the laboratory of Vincent du Vigneaud Ph D at Cornell University Medical College Subsequent years of the fellowship will be reviewed annually by the board of the National Research Council

## UTAH

**Radiologists Organize**—At a recent meeting held in Salt Lake City the radiologists of the state of Utah effected an organization known as the Utah State Radiological Society The officers include Dr James P Kerby president and Dr Moore L Allen secretary both of Salt Lake City The society plans to hold meetings during alternate months from September to May inclusive

## VIRGINIA

**Changes in Health Personnel**—Dr Vernon A. Turner, formerly health officer of Augusta County and recently released from army service has been appointed assistant director of local health services with headquarters in the Southwest district office in Abingdon effective May 1 succeeding Dr Peyton M Chichester, Richmond who has been transferred to the central office in Richmond Dr Cameron F McRae Jr, recently released from army service has been named health officer of Russell-Wise Health District to succeed Dr Linwood Farley Morton who was transferred to the Prince William-Stafford Health District with headquarters at Manassas effective May 1 Dr William Y Garrett Eastville has been named health officer of Norfolk-Princess Anne Health District succeeding Dr John M Jackson Manassas Dr Thomas Scarlett, Harrisonburg formerly health officer of Augusta-Rockingham-Harrisonburg Health District, recently returned from medical service in the army has been assigned as health officer of the Fairfax County Health Department, effective May 1 Dr Willard W Griggs Morton has resigned as health officer of the Page-Warren-Shenandoah Health District, effective May 13

## WISCONSIN

**Octogenarians Honored**—The Wisconsin chapter of the International College of Surgeons held a dinner in Milwaukee on May 15 for four surgeons who are over 80 years of age The physicians honored were Drs William E Ground Superior, John M Dodd, Ashland George V I Brown Milwaukee, and Thomas W Nuzum, Janesville

**New Professor of Psychiatry at Marquette**—Dr Michael Kasak, who since 1931 has been associate clinical professor and in charge of psychiatry in the senior class at Marquette University School of Medicine, Milwaukee, and who in 1944 became acting director of the division of psychiatry recently was promoted to be professor and director of the division of psychiatry

## GENERAL

**Interns and Residents Requested to Communicate With Their Hospitals**—The Sacred Heart Hospital Allentown Pa. has been attempting to effect a reunion of all ex-interns Many of the letters sent out were returned unclaimed Dr Dominic A Domo, secretary-treasurer of the ex-interns committee of the hospital, recommends that all write to their respective hospitals in order that the hospital records may be brought up to date

**Jayne Shover Named to Direct Cerebral Palsy Work.**—Miss Jayne Shover, Chicago, acting director of field services for the National Society for Crippled Children and Adults has been appointed director of the new cerebral palsy division of the national society (THE JOURNAL, June 1 p 473) Before joining the National Society for Crippled Children and Adults in 1945 Miss Shover was supervising psychologist and special education director of the Illinois Division of Service for Crippled Children and consultant to the Illinois Commission for Handicapped Children Headquarters of the new division will be located at the National Society for Crippled Children and Adults, 11 South LaSalle Street, Chicago 3

**Bacteriologists Award Lilly Prize to Dr McCarty**—At the forty-sixth general meeting of the Society of American Bacteriologists in Detroit May 24 the Eli Lilly and Company Award was presented to Dr Maclyn McCarty of the Rockefeller Institute for Medical Research, New York This was the ninth presentation of the prize which consists of $1,000 and a medal It is given annually to a man under 35 for promising work in bacteriology Dr McCarty graduated at Johns Hopkins University School of Medicine, Baltimore in 1937 At the general meeting of the Society of American Bacteriologists he spoke on 'Chemical Nature and Biological Specificity of the Substance Inducing Transformation of Pneumococcal Types '

**New Medical Director of Research Foundation.**—Dr Christian P Segard Leonia N J, has been appointed medical director of the Wisconsin Alumni Medical Research Foundation Madison Wis effective June 1 Dr Segard graduated at the Chicago College of Medicine and Surgery now Loyola University School of Medicine, in 1913 He once served as adviser to the government of India and the Y M C A India and to the government of Bengal India as adviser in hygiene and physical education On returning to the United States after World War I he became director of personnel and assistant director, Third Avenue Railway System New York He joined the staff of the eastern office of the Wisconsin Alumni Medical Research Foundation in 1934

**American Congress of Physical Medicine**—The American Congress of Physical Medicine will hold its twenty-fourth annual scientific and clinical session September 4-7 inclusive at the Hotel Pennsylvania in New York Scientific and clinical sessions will be given each day All sessions will be open to members of the medical profession in good standing with the American Medical Association In addition to the scientific sessions the annual instruction courses will be held September 4-6 These courses will be open to physicians and to therapists registered with the American Registry of Physical Therapy Technicians For information concerning the convention and the instruction course address the American Congress of Physical Medicine 30 North Michigan Avenue, Chicago 2

**Parran Named Head of World Health Council**—Dr Thomas Parran surgeon general of the U S Public Health Service Washington D C, was unanimously elected chairman of the International Health Conference in New York June 20 He had been designated by the U S Department of State as chairman of the United States delegation to the conference which opened June 19 and which according to one announcement, will continue for four or five weeks Representatives of sixty-seven countries are in attendance including the fifty-

one members of the United Nations Organization In a statement to the press Dr Parran said that formation of a global health organization would be a major step toward "our total objective of peace' and that the goal of the conference was to make medical service available to all persons regardless of their economic status

**Prevalence of Poliomyelitis**—Reports of cases of poliomyelitis for the periods indicated have been received from the division of public health methods, U S Public Health Service as follows

| Division and State | June 15 1946 | June 16 1945 | Median 1941 1945 |
|---|---|---|---|
| New England States | | | |
| Maine | 0 | 0 | 0 |
| New Hampshire | 0 | 0 | 0 |
| Vermont | 0 | 1 | 0 |
| Massachusetts | 0 | 0 | 0 |
| Rhode Island | 0 | 0 | 0 |
| Connecticut | 0 | 2 | 0 |
| Middle Atlantic States | | | |
| New York | 4 | 10 | 3 |
| New Jersey | 2 | 2 | 1 |
| Pennsylvania | 3 | 2 | 2 |
| East North Central States | | | |
| Ohio | 3 | 1 | 0 |
| Indiana | 3 | 3 | 0 |
| Illinois | 6 | 0 | 0 |
| Michigan | 1 | 0 | 1 |
| Wisconsin | 0 | 1 | 0 |
| West North Central States | | | |
| Minnesota | 1 | 0 | 0 |
| Iowa | 3 | 0 | 0 |
| Missouri | 0 | 0 | 0 |
| North Dakota | 0 | 0 | 0 |
| South Dakota | 0 | 0 | 0 |
| Nebraska | 1 | 0 | 0 |
| Kansas | 4 | 0 | 1 |
| South Atlantic States | | | |
| Delaware | 0 | 0 | 0 |
| Maryland | 0 | 0 | 0 |
| District of Columbia | 0 | 0 | 0 |
| Virginia | 0 | 3 | 2 |
| West Virginia | 2 | 2 | 0 |
| North Carolina | 4 | 2 | 0 |
| South Carolina | 0 | 7 | 1 |
| Georgia | 6 | 2 | 0 |
| Florida | 25 | 0 | 1 |
| East South Central States | | | |
| Kentucky | 6 | 0 | 0 |
| Tennessee | 0 | 3 | 1 |
| Alabama | 25 | 8 | 1 |
| Mississippi | 4 | 0 | 0 |
| West South Central States | | | |
| Arkansas | 2 | 1 | 2 |
| Louisiana | 3 | 1 | 2 |
| Oklahoma | 10 | 0 | 0 |
| Texas | 39 | 37 | 4 |
| Mountain States | | | |
| Montana | 0 | 0 | 0 |
| Idaho | 0 | 0 | 0 |
| Wyoming | 0 | 0 | 0 |
| Colorado | 10 | 0 | 0 |
| New Mexico | 2 | 0 | 0 |
| Arizona | 0 | 0 | 0 |
| Utah | 0 | 2 | 1 |
| Nevada | 0 | 0 | 0 |
| Pacific States | | | |
| Washington | 2 | 0 | 0 |
| Oregon | 0 | 1 | 0 |
| California | 14 | 5 | 6 |
| Total | 180 | 96 | 71 |
| 24 weeks | 1 381 | 999 | 657 |

**Essay Award Goes to Yale Physician.**—Dr Arthur J Geiger assistant professor of medicine Yale University School of Medicine New Haven, is the winner of the 1946 annual essay contest of the Mississippi Valley Medical Society 'for the best unpublished essay on a subject of practical and applicable value to the general practitioner of medicine.' Dr Geiger s subject was Penicillin Therapy in Subacute Bacterial Endocarditis Second prize was awarded to Dr Frederick Steigmann of the University of Illinois Chicago, for his essay The Problem of Jaundice in General Practice and third prize to Dr Rutherford T Johnstone Los Angeles for his essay A Basic Approach to the Diagnosis of the Occupational Diseases Dr Geiger will receive $100 a gold medal and a certificate of award He will deliver his essay at the eleventh annual meeting of the Mississippi Valley Medical Society Jefferson Hotel St Louis September 25 27

**Teaching of Physics for Students of Biology and Medicine**—Following a recommendation from the scientific advisory committee of the Baruch Committee on Physical Medicine to the executive committee of the American Association of Physics Teachers, a committee of three members of the association has been formed to assist in a more effective teaching of physics for premedical students and students of biology Members of the committee are Lester I Bockstahler, Ph D, Evanston, Ill, Louis A Strait, Ph D, Austin, Texas, and LeRoy L Barnes Ph D, Ithaca N Y, chairman The committee will assemble and make available to teachers of the first course in college physics illustrative material from biology and medicine which will show physical principles at work in biologic processes and physical principles applied in the study of biologic processes, and a second course in physics for students of biology and premedical students The committee invites suggestions from biologists physicists and physicians interested in the project and requests that all communications be sent to Dr Barnes, Rockefeller Hall, Ithaca, N Y

**Life Insurance Research Fund Awards Fellowships**—On June 19 the Life Insurance Medical Research Fund awarded *nine fellowships, totaling $23,000 for postgraduate research and* student training Award of the fellowships the first to be made by the fund coincided with the approval of eleven new grants totaling $162,000 to ten institutions for research in this field These grants and awards bring to $621 000 the allocations for research made by the fund since it was formed (THE JOURNAL, June 23, 1945 p 606) Two types of fellowships are granted by the fund The senior fellowships are given to graduates who have a doctor s degree in medicine or the related medical sciences Junior fellowships are awarded to undergraduate students in medical schools who desire to take an extra year for training in scientific research It is hoped that this program may serve to increase the number of research workers particularly in view of the accumulated deficiency of such workers which developed during the war Fellowships are open to residents of the United States and Canada Senior fellows usually receive $2 500 to $3 500 a year, while junior fellows are given $1,500 to $2,000 a year It is expected that additional fellowships will be awarded later this year Of the nine fellowships just awarded, four are for postgraduate research into cardiovascular diseases and five are to medical students for training and research The postgraduate fellowships to be available in 1946 were made to

Dr Louis Horlick Montreal Que provided satisfactory arrangements are made for him to work in the field of cardiovascular physiology
Dr Jacob H Milstone Yale University School of Medicine New Haven
Dr Roy L Robertson Emory University School of Medicine Atlanta
Dr Kenneth F G Savard University of Montreal Faculty of Medicine Quebec

Student fellowships were awarded to

Cus G Casten Southwestern Medical College
George T Shires Southwestern Medical College
Donn L Smith University of Colorado School of Medicine provided course work is satisfactorily restricted
Lloyd H Smith Harvard Medical School Boston
William G Turman Syracuse University College of Medicine

Eight of the new grants are for study of the physiology of circulation or circulatory dynamics The institutions to which the grants were made and the research workers involved as announced by M Albert Linton chairman of the fund are as follows

Dr Tzvee N Harris for study of rheumatic fever Children s Hospital Philadelphia
Dr Katharine K Merritt for study of congenital heart diseases Columbia University College of Physicians and Surgeons New York
Dr Clinton H Thienes for study of the reaction on circulation University of Southern California School of Medicine Los Angeles
Dr René Wegria Columbia University College of Physicians and Surgeons New York
Dr Eugene A Stead Jr Emory University School of Medicine Atlanta Ga
Dr William Dock and Dr Jean R Oliver Long Island College of Medicine Brooklyn
Dr Carl F Schmidt University of Pennsylvania School of Medicine Philadelphia
Dr Arabian N Taylor University of Texas Medical Branch Galveston
Dr George E Burch Tulane University of Louisiana School of Medicine New Orleans
Dr Harold D Green Bowman Gray School of Medicine of Wake Forest College Winston Salem N C
Dr Cyril N H Long and Dr John V Brobeck, Yale University School of Medicine New Haven

Dr Francis R Dieuaide is scientific director of the Life Insurance Medical Research Fund (THE JOURNAL April 6 p 959) He is clinical professor of medicine at Columbia University College of Physicians and Surgeons On July 1 the office of the Life Insurance Medical Research Fund will be established at the New York Academy of Medicine 2 East 103d Street New York The fund is supported by 149 legal reserve life insurance companies in the United States and Canada the 139 United States contributing companies representing 93 per cent of the life insurance in force for all United States companies

## CORRECTION

**Dialyzed Milk.**—In a Query and Minor Note with this title (THE JOURNAL, May 25 p 366) it is stated that a quart of milk contains 5 Gm of sodium. This should have read 0 5 Gm

# Deaths

**Hal Lovelace Foster** ⊕ Kansas City, Mo University of the City of New York Medical Department, 1882 born July 7, 1858 founder, secretary from 1896 to 1898 and vice president in 1920 of the American Academy of Ophthalmology and Otolaryngology, honorary member of the Missouri State Medical Association, charter member and second secretary of the Jackson County Medical Society, charter member of the Kansas City Southwest Clinical Society, charter member and past president of the Kansas City Academy of Medicine charter member of the Kansas City Society of Ophthalmology and Otolaryngology fellow of the American College of Surgeons, consulting otolaryngologist St Margaret s Hospital in Kansas City Kan , visiting otolaryngologist to St Joseph s and Trinity-Lutheran hospitals, first secretary of All Saints' Hospital now St Luke s at a dinner given in April 1945 an oil portrait of him was unveiled as a memento of the fiftieth anniversary of the American Academy of Ophthalmology and Otolaryngology died May 21, aged 87, of cardiorenal disease

**Alexander Berkeley Moore** ⊕ Washington D C University of Virginia Department of Medicine Charlottesville, 1907, born in Aldie Va Nov 6, 1883 specialist certified by the American Board of Radiology, member of the American Roentgen Ray Society and past president American Gastro-Enterological Association Radiological Society of North America Inc Alumni Association of the Mayo Foundation and the American College of Radiology fellow of the American College of Physicians in December 1910 entered the Mayo Clinic in Rochester Minn as an associate in roentgenology and later became head of the section served as an associate professor of roentgenology at the University of Minnesota Graduate School Minneapolis Rochester, formerly professor of roentgenology at the Georgetown University School of Medicine a captain in the medical corps of the U S Army during World War I radiologist Central Dispensary and Emergency Hospital died March 8 aged 62 of pulmonary embolism

**Robert Glenn Allison** ⊕ Minneapolis University of Maryland School of Medicine Baltimore 1912 born in York S C Nov 25 1887 clinical assistant professor of radiology at the University of Minnesota Medical School and the University of Minnesota Graduate School, specialist certified by the American Board of Radiology member of the American Roentgen Ray Society Radiological Society of North America Inc and the American College of Radiology served during World War I formerly on the staffs of the Trudeau (N Y) Sanatorium Municipal Tuberculosis Sanitarium Chicago and Harper Hospital Detroit on the staffs of the Glen Lake Sanatorium Oak Terrace Minn Abbott Hospital Asbury Hospital and the Northwestern Hospital where he died March 20 aged 58, of cerebral hemorrhage

**Frederick Jerome Walter** ⊕ San Diego Chicago Homeopathic Medical College 1897 College of Physicians and Surgeons of Chicago School of Medicine of the University of Illinois 1904 born in Bureau County, Ill Nov 11 1874 past president of the Florida Medical Association and the Volusia County Medical Society served as president of the Daytona (Fla ) and La Mesa (Calif ) school boards examiner for the Los Angeles induction board during World War II, at one time medical director of Mudlavia Sanitarium in Kramer Ind member of the Florida Railroad Surgeons Association and surgeon for the Florida Railroad died in the Scripps Memorial Hospital, La Jolla, February 14 aged 71 of heart disease and lobar pneumonia

**George Walter Caldwell,** Los Angeles, University of Denver Medical Department 1891, born in 1866 in 1892 affiliated with the New Amsterdam Eye and Ear Hospital in New York, instructor in ophthalmology and assistant in rhinology and laryngology at the New York Polyclinic 1893-1894 and ophthalmic and aural surgeon to Convent and School of the Sisters of St Dominic in Blanvelt N Y, 1893-1894, clinical instructor at San Francisco Polyclinic nose and throat department 1912-1913 on the clinic staff of the Lane Hospital of Stanford University, San Francisco nose ear and throat department 1913 1914 author of several books, died March 11, aged 79 of heart disease

**Raymond Howard Schroeder** ⊕ Dayton, Ohio Ohio State University College of Medicine, Columbus, 1938 interned at St Francis Hospital in Columbus served a residency at the Ohio Hospital for Epileptics Gallipolis and the Licking County Tuberculosis Sanatorium in Newark, began active duty as a first lieutenant in the medical corps Army of the United States on Sept 29 1942 promoted to captain, served for twenty-six months in China as flight surgeon for the 16th fighter squardon held the air medal with citation and four major battle stars, separated from the service on February 24, died March 30, aged 32

**Jesse Hall Allen** ⊕ Philadelphia University of Pennsylvania Department of Medicine, Philadelphia 1897, assistant professor of proctology at Jefferson Medical College specialist certified by the American Board of Surgery member of the American Proctologic Society, on the staffs of the Broad Street and Methodist hospitals, died in the Jefferson Hospital April 16 aged 77 of cerebral vascular disease

**Francis Joseph Lorraine Barthelme** ⊕ Effingham Ill St Louis University School of Medicine, 1923, began active duty as a captain in the medical corps Army of the United States, on Sept 22 1942 service terminated in November 1943, died in St Anthony's Hospital March 8 aged 48

**Louis Berman** ⊕ New York, Columbia University College of Physicians and Surgeons, New York, 1915, from 1921 to 1928 associate in biologic chemistry at his alma mater, visiting endocrinologist and once visiting neurologist at the Central Neurological Hospital, among his many books were the "Glands Regulating Personality" "Food and Character the 'Personal Equation" 'New Creations in Human Beings' and 'Behind the Universe of a Doctor s Religion' , died May 16 aged 53, of heart disease

**Robert Emmett Bryan,** Elkins W Va Jefferson Medical College of Philadelphia, 1882, died March 11, aged 85 of senility

**Jesse R Bryant,** Wausau Wis , Rush Medical College Chicago 1896 also a graduate in pharmacy , served with the state national guard and during World War I, died February 12 aged 78 of cerebral hemorrhage

**James Bell Bullitt** ⊕ San Jose Calif University of Louisville Medical Department 1889, an Affiliate Fellow of the American Medical Association specialist certified by the American Board of Radiology, member of the American Roentgen Ray Society of which he had been past president and the American College of Radiology, on the staffs of the Santa Clara County Hospital and the San Jose Hospital died February 25 aged 82, of aplastic anemia

**C J Campbell,** Mulberry Ark (licensed in Arkansas in 1903), member of the American Medical Association died February 28, aged 69, of coronary occlusion

**Francis Smith Clark,** Louisville, Ky , University of Louisville Medical Department 1892 member of the American Medical Association, died February 20 aged 77, of coronary sclerosis

**Sarah A Cole,** Lincoln, Kan State University of Iowa College of Homeopathic Medicine Iowa City 1889, the Hahnemann Medical College and Hospital, Chicago, 1898 died February 20 aged 90 of fracture of the femur sustained in a fall

**Silas Melvin Compton,** South Bend Ind , Indiana University School of Medicine, Indianapolis, 1909, died in St Joseph Hospital March 5 aged 68 of lobar pneumonia

**William Borden Conner** ⊕ Rochester, N Y , University of Pennsylvania Department of Medicine, Philadelphia, 1900, member of the Rochester Academy of Medicine and the Rochester Pathological Society on the staffs of the Highland, St Mary s and Genesee hospitals, died in the Strong Memorial Hospital February 24, aged 69, of carcinoma of the urethra.

**Albert Lloyd Cooper** ⊕ Scottsbluff, Neb , University of Nebraska College of Medicine Omaha, 1919 president of the Nebraska State Medical Association in 1943, for many years councilor of the Twelfth District Medical Society past president of the Scotts Bluff County Medical Society, served on the city council, died in a hospital at Kearney February 18, aged 56 of burns received in an airplane crash at Elm Creek.

**Fannie Wooten Cowle,** Hot Springs National Park, Ark., University of Nashville (Tenn.) Medical Department, 1899, died February 21, aged 84, of chronic nephritis

**Walter Roland Cox** ⊕ Memphis, Tenn , Memphis Hospital Medical College, 1908 died in St. Joseph Hospital February 11, aged 60, of cerebral hemorrhage

**Charles Woodhouse Crompton,** Hoquiam Wash , New York Homeopathic Medical College and Hospital, New York, 1891 died January 18 aged 76

**William Simon Crowley,** Oak Park Ill , Northwestern University Medical School, Chicago 1909, died in February, aged 61

**Cyrus Richardson Currier** ⊕ Lieutenant Commander, U S Navy, retired Sandwich Mass, Tufts College Medical School, Boston, 1911, U S Naval Medical School in 1934, entered the U S Navy in 1921 and retired Dec. 1 1942 for incapacity resulting from an incident of service, died April 9, aged 58 of coronary thrombosis

**Thomas Greene Curry,** Franklin, Texas, Kentucky School of Medicine, Louisville, 1894 member of the American Medical Association, died January 15 aged 79

**Clinton Day** ⊕ Hart, Mich Ensworth Medical College St Joseph, Mo, 1891 served during World War I, died February 26, aged 81, of arteriosclerosis

**Wilborn John Deason,** Happy Camp Calif Chicago College of Medicine and Surgery 1914, died in the Siskiyou County General Hospital, Yreka, February 25 aged 67

**Stephen Roszel Donohoe,** Norfolk Va University of Maryland School of Medicine Baltimore 1902 member of the American Medical Association, served during World War I, died March 13, aged 65

**Henrietta C Dorman,** San Bernardino Calif, Eclectic Medical Institute, Cincinnati, 1891, died in Monrovia January 25 aged 81

**Ruel E Ebersole** ⊕ Surgeon, U S Public Health Service retired Norfolk, Va University of Virginia Department of Medicine, Charlottesville 1900 died in a local hospital February 13, aged 71

**William C Frey** ⊕ San Francisco University of California Medical School San Francisco 1917 on the staff of St Francis Hospital, died February 23 aged 53 of abscess of the pancreas

**Joseph Reuss Frobese,** Austin Texas, University of Texas School of Medicine, Galveston 1910 member of the American Medical Association died in a local hospital February 8 aged 61 of gastric hemorrhage

**Frank Johnson Hall,** Kansas City, Mo, Kansas City Medical College 1900 member of the American Medical Association past president of the Jackson County Pathological Society served on the staff of St. Joseph's Hospital, died February 25 aged 70

**Ulysses S G Keller,** Madison Wis Columbian University Medical Department Washington D C 1895 formerly connected with the chemistry department of the University of Wisconsin died in Grand Rapids January 14 aged 78

**George S Kinzer,** Ickesburg Pa. College of Physicians and Surgeons Baltimore 1892 member of the American Medical Association in 1942 awarded a plaque for fifty years in the medical profession by the Medical Society of the State of Pennsylvania, of which he had been a member died February 28 aged 76

**Ulysses Mercur Lauman,** Randle Wash College of Physicians and Surgeons medical department of Columbia College New York 1891 served during World War I major medical reserve corps U S Army not on active duty for many years a member of the state legislature, died February 28 aged 79

**William Malcolm,** New York University of the City of New York Medical Department New York, 1891 formerly Presbyterian medical missionary in China, died February 19, aged 85

**Edwin Galtney Martin** ⊕ Benoit Miss Barnes Medical College, St. Louis, 1898 died February 22 aged 75

**Hans Benjamin Museus,** Los Angeles, Rush Medical College, Chicago 1906 died February 16 aged 71

**Willard Fulton Read,** Hamilton N Y University of the City of New York Medical Department New York, 1897 member of the American Medical Association from 1895 to 1927 member of the faculty of Colgate University where he was president pro tem in 1921 and 1922 died in Flushing, N Y February 11 aged 81

**Frank P Robinson** Greeneville, Tenn University of Tennessee Medical Department, Nashville, 1890 served during the Spanish-American War served as first chief surgeon of the National Home for Disabled Volunteer Soldiers, Johnson City died January 26, aged 84

**Cornelia Anna Stoeltzing** ⊕ Cleveland University of Wooster Medical Department Cleveland 1906 one of the founders of the Woman's Hospital where she served as president of the board of trustees died January 12 aged 63

**Jessie Wilhelmina Smith Trumpour,** Forest Glen Md. Cleveland Medical College, Homeopathic, 1897, University of Wooster Medical Department, Cleveland, 1902, died February 18, aged 76

## DIED WHILE IN MILITARY SERVICE

**Ivan Jay Baumgartner,** Marshallville, Ohio, Western Reserve University School of Medicine Cleveland, 1944 interned at the Mercy Hospital in Toledo, began active duty as a first lieutenant in the medical corps Army of the United States on July 14 1945, died in Shaker Heights, March 23, aged 26

**Harold H Bergman,** Pasadena Calif Loyola University School of Medicine Chicago, 1939 interned at St. Elizabeth Hospital in Chicago served a residency at the U S Public Health Service Hospital in Fort Worth Texas, commissioned a first lieutenant in the medical reserve corps of the U S Army in February 1940, promoted to captain and major in the medical corps Army of the United States, died in the Birmingham General Hospital Van Nuys Dec 29 1945, aged 34 of chronic nephritis

**Albert Edward Corpening** Granite Falls N C Medical College of Virginia Richmond, 1940 interned at the Norfolk General Hospital in Norfolk, Va, and the Tampa Municipal Hospital in Tampa Fla. began active duty as a first lieutenant in the medical corps Army of the United States on Dec 1 1941 promoted to captain, served in the South Pacific area died in Forsyth County March 16 aged 29 of injuries received in an automobile accident while on terminal leave

**Charles Kenneth Elder** ⊕ Oswego N Y Syracuse University College of Medicine 1928 member of the American Society of Anesthetists Inc, interned at St Vincent's Hospital of the Borough of Richmond West New Brighton Staten Island served on the staff of the Oswego Hospital began active duty as a captain in the medical corps Army of the United States in August 1942 promoted to major, died in Minetto January 17 aged 42

**Carl Bertram Hall,** Wilmette Ill Northwestern University Medical School Chicago, 1937 interned at the Evanston Hospital in Evanston Ill served a residency in obstetrics and gynecology at the Pennsylvania Hospital in Philadelphia commissioned a lieutenant in the medical corps Army of the United States Sept. 9, 1942 promoted to captain served in China and India died at Camp Kilmer N J January 4 aged 34 of hepatitis

**Charles Eugene Huber Jr,** New York Columbia University College of Physicians and Surgeons New York 1928 member of the American Medical Association interned at the Lenox Hill Hospital began active duty as a captain in the medical corps Army of the United States on July 8 1942 promoted to major and lieutenant colonel on duty for thirty months in the China-Burma-India theater and for a time commanded there the Fourteenth Evacuation Hospital died while on terminal leave February 14, aged 43 of coronary thrombosis

**William Romulus Jenkins** Franklinton N C University of Maryland School of Medicine and College of Physicians and Surgeons Baltimore 1943 interned at the University Hospital in Baltimore began active duty as a first lieutenant in the medical corps Army of the United States in February 1944 died at Fort Bragg April 16, aged 28, of acute cardiac failure.

**Samuel Alvin Loseff** Chicago University of Illinois College of Medicine Chicago, 1932 member of the American Medical Association interned at the Elgin State Hospital in Elgin Ill, and the Michael Reese Hospital on the staff of the Edgewater Hospital began active duty as a first lieutenant in the medical corps Army of the United States, on April 7 1944 died in the Lawson General Hospital, Atlanta, Ga Nov 29 1945, aged 39, of carcinoma

**James Richard Reeves,** Columbus, Ohio Indiana University School of Medicine, Indianapolis, 1933 member of the American Medical Association assistant professor of medicine at the Ohio State University College of Medicine affiliated with the University Hospital began active duty as a captain in the U S Army (National Guard) in October 1940, promoted to major relieved from active duty on March 4 died in St Francis Hospital April 11 aged 41 of a skull fracture incurred in a fall while on terminal leave.

# Foreign Letters

## LONDON

*(From Our Regular Correspondent)*

May 25, 1946

### Consultants, Specialists and the National Health Service Bill

The bill for a national health service is now passing through the committee stage in the House of Commons The government is making amendments of a minor nature, but those from the opposition are rejected As the bill affects consultants as well as general practitioners meetings of the former have been held to consider it The Consultants and Specialists Group Committee of the British Medical Association has adopted a number of resolutions The committee approves the principle of regional organization of hospitals, voluntary and municipal, by regional boards, but it holds that only in agreement with the Central Health Services Council should the minister of health have the right to refrain from laying the council's annual report before Parliament The medical practitioners on the council, regional boards and hospital management committees should be appointed by the minister after consultation and agreement with the professional organizations concerned An endeavor should be made before the bill is passed to ensure that medical representation is adequate on the regional hospital boards Further efforts should be made to obtain a comprehensive health service by including the industrial medical service and the medical services of other government departments There is no proved necessity for the change of ownership of hospital buildings and equipment or of hospital endowments The minister should be pressed for an early statement of the retiring age from the service That part of a hospital which is already built specially or designated as a pay block should be used solely for that purpose Persons should not be able to avail themselves of the amenities of pay block accommodation without paying for the services of part time consultants attending them. From the medical staff of the hospitals a medical board should be elected by the medical staff with power to nominate an adequate number of their members to the hospital management committee. Every consultant or specialist on the staff of a voluntary or municipal hospital who enters the health service should be entitled to continuity of office on the staff of a hospital in the same area The right of private practice should be safeguarded and pressure exerted in order that a proportion of accommodation be reserved for private patients The right to continue as members of the staffs of the hospitals which they serve should be accorded to all consultants and specialists whether they enter the national health service or not Where a consultant or specialist can show that he has purchased a bona fide practice, the principle of compensation should be adhered to

### Annual Meeting of the Surgeons of Great Britain and Ireland

The annual meeting of the surgeons of Great Britain and Ireland, held in London, was made noteworthy by the attendance of a number of leading French and Belgian surgeons—Leriche, Bazy Santy Lortat-Jacob, Mathey, Berat, de Baiseux, Albert, Dejardin, Morelle Segound and Mayer The meeting was held under the presidency of Sir Max Page. At a dinner the president of the Royal College of Surgeons, Sir Alfred Webb-Johnson, in proposing the health of the guests, spoke of the emotion felt at this reunion after long years of trial and the admiration of British surgeons for the fortitude of their colleagues and their faith so difficult to keep burning What at great risk they had done for our men would never be forgotten In replying, Professor Leriche related how in the difficult years he read the works of the older English surgeons down to Sir Astley Cooper and was impressed with the unity of surgical thought The need of surgeons today was to break down isolation—to meet and work in common Sir Max Page welcomed the return of international surgery It was essential to encourage interchange of ideas to promote science. The director general of the Army Medical Service, Sir Alexander Hood, testified to the achievements of surgeons in the war By its effect on the morale of troops, efficient care of the sick and wounded contributed enormously to victory The presence of specialist surgical teams near the front had an immense influence

## NETHERLANDS

*(From Our Regular Correspondent)*

AMSTERDAM, May 6, 1946

### Estimation of 17-Ketosteroids

For more than twenty years the pharmacotherapeutic laboratory of the University of Amsterdam was engaged in research on sex and adrenocortical hormones Contributions toward the refining and characterization of estrogenic agents and the discovery and chemical identification of the male steroid testosterone were among the results achieved Since the late prewar years the nonbiologic estimation of sex steroids was included in the program During the last few years E. Dingemanse and L G Huis in the *Veld* elaborated a method of estimating 17-ketosteroids in the urine of patients and of normal persons, and the clinical application of this method is yielding valuable results

### Mortality from Tuberculosis in the Netherlands

Although the absolute figures are not very high in comparison with those of other countries, the rise of the mortality from tuberculosis during the war is considerable, as shown in the accompanying table

*Mortality from Tuberculosis*

| | 1928 1939 | 1937 | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 |
|---|---|---|---|---|---|---|---|---|
| The Netherlands | 60 | 48 | 45 | 41 | 44 | 59 | 61 | 70 |
| Amsterdam | 56 | 44 | 41 | 35 | 37 | 60 | 71 | 75 |

### Gift of Penicillin by American Red Cross

The American Red Cross has given a billion units of penicillin to several Dutch hospitals The penicillin has been sent to the Netherlands by special aircraft

### Cancer Diagnosis

Dr van der Spek describes in the *Nederlandsch tijdschrift voor geneeskunde* **90** 360, 1946 the serologic method of diagnosing cancer This method has been elaborated by de Kromme and by de Bruine Groeneveldt Control tests have shown that the results were correct in 84 per cent of the cases The method is based on the demonstration of an antigen and of antibodies in the blood and urine of affected persons

### Miscellaneous

In March the University of Utrecht conferred the honorary degree of doctor of science on the phytopathologist Dr van Luijken for his research on antibiotics Investigating soils he isolated and cultivated Penicillium expansum, whose culture medium proved to contain an agent antagonistic to the fungus Pythium de Baranyum Exparsine is with reasonable probability identified as anhydro 3 oxymethyl-4 pyrone carbonacide and its identity with Raistrick's Patulin is probable.

The University of Groningen awarded an honorary doctorate in science to Prof J B S Haldane for his many contributions to physiology and biochemistry

Prof P Formijne has been reappointed to the Amsterdam chair of internal medicine, from which he resigned at the end of hostilities in the Netherlands last year

Winston Churchill is to visit the Netherlands from May 8 to 13 On May 10 Leiden University will confer on him an honorary degree of doctor On May 11 the golden medallion of the city of Amsterdam will be presented to him

## BRAZIL

*(From Our Regular Correspondent)*

RIO DE JANEIRO, May 22, 1946

### Intrathoracic Goiter

Dr Raymundo Britto has reported 1,400 cases of thyroid diseases treated at the Red Cross Hospital of Rio de Janeiro Seventy two of the 703 patients treated surgically presented intrathoracic goiter The biotype of the patient is significant in the etiology of intrathoracic goiter Of 95 such cases, 59 were of the hypersthenic type, 19 of the sthenic type and 17 of the asthenic type In only 4 of the 72 patients treated surgically was the goiter completely intrathoracic. Fifteen of the 95 patients with this disease were men and 80 were women. Twenty-six of them were from 31 to 40 years of age Seventy-seven patients, or 81 1 per cent, had hyperthyroidism Two cases of adenocarcinoma of the left lobe with hyperthyroidism were reported In almost all cases there was compression and deviation of the laryngotracheal tube predominantly on the left side, making laryngoscopy necessary Fluoroscopy, radiography and tomography were especially valuable for diagnosis In the 4 completely intrathoracic cases the cervical route was used for the operation with satisfactory results No postoperative complications or fatalities were reported. Sulfonamides and penicillin were administered during the postoperative period.

### Penicillin in the Treatment of Frambesia Tropica

Drs Nery Guimarães, Marques da Cunha and A. Area Leão of the Oswaldo Cruz Institute of Rio de Janeiro have been conducting for several months a series of experiments on the treatment of frambesia tropica (pain, yaws) Dr Guimarães has now published a fifth paper The report deals with investigations performed to ascertain (*a*) the minimal curative dose for the initial lesions of frambesia, (*b*) the effect of the reduction of the number of injections in each day and the possible application of penicillin in the control of the disease in rural districts and (*c*) reduction of the duration of the treatment by the use of high dosage

Clinical recovery was correlated with dosage of penicillin as follows (1) 150 Oxford units every four hours, seventeen days, (2) 50 units daily, no recovery (3) 400 units three times daily fifteen days, (4) 400 units two times daily twenty days, (5) 1 600 to 3,200 units daily, twenty to thirty days, (6) 33⅓ to 46 7 units per kilogram of body weight every four hours, fifteen days, (7) 61 5 to 166 7 units per kilogram of body weight every four hours, four days, (8) 20,000 units every four hours for five doses, no recovery

### Late Biochemical Variation of Shigella Alkalescens

Dr Arlindo de Assis, professor of bacteriology at the Fluminense School of Medicine of Niteroi state of Rio de Janeiro, published a report on the late biochemical variation of Shigella alkalescens types I and II Six strains of Sh alkalescens which had been tested on carbohydrates in 1939 were retested in 1946 on the same substrates (sucrose, rhamnose, dulcitol, xylose and salicin) No change occurred in tests with fermentations of sucrose, rhamnose and dulcitol The alkali producing Shigellae may be considered a heterogeneous group of bacteria which may be split into at least four antigenic types with disregard for their fermentative abilities Since the stability of these antigenic types is definitely greater than that of the usual fermentation tests, it seems desirable to classify Sh alkalescens cultures on a purely serologic basis in the future

### Medical Meetings

On July 1 to 5 the seventh Brazilian Congress of Orthopedics and Traumatology will be held at Rio de Janeiro Besides discussions by surgeons who served in the Brazilian Expeditionary Force in Europe, the program includes special reports on the treatment of congenital clubfoot by Dr Oswaldo Campos, Rio de Janeiro, and Dr Define Frasca, São Paulo, and on intrinsic fractures of the foot by Dr Guerra Blessman, Porto Alegre, and Dr Benjamin Salles, Bahia.

The first Inter-American Congress of Medicine, sponsored by the National Academy of Medicine, will be held at Rio de Janeiro on September 7 to 15 Many physicians and surgeons of the Americas have already accepted the invitation of the organizing committee to be present at the meeting, including Drs Malcolm MacEachern, Charles O Bruce Jr, George Pack, Samuel Soskin and Tracy Putnam from the United States The subjects to be discussed at the meeting are included in ten divisions hospitals and hospital organization medical and social aspects of immigration, war medicine and surgery, prevention and treatment of cancer, the great endemic diseases of the Americas nutriology and vitaminology, endocrinology, tuberculosis, neuropsychiatry, hygiene and public health

### Brief Items

Dr Mauricio C Medeiros has been appointed professor of psychiatry at the University of Rio de Janeiro succeeding Dr Henrique Roxo, who retired from active duty because of age

Dr Luis A Caprighone has been appointed professor of medicine at the University of Rio de Janeiro, succeeding the late Dr Heitor Annes Dias

---

# Marriages

GEORGE J GABUZDA JR, Freeland, Pa, to Ensign Marion E. Jarvis Navy Nurse Corps, of St Albans, Vt, April 2

FRANKLIN H SCHAEFER, New Haven, Conn to Miss Dorothy Marguerite Hunter of Erie, Pa, April 5

ALFRED WILLIAM HARRIS to Miss Claire Marie Schlenter, both of Dallas, Texas, in New York April 10

RALPH V BYRNE, Los Angeles to Miss Mary Voyer of Minneapolis in Beverly Hills Calif, March 21

FRANKLIN CROTHERS KELTON, St Davids, Pa, to Miss Fern Naomi Clemson of Tamaqua April 20

JACK KELLY HOLMES Belmont, Mass, to Miss Christine M Kinsler of Lincoln in Concord April 13

AUBREY VAN WYCK GOULD JR New York to Miss Marjorie Wessels at West Sayville, N Y, April 13

ROBERT EARLE POOLE, Spartanburg, S C, to Miss Beulah M Robeson of Columbus Ga April 20

FITZGERALD H CLARK, Jamestown N Y, to Miss Alfreda M Hilldale of Sugar Grove, April 17

COLMAN LOPATIN New Haven, Conn, to Miss Frieda Kenigsberg of Middletown, March 31

DOUGLAS M CHESSON, Houma, La, to Miss Willa Dean Comeaux in Broussard recently

HERBERT TABOR Bethesda, Md, to Dr Celia White of Dorchester, Mass April 8

WILLIAM H CROUCH JR to Miss Jean Carlson, both of Kansas City Mo, April 7

WILLIAM GARY CUMBIE to Miss Carolyn Boatner, both of Troy Ala, April 30

DAVID M JONES to Miss Jane Gardner, both of Indianapolis, March 23

# Correspondence

## TOXICITY OF THIOGLYCOLIC ACID USED IN COLD PERMANENT WAVE PROCESS

*To the Editor* —The article by Dr. Lawrence H. Cotter on Thioglycolic Acid Poisoning in Connection with the 'Cold Wave' Process (THE JOURNAL, June 15, p. 592) contains some misstatements and contradictions that should be clarified as a part of any fair appraisal of the situation. Obviously, Dr. Cotter is necessarily unaware of extensive investigative work that has been carried out by manufacturers for evidence of sensitizing properties of cold wave material and also of measures for the appraisal of primary irritation of the skin.

1. Throughout the article there are statements and implications to the effect that thioglycolic acid as such is used in cold wave preparations. I do not know that any thioglycolic acid, as such, is ever used, all being neutralized or provided with an excess of alkaline material, either ammonium hydroxide, which may be undesirable, or with other basic material, which practice is preferable.

2. Dr. Cotter refers to "chemically pure" thioglycolic acid. There is no such substance as 'pure' thioglycolic acid in that hydrogen sulfide always is an immediate or ready decomposition product. It is possible to stabilize thioglycolic acid to the point that no, or only traces of, hydrogen sulfide are produced in which instance the stabilizing agent becomes the deviating substance from chemical purity.

3. Throughout the article emphasis is placed on positive cephalin flocculation tests. At one point the statement is made that a positive cephalin flocculation test suggests a chemical poison. Recourse to the publications of the originator of the cephalin flocculation tests, Dr. Franklin Hanger, fails to reveal any claim that this procedure is a test preponderantly for external chemical poisons. Rather it is an index of hepatic inflammation. In the totality of hepatic inflammation external poisons do not play a paramount role.

4. Of the cases cited it is probable that Dr. Cotter will concur in the belief that at and after the time he saw the first patient all significant manifestations were characteristic of x-ray damage, which x-ray burns with ulcers he emphasizes. For case 2 I find no sound evidence linking the condition described with thioglycolic acid. Some months after any exposure to thioglycolic acid the woman was under observation by Dr. Cotter. In case 3, iteration and reiteration is directed to the burning action of "acid." Appropriate inquiry would have established that no acid was present in the cold wave solution. If any acid was present in the circumstances, this would have been limited to the highly dilute acid that may have been utilized, as is customary, for the removal of the alkaline wave solution.

5. Claim is made that the cases chosen for publication were selected "because it had been possible to demonstrate their lesions in the laboratory." A review of these cases does in truth disclose some laboratory work and some indication of pathologic change, but I doubt that these "lesions" have through any shown proof been associated with thioglycolic acid as a causative factor.

At least one manufacturer to my knowledge has procured elaborate testing (1) to establish the degree of primary irritation of thioglycolic acid at various percentage levels, together with any similar effects of the alkaline derivatives as actually used in cold wave preparations, (2) to determine the possibilities of sensitization through repeated patch tests carried out at such intervals as are appropriate to the causation of sensitization, (3) appraisal of circumstances under which hydrogen sulfide is produced in the original thioglycolic acid and the procurement of stabilizers preventing this occurrence and (4) elaborate animal experiments in which thioglycolic acid and subsequently produced alkaline salts were applied or introduced under divers conditions. Such work I have carried out in Chicago, New York, Ann Arbor and Detroit. The totality of results suggests that

(*a*) There is no primary skin irritation from thioglycolic acid or alkaline derivatives at levels below 8 per cent.

(*b*) I have not seen evidence of sensitization and allergic responses with properly prepared materials under any circumstances.

(*c*) Hydrogen sulfide formation can be controlled through stabilization.

(*d*) In my tests measurable systemic responses have not occurred in animals after parenteral introduction.

Wholesale condemnation of all cold wave process materials is not, I believe, warranted.

CAREY P. MCCORD, M.D., Detroit.

## BLOOD PRESSURE IN HYPERTENSION

*To the Editor* —I have just read in the February 9 issue of THE JOURNAL the paper of Gubner, Silverstone and Ungerleider about the range of blood pressure in hypertension. Since I read the first communications about pressure and depressor tests I have proved their ability in my private practice and found them a useful aid in the evaluation of hypertensive and prehypertensive states. But I encountered some difficulty. Most of my patients did not cooperate satisfactorily in performing the pressor test, they did not stop breathing long enough to record the highest systolic pressure and repeating the test for reading the diastolic level was much more difficult. The authors of the paper also experienced this difficulty of maintaining apnea and therefore advised the brief inhalation of aromatic spirit of ammonia. I should like to draw attention to a simple but useful modification I used in the technic of the pressor test. The patient was instructed to make—as in breathing or "humming' exercises—an F or S sound with his mouth while exhaling and to prolong this expiration exercise as long as he could stand it. With this modification in producing apnea I never had difficulty in recording the systolic as well as the diastolic pressure in one single reading. Since I have used this modification of the pressure test I have never had to use inhalation of aromatic spirit of ammonia. *This modification is so simple and so satisfacory that it warrants further use.*

MAX NUSSBAUM, M.D., Petah-Tikwa, Palestine.

## THE RACIAL FACTOR IN DISEASE

*To the Editor* —In an otherwise excellent and timely paper on gout (McCrahen, J. P., Owen, P. S., and Pratt, J. H. Gout: Still a Forgotten Disease) the authors, in discussing race, state that approximately one half of the patients in their series were of American parentage and that the remaining racial groups were Jewish, Italian, Irish, English, German, Negro, Canadian, French, Austrian, Greek and Lithuanian.

It would seem almost supererogatory to point out the exceedingly misleading and falsely inferential nature of this statement. Aside from the fact that several of the categories are not at all mutually exclusive, all of them, with the possible exception of the Negro (and even here, possibly not so) are to a varying extent, including and perhaps especially the American and Jewish, diverse mixtures of widely varying origins. I do not know, and I doubt whether any one could tell with accuracy, the racial origin of a person "of American parentage" or a Jew residing in Boston (with or without American parentage) or of an Englishman. It would appear that there is a need for greater accuracy on the part of those who wish to deal with such data.

ARTHUR M. GINZLER, M.D., Baltimore.

# POSTGRADUATE CONTINUATION COURSES FOR VETERAN AND CIVILIAN PHYSICIANS

## Compiled by the Council on Medical Education and Hospitals for Period July 1, 1946 to Jan. 15, 1947

Medical schools, hospitals state medical societies and other medical educational institutions and organizations are providing the Council with a growing body of information on courses designed primarily to meet the needs of returning medical officers These have been incorporated into the lists on these pages They are not specifically designated for veterans, since most if not all of them may also be open to interested civilian physicians Furthermore, all courses listed which were not designed primarily for physician veterans are also open to qualified returning medical officers

Note that each course is listed only once, without cross indexing, so that in some instances a prospective student should look under more than one heading for a desired course

### Table of Contents


| Subject | Page | Subject | Page | Subject | Page |
|---|---|---|---|---|---|
| Allergy | 777 | Endoscopy | 780 | Otorhinolaryngology | 786 |
| Anatomy | 777 | Fractures | 780 | Pathology | 786 |
| Anesthesiology | 778 | Gastroenterology | 780 | Pediatrics | 786 |
| Arthritis | 778 | Hematology | 781 | Pharmacology | 787 |
| Bacteriology | 778 | Industrial Health | 781 | Physical Medicine | 787 |
| Basic Sciences | 778 | Legal Medicine | 781 | Physiological Chemistry | 787 |
| Biochemistry | 778 | Medicine General | 781 | Physiology | 787 |
| Cardiovascular Diseases | 778 | Neurology and Psychiatry | 783 | Poliomyelitis | 787 |
| Chemistry | 779 | Neurosurgery | 784 | Proctology | 787 |
| Chest Diseases | 779 | Nutrition | 784 | Public Health | 788 |
| Dermatology and Syphilology | 779 | Obstetrics and Gynecology | 784 | Radiology | 788 |
| Diabetes | 779 | Ophthalmology | 785 | Surgery | 788 |
| Electrocardiography | 780 | Orthopedic Surgery | 785 | Therapy | 789 |
| Electroencephalography | 780 | Otolaryngology | 786 | Urology | 789 |
| Endocrinology | 780 | Otology | 786 | Venereal Disease | 789 |


*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15 1947*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| | **ALLERGY** | | |
| Cook County Graduate School of Medicine 427 S Honore St Chicago 12 | Allergy | 1 month monthly | $200 |
| Tufts Medical School Postgraduate Division 30 Bennet St Boston 11 At Affiliated Hospitals | Allergy | Nov 11 15 5 days full time | 40 |
| American College of Physicians 4200 Pine St Philadelphia 4 At Boston Mass | Allergy Cardiology | Nov 4 9 1946 1 week | Members 20 Non members 40 Service men free |
| Long Island College of Medicine Medical Society of County of Kings 1313 Bedford Ave Brooklyn 2 At Kings County Hospital | Allergy | Oct 11 1946 8 sessions once a week | 20 |
| American College of Physicians 4200 Pine St Philadelphia 4 At New York City | Allergy Cardiology | Nov 4 9 1946 1 week | Members 20 Non members 40 Service men free |
| Columbia University Faculty of Medicine 630 W 168th St New York 32 At Roosevelt Hospital | Recent Advances in Allergy | Nov 11 16 1946 full time | 40 |
| Columbia University Faculty of Medicine 630 W 168th St New York 32 At New York Post Graduate Medical School 303 E 20th St New York 3 | Allergy | June 26 1946 3 weeks full time | 200 |
| Columbia University Faculty of Medicine 630 W 168th St. New York 32 At Mount Sinai Hospital | Allergy | Nov 11 23 1946 Part time | 20 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 106th St New York | Allergy | 2 months arranged | 50 |
| American College of Allergists, Inc At Jefferson Medical School Philadelphia | Intensive Fall Instructional Course in Allergy | Nov 4 9 1946 | 100 |
| Graham Thomas Clinic 210 Franklin St Richmond Va | Fellowship in Allergy | July 1 1946 1 year and Jan 1 1947 | None |
| Marquette University School of Medicine Milwaukee Wis | Basic Orientation Course in Allergy | Oct 7 11 1946 1 week | 40 Interns and residents free |
| | **ANATOMY** | | |
| Tufts Medical School Postgraduate Division 30 Bennet St Boston 11 At Affiliated Hospitals | Surgical Anatomy | Oct 7 Nov 29 1946 3 days a week | 200 |
| Wayne University College of Medicine 1516 St Antoine St Detroit | Advanced Dissection | July Sept 1946 | 40 |
| | Regional Dissection | July Sept 1946 | 40 |
| Creighton University School of Medicine 306 N 14th St Omaha | Regional Anatomy | Arranged | 40 |
| | Anatomy | Arranged | None |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 105th St New York | Applied Anatomy of Ear Nose and Throat | Arranged 110 hrs | Arranged |
| | Applied Anatomy of the Upper Extremity | Arranged 60 hrs | 125 |
| | Applied Anatomy of the Anesthetist | Arranged 100 hrs | 275 |
| | Applied Anatomy of the Thorax | Arranged 120 hrs | 275 |
| | Applied Anatomy of the Urogenital System | Arranged 150 hrs | 300 |
| | Applied Anatomy of the Lower Extremities | Arranged 60 hrs | 125 |
| | Applied Anatomy for the Orthopedic Surgeon | Arranged 100 hrs | 275 |
| | Applied Anatomy of the Abdomen | Arranged 180 hrs | 300 |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan. 15, 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| | **ANATOMY—Continued** | | |
| University of North Carolina School of Medicine, Chapel Hill | Anatomy | Arranged | 25 |
| Duke University School of Medicine, Durham, N. C. | Anatomy | Arranged, 3 mos. or longer, full time | None |
| University of Pennsylvania Graduate School of Medicine, 237 Medical Laboratories, Philadelphia<br>At University of Pennsylvania Anatomical Laboratory | Otologic (Cadaver) Operations | Arranged, 2 weeks, 20 hrs. | 100 |
| | Rhinolaryngologic (Cadaver) Operations | Arranged, 10 days, 20 hrs. | 150 |
| University of Texas Medical Branch, Galveston, Texas | Applied Anatomy | Arranged | Not stated |
| | **ANESTHESIOLOGY** | | |
| University of Georgia School of Medicine, University Place, Augusta | General Anesthesia (Inhalation and Intravenous) | Arranged, 2 weeks, Throughout year | 150 |
| | Regional Anesthesia | Arranged, 2 weeks, Throughout year | 150 |
| Cook County Graduate School of Medicine, 427 S. Honore St., Chicago 12 | Inhalation Anesthesia | 1 month monthly | 200 |
| Tufts Medical School, Postgraduate Division, 30 Bennet St., Boston 11<br>At Affiliated Hospitals | Anesthesiology | Dec. 2-5, 1946, 4 days, Full time | 40 |
| Columbia University Faculty of Medicine, 630 W. 168th St., New York 32<br>At Mount Sinai Hospital | Anesthesia, Diagnostic and Therapeutic Nerve Blocking | Oct. 22-Nov. 22, 5 weeks, Part time | 30 |
| Columbia University Faculty of Medicine, 630 W. 168th St., New York 32<br>At Post Graduate Medical School, 303 E. 20th St., New York 3 | Anesthesia * | Arranged, 2 weeks, Full time | 100 |
| New York Polyclinic Medical School and Hospital, 341-353 W. 50th St., New York | Regional Anesthesia | Oct. 1, 1946-Jan. 2, 1947, 3 months | 300 |
| New York University College of Medicine, 477 First Ave., New York 16 | Anesthesia | Fall, 6 months | 250 |
| Duke University School of Medicine, Durham, N. C. | Anesthesia | Arranged, 3 or 6 weeks | None |
| Ohio State University College of Medicine, 11th and Neil Avenues, Columbus, Ohio<br>At Ohio State University Hospital | Anesthesia | Full time<br>Arranged, 3 months | Not stated |
| | **ARTHRITIS** | | |
| Long Island College of Medicine, Medical Society of County of Kings, 1313 Bedford Ave., Brooklyn 2<br>At Jewish Hospital | Arthritis | Oct. 14, 1946, 8 sessions, weekly | 20 |
| New York University College of Medicine, 477 First Ave., New York 16<br>At Bellevue Hospital | Arthritis and Rheumatic Disorders | Fall 1946, 6 weeks, Part time | 100 |
| | **BACTERIOLOGY** | | |
| Wayne University College of Medicine, 1516 St. Antoine St., Detroit | New Bactericidal Agents | Arranged, part time | 10 |
| University of North Carolina School of Medicine, Chapel Hill, N. C. | Bacteriology and Immunology | Arranged | 25 |
| Duke University School of Medicine, Durham, N. C. | Bacteriology and Parasitology | Arranged, 3 months or longer, Full time | None |
| | **BASIC SCIENCES** | | |
| University of California University Extension, San Francisco | Training Course in the Basic Sciences | June 24, 1946, 16 weeks | Not stated |
| University of Minnesota Medical School, Minneapolis<br>At Center for Continuation Study | Basic Sciences and Their Clinical Application | Sept. 1, 1946-June 1947, 10 months | Arranged |
| | **BIOCHEMISTRY** | | |
| Creighton University School of Medicine, 306 N. 14th St., Omaha | 5 Lectures on Recent Developments in Biochemistry | Arranged | None |
| University of North Carolina School of Medicine, Chapel Hill | Biochemistry | Arranged | 25 |
| Duke University School of Medicine, Durham, N. C. | Biochemistry | Arranged, 3 months, full time | None |
| | **CARDIOVASCULAR DISEASES** | | |
| Los Angeles Heart Association<br>At Los Angeles General Hospital, County Medical Bldg., Los Angeles | Postgraduate Symposium on Cardiovascular Disease | Oct. 23 and 24, 1946, 2 days | 10 |
| California Heart Association, 45 Second St., San Francisco<br>At Los Angeles, San Francisco and San Diego | Postgraduate Course in Cardiovascular Disease | Oct. 1946, 1 day, 2 days, 3 days | 10, 15, 20 |
| University of Southern California School of Medicine, 3551 University Ave., Los Angeles<br>At Los Angeles County Hospital | Cardiology and Vascular Disease | Sept. 10, 1946, 9 months, Full time | 750 |
| | Cardiology | Sept., 1946, 12 weeks, weekly | Regis. fee 15<br>50<br>Regis. fee 5 |
| American College of Physicians, 4200 Pine St., Philadelphia 4<br>At Denver | Cardiology and Psychosomatic Medicine | Sept. 23-29, 1946, 1 week | Members 20<br>Non-members 40<br>Physicians in service free |
| University of Georgia School of Medicine, University Place, Augusta | Cardiology | Arranged, 2 weeks | 100 |
| Harvard Medical School Courses for Graduates, 25 Shattuck St., Boston<br>At Peter Bent Brigham Hospital | Cardiology | July 1-31, 1946, 1 month | 150 |
| Tufts Medical School, Postgraduate Division, 30 Bennet St., Boston 11<br>At Pratt Diagnostic Hospital | Cardiology | Nov. 4-8, 1946, 5 days, Full time | 40 |
| American College of Physicians, 4200 Pine St., Philadelphia 4<br>At Ann Arbor, Mich. | Cardiology and Psychosomatic Medicine | Sept. 23-29, 1946, 1 week | Members 20<br>Non-members 40<br>Physicians in service free |
| Creighton University School of Medicine, 306 N. 14th St., Omaha | Cardiovascular Renal Diseases | Arranged | None |
| Columbia University Faculty of Medicine, 630 W. 168th St., New York 32<br>At Mount Sinai Hospital | Cardiovascular Diseases | Oct. 7-Nov. 9, 1946, 5 weeks, Part time | 75 |
| Columbia University Faculty of Medicine, 630 W. 168th St., New York 32<br>At Montefiore Hospital | Cardiology | Sept. 19, 1946-June 20, 1947, 40 weeks, part time | 200 |
| New York Medical College, Flower and Fifth Avenue Hospitals, 1 East 105th St., New York | Cardiology | Nov. 1946, 2 weeks, part time | 100 |

*Postgraduate Continuation Courses for Practicing Physicians—July 1 1946 to Jan 15 1947—Continued*

| Institution | Title of Course | [illegible] | Registration Fee and/or Tuition |
|---|---|---|---|
| **CARDIOVASCULAR DISEASE—Continued** | | | |
| New York Polyclinic Medical School and Hospital 345-353 W 50th St New York | Diagnosis and Treatment of Diseases of the Heart | Arranged 3 weeks part time | 75 |
| New York University College of Medicine 477 First Ave New York 16<br>At Beth Israel Hospital | Cardiovascular Diseases | Fall winter 1946 | Civilian Phys 75<br>Veterans 50 |
| St Francis Sanatorium for Cardiac Children Port Washington Blvd Roslyn N Y | Seminars on Rheumatic Fever and Rheumatic Heart Disease | Sept 27 Nov 29 1946 2 months part time | 20 |
| | Comprehensive Postgraduate Course in Rheumatic Fever and Rheumatic Heart Disease | July 8 19 1946 2 weeks | 75 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4 | Cardiology | Oct 1946 8 Thursdays 48 hours | 80 |
| **CHEMISTRY** | | | |
| Duke University School of Medicine Durham N C | Practical and Theoretical Instruction in Clinical Chemistry | Arranged 3 months full time | None |
| | Seminars in Clinical Chemistry | Arranged 10-12 weekly seminars part time | None |
| **CHEST DISEASES** | | | |
| California Tuberculosis and Health Association 45 2nd Street San Francisco<br>At Medical Schools in San Francisco and Los Angeles | Tuberculosis | 3 days to 2 weeks | None |
| Creighton University School of Medicine 306 N 14th St Omaha | Diseases of the Chest | Arranged | None |
| Columbia University Faculty of Medicine 630 W 168th St New York 32<br>At Bellevue Hospital Chest Service | Diseases of the Chest | Oct 7 1946 2 weeks | 50 |
| Columbia University Faculty of Medicine 630 W 168th St New York 32<br>At Bellevue Hospital | Tuberculosis and Diseases of the Chest | Oct 7 19 1946 2 weeks full time | 50 |
| Columbia University Faculty of Medicine 630 W 168th St New York 32<br>At Montefiore Hospital | Diseases of the Chest | Jan 3 May 16 1947 19 weeks part time | 60 |
| Columbia University Faculty of Medicine 630 W 168th St New York 32<br>At Mount Sinai Hospital | Diseases of the Chest | Nov 11 23 1946 2 weeks part time | 30 |
| Medical Society of the State of New York 292 Madison Ave New York<br>At Various Hospitals and Sanatoriums and Schools throughout the state | Course of Instruction in Pulmonary Disease and Tuberculosis | Arranged 3 12 months | Not stated |
| Trudeau School of Tuberculosis Saranac Lake New York | Refresher Course in Tuberculosis | Sept 9 1946 4 weeks | 100 |
| University of Oregon School of Medicine Marquam Hill Portland | Diseases of the Respiratory Tract | Dec 2-6 1946 5 days full time | 50 |
| **DERMATOLOGY AND SYPHILOLOGY** | | | |
| University of Southern California School of Medicine 3551 University Ave Los Angeles<br>At Los Angeles County Hospital | Dermatology and Syphilology | Oct 1946 11 months full time | 1 000<br>Regis fee 15 |
| Cook County Graduate School of Medicine 427 S Honore St Chicago 12 | Dermatology | Sept 23 Oct 21 1946 2 weeks | 100 |
| Harvard Medical School Courses for Graduates 25 Shattuck St Boston 15 | Dermatology and Syphilology | Arranged 1 year | 500 |
| Tufts Medical School Postgraduate Division 30 Bennet St Boston 11<br>At Boston City Hospital | Dermatology | Nov 18 23 1946 1 week full time | 40 |
| Wayne University College of Medicine 1516 St Antoine St Detroit 1<br>At Social Hygiene Clinic Receiving Hospital | Dermatology | Arranged 6 hours weekly | 40 |
| University of Minnesota Medical School Minneapolis<br>At Center for Continuation Study | Pathology of Diseases of the Skin | Fall 1946 4-6 weeks | To be arranged |
| Creighton University School of Medicine 306 N 14th St Omaha | Dermatology | Arranged | None |
| Columbia University Faculty of Medicine 630 W 168th St New York 32 | Dermatology | First of any month 3-6 months | Per month 55 |
| Columbia University Faculty of Medicine 630 W 168th St New York 32<br>At New York Post Graduate Medical School 303 East 20th Street New York 3 | *Dermatology and Syphilology for Pediatricians | Sept 16-20 1946 5 days full time | 50 |
| | Seminar in Practical Dermatology and Syphilology | Sept 9 13 1946 5 days full time | 45 |
| | Practical Instruction in Dermatological Allergy and Immunology | Arranged 6 weeks 3 months part time | 6 weeks 50<br>3 months 85 |
| | Practical Instruction in Diagnosis and Management of Syphilis | Arranged 6 weeks 3 months part time | 6 weeks 50<br>3 months 85 |
| | *Practical Instruction in Clinical and Microscopic Dermatological Photography | Arranged | 1 month 50 |
| | *Practical Instruction in Minor Dermatological Surgery | Arranged 6 weeks 3 months part time | 6 weeks 50<br>3 months 85 |
| | *Practical Instruction in Physical Therapy | Arranged 6 weeks 3 months part time | 6 weeks 50<br>3 months 85 |
| | Dermatology and Syphilology | First of any month 6 weeks part time | 100<br>Half fee to phys in service |
| New York Polyclinic Medical School and Hospital 345 W 50th Street New York 19 | Dermatology and Syphilology | First of any month 3 months part time | 150<br>Half fee to phys in service |
| New York University College of Medicine 477 First Ave New York 16<br>At Beth Israel Hospital | Dermatology | Fall 1946 4 weeks 2 days a week | 25 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4 | Dermatology Syphilology | Oct 1946-June 1947 8 months | Not stated |
| **DIABETES** | | | |
| Creighton University School of Medicine 306 N 14th St Omaha | Diabetes | Arranged | None |
| Long Island College of Medicine Medical Society of County of Kings and Academy of Medicine 1313 Bedford Ave Brooklyn 2<br>At Jewish Hospital | Diabetes | Oct 17 1946 6 weeks 1 session weekly | 20 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4<br>At Philadelphia Hospital | Diabetes Mellitus | Arranged 2-4 weeks 75 hours | 150 |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15, 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| **ELECTROCARDIOGRAPHY** | | | |
| University of Southern California School of Medicine 3001 University Ave Los Angeles<br>At Los Angeles County Hospital | Electrocardiography | Sept 1946, 12 weeks, once a week evenings | 50<br>Regis fee 5 |
| Michael Reese Hospital 29th Street and Ellis Ave Chicago 16 | Electrocardiography | Aug 19-31, 1946 2 weeks | 150 |
| Tufts Medical School, Postgraduate Division 30 Bennet St Boston 11 | Electrocardiography I<br>Electrocardiography II | Sept 23-27 1946 5 days<br>Jan 13-15, 1947 3 days | 40<br>25 |
| University of Michigan Medical School Department of Post graduate Education 1313 E Ann St Ann Arbor | Electrocardiographic Diagnosis | Nov 4-9 1946 1 week | Not stated |
| Wayne University College of Medicine, 1516 St Antoine St, Detroit 1<br>At Receiving Hospital | Electrocardiography | July Sept. 1946 1 hour per week | 10 |
| Long Island College of Medicine Medical Society of County of Kings and Academy of Medicine, 1313 Bedford Ave Brooklyn 2<br>At Beth El Hospital | Electrocardiography and Heart Sound Recording | Oct 15, 1946 8 sessions bi weekly | 20 |
| Long Island College of Medicine Medical Society of County of Kings and Academy of Medicine 1313 Bedford Ave Brooklyn 2<br>At Jewish Hospital | Electrocardiography and Clinical Cardiology | Oct 15, 1946 15 sessions | 20 |
| | Electrocardiography (clinical) | Oct 14 1946 15 sessions | 20 |
| Columbia University Faculty of Medicine 630 W 168th St New York 32<br>At Mount Sinai Hospital | Intensive course in Clinical Electrocardiography | Dec. 16-21 1946 1 week full time | 40 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 106th St New York | Electrocardiography | First week in Oct 1946 15 hours, part time | 100 |
| New York Polyclinic Medical School and Hospital 345 W 50th Street New York 19 | Electrocardiographic Interpretation | Arranged 2 weeks 2 hours daily | 75 |
| New York University College of Medicine 477 First Ave New York 16<br>At Beth Israel Hospital | Electrocardiography | Dec 1 1946 10 weeks 1 hour per week | 25 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia<br>At Philadelphia Hospital | Electrocardiography and Cardiac Roentgenology | Arranged 5 days, 30 hrs | 60 |
| University of Texas Medical Branch 912 Avenue B, Galveston | Electrocardiography | Oct thru Dec 1946 once weekly | Not stated |
| **ELECTROENCEPHALOGRAPHY** | | | |
| University of Illinois College of Medicine 1853 W Polk St Chicago | Electroencephalography | Arranged 3 weeks | 50 |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At Mount Sinai Hospital | Laboratory Training in Clinical Electroencephalography | Oct 24, 1946-Jan 2, 1947 2 months part time | 450 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4<br>At Graduate Hospital and Pennsylvania Institute | Electroencephalography | 1st Thursday of Oct 1946 6 Thursdays 36 hours | 150 |
| University of Texas Medical Branch, 912 Avenue B Galveston | Electroencephalography | Arranged | Not stated |
| **ENDOCRINOLOGY** | | | |
| University of Southern California School of Medicine 3001 University Ave Los Angeles<br>At Los Angeles County Hospital | Graduate Endocrinology Lectures | July 1946 and Jan 1947 12 weeks once a week evenings | Tuition 50<br>Regis fee 5 |
| Creighton University School of Medicine 306 N 14th St Omaha | Endocrinology | Arranged | None |
| Long Island College of Medicine Medical Society of County of Kings, Brooklyn 2<br>At Jewish Hospital | Female Sex Endocrinology | Oct 8 1946 10 sessions once a week | 20 |
| Columbia University Faculty of Medicine, 630 West 168th St New York 32<br>At Mount Sinai Hospital | Diseases of metabolism | Nov 13-20 1946 2 weeks part time | 20 |
| | Endocrinological diseases | Nov 25-30 1946 1 week part time | 20 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 106th St, New York | Endocrinology | Fall 1946 one month | 150 |
| University of Oregon Medical School Marquam Hill, Portland | Metabolism and Endocrinology | Nov 4-8 1946 5 days full time | 50 |
| **ENDOSCOPY** | | | |
| Harvard Medical School Courses for Graduates 25 Shattuck St Boston | Endoscopy | 1 month arranged monthly | 50 |
| Columbia University College of Physicians and Surgeons 630 W 168 St New York<br>At Columbia Presbyterian Medical Center | Gastroscopy | Oct. to June arranged 2 months part time | 250 |
| | Bronchoscopy | Oct 21 Nov 8, 1946 3 weeks part time | 250 |
| At New York Postgraduate Medical School | Cystoscopy and Endoscopy | Sept 30-Nov 1 1946 Jan 6-Feb 7 1947 15 sessions part time | 40 |
| At New York Eye and Ear Infirmary 218 2nd Ave, New York | Broncho-Esophagology on animals | 12 days intensive or 6 weeks, 2 days weekly arranged | 200 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories, Philadelphia 4<br>At Graduate Hospital & Presbyterian Hospital<br>At University of Pennsylvania Surgical and Anatomical Laboratories Affiliated Hospitals | Cystoscopy Chromouretero scopy and Pyclography | 6 weeks 36 hours, arranged | 300 |
| | Bronchoesophagology Gastroscopy and Laryngeal Surgery | 2 weeks 85 hours arranged | 250 |
| **FRACTURES** | | | |
| Long Island College of Medicine and Kings County Medical Society 1313 Bedford Ave Brooklyn N Y<br>At Kings County Hospital | Fractures | Oct 5 1946 10 sessions once weekly | 20 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 106th St New York | Fractures and Allied Trauma | Fall Term | 150 |
| **GASTROENTEROLOGY** | | | |
| American College of Physicians, 4200 Pine St, Philadelphia 4<br>At Chicago | Gastroenterology | Nov 11 16 1946 | Members 20<br>Non members 40<br>Physicians in service free |
| Wayne University College of Medicine 1516 St Antoine St Detroit 1<br>At Receiving Hospital | Gastro-enterology Clinic | July September 1946 3 months 1 hour weekly | 10 |
| Creighton University School of Medicine 306 N 14th St Omaha | Gastroenterology | Arranged | None |
| Long Island College of Medicine and Kings County Medical Society 1313 Bedford Ave Brooklyn N Y<br>At Beth El Hospital | Gastroenterology | Nov 7 1946 7 sessions part time | 20 |
| At Greenpoint Hospital | Gastroenterology | Oct 15 1946, 12 sessions twice weekly | 20 |
| At Jewish Hospital | Gastroenterology | Oct 8 1946 5 sessions twice weekly | 20 |

*Postgraduate Continuation Courses for Practicing Physicians—July 1 1946 to Jan 15 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| **GASTROENTEROLOGY—Continued** | | | |
| Columbia University College of Physicians and Surgeons 630 W 168 St New York<br>At Columbia Presbyterian Medical Center | Gastroscopy | Arranged part time | 250 |
| At Montefiore Hospital | Gastroenterology | Oct 1 1946 Jan 14 1947<br>15 weeks part time | 75 |
| At Mount Sinai Hospital | Gastrointestinal Diseases<br>Surgery of the Gastrointestinal Tract | Oct 7 Nov 19 1946<br>5 weeks part time<br>Oct 21 Nov 15 1946<br>full time | 75<br>150 |
| At New York Postgraduate Medical School | Gastroenterology | 10 days full time to be announced | 75 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 105th St New York | Gastroscopy<br>Gastroenterology | 1 month arranged<br>1 month fall | 100<br>100 |
| New York Polyclinic Medical School and Hospital, 341 W 50th St New York | Gastroenterology<br>Proctology and Gastro-enterology | 9 weeks Oct 1 1946 to Jan 2 1947<br>6 weeks Oct. 1 1946 to Jan 2 1947 | 90<br>100 |
| New York University College of Medicine 477 First Ave New York<br>At Bellevue Hospital | Clinical Gastroenterology | 5 months part time fall | 100 |
| At Beth Israel Hospital | Gastroenterology | 8 weeks fall 1946 | 55 |
| At Lenox Hill Hospital | Gastroenterology | 7 weeks fall 1946 | 50 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4<br>At Graduate Hospital | Clinical Gastroenterology | 16 weeks 500 hours arranged | 400 |
| American College of Physicians 4200 Pine St Philadelphia 4 | Gastroenterology | Nov 11 16 1946 | Members 20<br>Non members 40<br>Physicians in service free |
| **HEMATOLOGY** | | | |
| Tufts Medical School Postgraduate Division 30 Bennett St Boston | Hematology | Nov 20 29 1946<br>full time | 40 |
| Creighton University School of Medicine, 306 N 14th St Omaha | Hematology | Arranged | None |
| Long Island College of Medicine and Medical Society of Kings 1313 Bedford St Brooklyn<br>At Jewish Hospital | Clinical Hematology | 8 sessions Oct 17 1946 | 20 |
| Columbia University College of Physicians and Surgeons 630 W 168 St, New York<br>At Montefiore Hospital | Clinical Hematology | Sept 17 1946 to Jan 28 1947 | 75 |
| New York Medical College Flower and Fifth Ave Hospitals<br>At Mount Sinai Hospital | Hematology | Oct 21 Nov 16 1946 4 weeks part time | 50 |
| New York University College of Medicine 477 First Ave New York<br>At Lenox Hill | Hematology<br>Hematology | 2 months arranged<br>6 weeks 2 hours per week January 1947 | 50<br>25 |
| American College of Physicians 4200 Pine St Philadelphia 4<br>At Columbus Ohio | Hematology | 5 days Oct 21 26 1946 | Members 20<br>Non members 40<br>Physicians in service free |
| **INDUSTRIAL HEALTH** | | | |
| Wayne University College of Medicine 1516 St Antoine St Detroit 1 | Orientation Course in Occupational Health and Medicine | Sept 9 1946 15 weeks | Not stated |
| **LEGAL MEDICINE** | | | |
| New York University College of Medicine 477 First Ave New York<br>At Bellevue Hospital | Courses in Forensic Medicine | Oct 1946 through June 1947 | Variable |
| Duke University School of Medicine Durham N C | Legal Medicine | Arranged 3 months or longer full time | None |
| **MEDICINE GENERAL** | | | |
| California Medical Association Post Graduate Committee 450 Sutter St San Francisco 8<br>At Leading cities of California | Postgraduate Program | Throughout year | None |
| University of California Medical School Medical Center San Francisco 22<br>At Toland Hall University of California Hospital | Course in Internal Medicine | Sept 1946 12 weeks part time | 60 |
| University of Southern California Medical School Medical Center San Francisco 22<br>At Los Angeles County Hospital | Review of Internal Medicine | Every 3 months | Tuition 180<br>Regis fee 5 |
| | Clinical Review of Internal Medicine | Sept 1946 12 weeks full time | Tuition 250<br>Regis fee 5 |
| American College of Physicians 4200 Pine St Philadelphia 4<br>At Washington D C | Internal Medicine | Oct 28-Nov 2 1946 1 week | Members 20<br>Non members 40<br>Free to physicians in service |
| Emory University School of Medicine 50 Armstrong St Atlanta Ga<br>At Grady Memorial Hospital and Emory University Hospital | General Internal Medicine | Arranged | 12 weeks 125<br>Per week for less than quarter 12 |
| Cook County Graduate School of Medicine 427 S Honore St Chicago 12 | Internal Medicine | Sept 23 Oct 21 1946<br>2 weeks | 75 |
| University of Illinois College of Medicine 1853 W Polk St Chicago | General Medicine for Veterans | Arranged 3 months | Res of Ill 75<br>Non res 100 |
| | General Refresher Course | 1st of each month 3 months | Res of Ill 75<br>Non res 100 |
| State University of Iowa College of Medicine University Campus Iowa City<br>At State University of Iowa Hospitals | Informal Refresher Course | Arranged indefinite | None |
| University of Kansas School of Medicine Kansas City | Refresher (a) Therapeutics<br>(b) Physical Medicine | Nov 4 8 1946 (a)<br>Dec 9 13 1946 (b) 5 days | 20<br>No charge to ex or present military service physicians |
| Kentucky Medical Association 620 S Third St Louisville<br>At Louisville General Hospital | Refresher Course in Internal Medicine | Continuously 6 weeks | None |
| Maine Medical Association 142 High St Portland<br>At Boston | Medicine and Surgery | Arranged 12 weeks | Arranged |
| University of Maryland School of Medicine Lombard and Greene Sts Baltimore | 8 week Review Course | Oct 10 1946 8 weeks | 100 |
| Harvard Medical School 25 Shattuck St Boston | Review Course for Medical Officers in Medicine and Surgery | Aug 15 1946 6 months | G I Bill of Rights |
| Massachusetts Medical Society and Massachusetts Department of Public Health 8 The Fenway Boston<br>At Boston and local districts | Postgraduate Medical Education | Fall 1946 all year | None |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15, 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| | **MEDICINE GENERAL—Continued** | | |
| Tufts Medical School, Postgraduate Division, 30 Bennet St Boston<br>At Affiliated Hospitals | Internal Medicine | Arranged 1 month | 50 |
| | Internal Medicine | Oct 7 Nov 2 1946 Jan 6-Feb 1 1947 1 month full time | 100 |
| | General Refresher | Oct 7 Dec. 28 1946 Jan 6-March 29 1947, 3 months full time | 300 |
| | Clinical Medicine | Sept 3 28, Dec 2 28 1946 1 or 2 months | 75 |
| Wayne University College of Medicine, 1016 St Antoine St Detroit 1<br>At Receiving Hospital | Medical Pathological Conference | July Sept 1946, 1 quarter | 10 |
| | Hematology Clinic Therapeutic Conference | July Sept 1946 | 10 |
| Wayne University College of Medicine 1516 St Antoine St Detroit 1<br>At Wayne County General Hospital | Diagnostic Conference | July Sept 1946 | 10 |
| | Seminar in Internal Medicine | July Sept. 1946, part me | 10 |
| Washington University School of Medicine Kings Highway and Euclid Ave St Louis | Courses for General Practitioners | Arranged | G I Bill of Rights and arranged |
| Creighton University School of Medicine, 306 N 14th St Omaha | Clinical Basic Science Conference | Arranged | None |
| | Special Courses | Arranged | None |
| | Preceptorship | Arranged | None |
| | General Medicine | Arranged | None |
| Rutgers University New Brunswick, N J<br>At Cooper Hospital Camden N J | Postgraduate Medical Rutgers Plan | July 1, 1946 3 years, 48 weeks per year | Per quarter 24 |
| University of Buffalo School of Medicine, 24 High St Buffalo | For General Practitioners | Sept 16-28, 1946 2 weeks | 60 |
| Cornell University Medical College 1300 York Ave, New York<br>At Bellevue Hospital | Graduate Course in Internal Medicine | First of each month, 6 months | 6 months 250<br>2 weeks 50 |
| Cornell University Medical College<br>At Bellevue Hospital | Refresher Course in Internal Medicine | Oct 1 15 1946, 2 weeks | Veterans 50 |
| Columbia University Faculty of Medicine 630 West 168th St., New York 32<br>At Montefiore Hospital | Peripheral Vascular Diseases | Sept 27 1946-Feb 7, 1947 19 weeks, part time | 75 |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At Mount Sinai Hospital | Diseases of the Liver | Oct 7 24 1946 3 weeks part time | 20 |
| | Diseases of the Kidneys | Oct 21 30, 1946 1 week, part time | 10 |
| | Geriatrics | Oct 1 Nov 21 1946, 8 weeks part time | 50 |
| | Peripheral Vascular Diseases | Oct 22 1946 to Jan 21, 1947, 4 months, part time | 80 |
| | Symposium on Internal Medicine | Oct 7 Nov 30 1946 8 weeks full time | 200 |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At New York Postgraduate Medical School 303 E 20th St New York 3 | Seminar in Internal Medicine | Jan 2 Feb 28 1947 2 months, full time | 2 months 225 |
| | Combined Course in Internal Medicine | Sept 23-Dec. 13 1946 12 weeks full time | 350 |
| Long Island College of Medicine 1313 Bedford Ave Brooklyn<br>At Greenpoint Hospital | *Sterility | Oct 8, 1946 12 sessions | 20 |
| Long Island College of Medicine 1313 Bedford Ave Brooklyn 2<br>At Israel Zion Hospital | Pathology of Internal Medicine (Gynecological Pathology) | Oct 16 1946 12 sessions once weekly | 60 |
| | Peripheral Vascular Diseases | Oct 11 1946 8 sessions once weekly | 20 |
| Long Island College of Medicine 1313 Bedford Ave, Brooklyn 2<br>At Jewish Hospital | Peripheral Vascular Diseases | Oct 14 1946, 8 sessions once weekly | 20 |
| | Hypertension and Nephritis | Oct 16, 1946 8 sessions, once weekly | 20 |
| At Jewish Sanitarium and Hospital for Chronic Diseases | Internal Medicine and Allied Specialties | Oct 7 1946, 2 months, 4 times weekly | 50 |
| New York Academy of Medicine 2 E 103rd St, New York 29 | Tumors | Oct 7 18 1946 2 weeks | Regis fee 5 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 105th St New York | Peripheral Vascular Disease | Fall 1946 2 weeks | 2.0 |
| | Histogenesis | Arranged 20 weeks, half time | 1.0 |
| | Peritoneoscopy | Arranged | 100 |
| | Diseases of the Respiratory System | Arranged | 150 |
| | Internal Medicine | First Monday of every month except July and Aug 1 month | 25 |
| | Physical Diagnosis | Arranged 1 month | 100 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | Course for General Practitioners | Arranged, 3 months | 200<br>Half fee to Physicians in service |
| | Course for General Practitioners | Arranged 6 weeks | 100<br>Half fee to Physicians in service |
| New York University College of Medicine 477 First Ave. New York 16<br>At Bellevue Hospital | General Review for General Practitioners | Throughout year from Oct to June daily, full time | Civilians 225<br>Veterans 175 |
| | Internal Medicine | First of each month Oct 1946-May 1947, 12 weeks | Civilians 150<br>Veterans 125 |
| Syracuse University College of Medicine 766 Irving Ave Syracuse | Refresher in General Medicine | Arranged | Not stated |
| University of North Carolina School of Medicine Chapel Hill | University Postgraduate Course in Clinical Medicine | Fall 1946 1 day a week for 8 weeks | Not stated |
| Duke University School of Medicine Durham N C. | Medicine | Arranged 3 months or longer, full time | None |
| | General Medicine | Arranged 1 or 2 weeks or longer, full time | None |
| American College of Physicians, 4200 Pine St Philadelphia 4<br>At Cincinnati, Ohio | Metabolism and Nutrition | Oct 14 19 1946 1 week | Members 20<br>Non members 40<br>Free to physicians in service |
| Interstate Postgraduate Medical Association, Madison, Wis<br>At Cleveland, Ohio | Interstate Postgraduate Assembly | Oct. 15-18, 1946 | Regis fee |
| American College of Physicians 4200 Pine St Philadelphia 4<br>At Gallinger Municipal Hospital | Postgraduate Course in Internal Medicine | Oct 28-Nov 9 1946, 2 weeks | Members 20<br>Non members 40<br>Physicians in service free |
| University of Cincinnati College of Medicine Eden and Bethesda Aves Cincinnati | Medicine and Pediatrics | Continuously 3 to 4 months | Not stated |
| | Refresher Course in Medicine (Pediatrics Surgery, and Obstetrics) | July 15-Sept 15 1946 (tentative), 2 months | Not stated |
| American College of Physicians 4200 Pine St Philadelphia 4<br>At Cleveland, Ohio | Internal Medicine | Nov 18-23 1946 | Members 20<br>Non members 40<br>Free to physicians in service |

*Postgraduate Continuation Courses for Practicing Physicians—July 1 1946 to Jan 15 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| **MEDICINE GENERAL—Continued** | | | |
| University of Oregon Medical School and Hospital Marquam Hill Portland 1 | Diagnosis and Treatment of Malignant Growths | Sept 9 12 1946 4 days full time | Not stated |
| | General Informal Review | Arranged | Per month 75 |
| At University of Oregon Medical School Hospital and Clinics | General Refresher Course | July 1 and Sept 30 1946 12 weeks | Per month 75 |
| Mount Sinai Hospital Philadelphia | Refresher Course | July 1 1946 3 months repeated in 3 months | None |
| University of Pennsylvania School of Medicine Thirty Sixth and Pine Sts Philadelphia | Internal Medicine (Basic Studies) | Oct June annually 8 months | Not stated |
| | Refresher Course for Veteran Medical Officers | Sept 23 Dec 21 1946 12 weeks | 175 Plus library deposit 10 |
| | Twelve week Refresher Course | Arranged 12 weeks | 175 |
| American College of Physicians 4200 Pine St Philadelphia 4 At Pittsburgh | Internal Medicine | Sept 16-21 1946 1 week | Members 20 Non members 40 Free to physicians in service |
| University of Pittsburgh School of Medicine Bigelow Blvd Pittsburgh At Medical Center | Refresher Course for General Practitioners | Oct 1 1946 repeated as required 5 weeks | 100 |
| Medical College of the State of South Carolina 16 Lucas St., Charleston | Post Graduate Seminar | Nov 5-7 1946 3 days | 15 |
| Meharry Medical College Nashville Tenn | Medicine | Arranged 3 months | per quarter 12 |
| Vanderbilt University School of Medicine Twenty First Ave at Edgehill Nashville Tenn | Medicine | Oct 1946 1 to 3 months | 3 months 166 66 |
| University of Texas Medical Branch 912 Avenue B Galveston | General Internal Medicine | To be announced 1 week | Not stated |
| University of Vermont College of Medicine Pearl St College Park Burlington | General Practice Internal Medicine Surgery | Beginning of any month 1 to 9 months | Per year or pro rated 500 |
| | Course for General Practice | Arranged 12 weeks part time | Not stated |
| | Course in Internal Medicine | Arranged, minimum 4 weeks part time | Not stated |
| Medical Society of Virginia 122 E Clay St Richmond At Medical College of Virginia Hospital | Fourth Refresher Course in General Medicine | Sept 2 14 1946 2 weeks | 40 |
| Washington State Medical Association 1215 Fourth Ave Seattle At King County Hospital | Internal Medicine | July 15-Aug 10 1946 1 month | None |
| University of Wisconsin Medical School 418 North Randall Ave Madison 6 | Refresher Course for General Practitioners | Arranged 12 weeks | 125 |
| | Course for Specialists in Internal Medicine | Arranged 2 to 6 months | Per month 100 |
| At Wisconsin General Hospital | Observation Course in Medical and Clinical Subjects | Arranged 1 to 5 months | Per month 100 |
| American College of Physicians 4200 Pine St Philadelphia 4 At Montreal Canada | Internal Medicine | Nov 25-30 1946 1 week | Members 20 Non members 40 Free to physicians in service |
| **NEUROLOGY AND PSYCHIATRY** | | | |
| University of California Extension Division San Francisco At Langley Porter Clinic | Refresher Course in Psychiatry and Neurology | Sept 16 1946 12 weeks | 200 |
| Catholic University of America Washington D C At St Elizabeths Hospital | Psychiatric Conferences | Sept 1946 1 semester | 10 |
| | Psychosomatic Medicine | Sept 1946 to Feb 1947 1 semester | 10 |
| | Individual Psychotherapy | Sept 24 1946 2 semesters | Not stated |
| | Group Psychotherapy | | |
| University of Maryland School of Medicine and College of Physicians and Surgeons Lombard and Greene Sts Baltimore | General Pathology and Neuropathology | Arranged | Not stated |
| Metropolitan State Hospital 475 Trapelo Rd Waltham Mass | Psychiatry | Jan March 1947 3 months | Not stated |
| | 12th Post Graduate Seminar in Neurology and Psychiatry | Oct 1 Dec 10 1946 | Not stated |
| Wayne University College of Medicine 1516 St Antoine St Detroit 1 At Wayne County General Hospital | Neurology and Psychiatry | Arranged 3 hours weekly | 30 |
| Creighton University School of Medicine 306 N 14th St Omaha | A Psychosomatic Case Conference | Arranged | None |
| | Psychiatry and Psychoanalysis | Sept 13 1946 10 weeks | 1? 50 |
| American Institute for Psychoanalysis 256 West End Ave New York | Readings in Psychoanalysis Pt II | Sept 9 1946 every other week 15 sessions 30 weeks | 20 |
| | Clinical Conferences | Nov 21 1946-Feb 6 1947 | 12 50 |
| At New School for Social Research 66 W 12th St New York | Introduction to the Rorschach Method of Personality Diagnosis | Oct 2, 1946 | 17.50 |
| | Seminar on Personal Case Histories | Oct 3 1946 15 weeks | 25 |
| | Neuroses and Psychoses | Sept 27 1946 15 weeks | 15 |
| At American Institute for Psychoanalysis 130 E 63rd St New York | Continuous Case Seminar | Sept 10 1946 10 weeks | 12 50 |
| Long Island College of Medicine Medical Society of County of Kings 1313 Bedford Ave Brooklyn 2 At Jewish Hospital | Child Psychiatry | Oct 17 1946 12 sessions once weekly | 20 |
| Columbia University Faculty of Medicine 630 West 168th St New York 32 | Neurology and Psychiatry | 1st day of any month 2 to 6 months | per month 55 |
| At Columbia Presbyterian Medical Center | Symposium on Neurology and Psychiatry | Oct 7 Dec 13 1946 10 weeks full time | 250 |
| At Montefiore Hospital | Neuropsychiatry | Nov 13-Dec 14 1946 4 weeks part time | 75 |
| At Mount Sinai Hospital | Advances Applied Neuroanatomy and Neuropathology | Oct 28 1946-Apr 14 1947 5 months part time | 75 |
| | Applied Neuroanatomy and Neuropathology | Oct 7 1946-Apr 28 1947 7 months part time | 125 |
| | Recent Advances in Neurology and Psychiatry | Dec 2-6 1946 4 days full time | 40 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 106th St New York | Neurology | Oct 1946 one month full time | 200 |
| New York University College of Medicine 477 First Ave New York 16 At Bellevue Hospital Psychiatric Division At Lenox Hill Hospital | Full Time Refresher Course in Neurology and Psychiatry | Sept 1? 1946 8 weeks | 250 |
| Duke University School of Medicine Durham N C | Neurology | Fall 1946 6 weeks part time | 75 |
| | Neurosurgery | Arranged 3 months or longer full time | None |
| | Neuropsychiatry | Arranged 3 months or longer full time | None |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15, 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| **NEUROLOGY AND PSYCHIATRY—Continued** | | | |
| American College of Physicians, 4200 Pine St, Philadelphia 4<br>At Portland Ore | Clinical Neurology and Internal Medicine | Oct 7-12, 1946 1 week | Members 20<br>Non members 40<br>Free to physicians in service |
| At Philadelphia | Clinical Neurology and Internal Medicine | Oct 7-12, 1946 1 week | Members 20<br>Non members 40<br>Free to physicians in service |
| Philadelphia Psychoanalytic Institute, 206 S 13th St, Philadelphia 7<br>At Bellevue Stratford Hotel | Orientation Course on Normal Behavior | Sept 24 1946-June 3 1947, 10 sessions 1½ hours each | 10 |
| | Psychopathology and Childhood | Oct 15 1946 to May 13, 1947, 12 sessions part time | 12 |
| | The Emotional Development of the Child | Oct 1 1946-May 27 1947, 10 sessions, part time | 10 |
| | Character Formation in Childhood and its Disorders | Oct 8 1946-April 8 1947 5 sessions, part time | 5 |
| At Philadelphia—Places arranged | Professional School Courses (on theory therapeutic applications and practice of psychoanalysis) | Sept 4, 1946 varies | For all courses 180 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4 | Neurology Psychiatry (Basic Studies) | Oct 1946-June 1947, 8 months | Not stated |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4<br>At Psychopathic Department Philadelphia Hospital<br>At Affiliated Institutions | Clinical Psychiatry | Arranged, 8 weeks 240 hours | 100 |
| | Clinicobiologic Neurology and Psychiatry * | Arranged 10 weeks 250 hours | 100 |
| Meharry Medical College Eighteenth Ave N and Hefferman St, Nashville | Short courses | Arranged 1-2 weeks | 1 week 20<br>2 weeks 35 |
| University of Texas Medical Branch Galveston | Technical Procedures of the Neurological Examination | Arranged | Not stated |
| University of Wisconsin Medical School 418 North Randall St Madison 6 | Course in Neuro-Psychiatry for Specialists * | Arranged 2-6 months | per month 100 |
| **NEUROSURGERY** | | | |
| University of Wisconsin Medical School 418 North Randall St Madison 6 | Neurosurgery for Specialists * | Arranged 2-6 months | per month 100 |
| **NUTRITION** | | | |
| Creighton University School of Medicine 306 N 14th St, Omaha | Five Lectures on Nutrition Fundamentals | Arranged | None |
| University of North Carolina School of Medicine Chapel Hill | Nutrition | Arranged | 25 |
| Duke University School of Medicine Durham N C | Nutrition | Arranged 8 months or longer, full time | None |
| **OBSTETRICS AND GYNECOLOGY** | | | |
| Chicago Maternity Center 1336 S Newberry Ave Chicago | Assistant Residency in Obstetrics | Continuously 4-6 months | None |
| Cook County Graduate School of Medicine 427 S Honore St Chicago 12 | Personal Course in Gynecological Surgery | July 11, Aug 29 Oct 10 Nov 21, 1946, 4 weeks once weekly | 60 |
| | Practical and Didactic Course in Office Gynecology | July 10 Aug 28 Oct 9, Nov 20 1946, 4 weeks every Wednesday | 60 |
| University of Maryland School of Medicine Lombard and Greene Sts Baltimore | Review of Obstetrics and Gynecology | Sept 15-Dec 15 1946 12 weeks | 150 |
| | Review of Gynecology Oncology and Female Urology | Arranged 10 weeks | 125 |
| Harvard Medical School Courses for Graduates 25 Shattuck St Boston 15 | Gynecology | July 31, 1946 1 month | 75 |
| Tufts Medical School Postgraduate Division 30 Bennet St Boston 11<br>At Affiliated Hospitals | Obstetrics and Pediatrics | Arranged 1 month | 100 |
| Creighton University School of Medicine 306 N 14th St Omaha | Obstetrics and Gynecology | Arranged | None |
| Long Island College of Medicine Medical Society of County of Kings 1313 Bedford Ave Brooklyn 2<br>At Cumberland Hospital | Complications of Pregnancy | Oct 1 1946, 8 sessions, twice weekly | 20 |
| At Long Island College Hospital | Prenatal Care | Oct 24 1946 8 sessions once weekly | 20 |
| At Long Island College of Medicine | Manikin | Oct 22 1946, 12 sessions once weekly | 20 |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At Margaret Hague Maternity Hospital | One month's course in Practical Obstetrics | First of every month | 100 |
| | Observation Course in Obstetrics | First of every month full time | 100 |
| | Obstetrics Internship Training | First of every month 3 months full time | 350 |
| Columbia University Faculty of Medicine, 630 West 168th St. New York 32<br>At Mount Sinai Hospital | Obstetrics and Gynecology | First of any month per month 2-6 months | 55 |
| | Recent Advances in Gynecology | Dec 9-14 1946, 6 days full time | 40 |
| Columbia University—At New York Post Graduate Medical School 303 E 20th St New York 3 | Gynecological Endocrinology | Oct 1 Nov 26 1946 Jan 2 March 1 1947, 24 sessions part time | 100 |
| | Gynecology Diagnosis and Office Treatment | Sept 30-Nov 1 1946 Jan 6-Feb 7 1947 15 sessions part time | 60 |
| | Gynecology Diagnosis and Office Treatment | Dec 2-23 Dec 3-24 1946 Dec 3 1946-Jan 2 1947, 10 sessions | 40 |
| | Seminar in Gynecology | Oct 1 Nov 30 1946, Jan 2 Feb 28 1947 2 months full time | 225 |
| | Surgical Anatomy as Applied to Operative Gynecology (cadaver) | Oct 1-26 Oct 29-Nov 26 Dec 3-28 1946 Jan 7 Feb 1 1947 12 sessions part time | 200 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | Combined Obstetrics and Gynecology | Oct 1 1946 2 months, full time | 250 |
| | Clinical and Operative (cadaver) Gynecology | Arranged, 6 weeks | 175 |
| New York University College of Medicine 477 First Ave New York 16<br>At Lenox Hill Hospital | Histopathology for Gynecologists | Fall 1946 5 weeks part time | 50 |
| Duke University School of Medicine Durham N C | Obstetrics and Gynecology | Arranged 3 months or longer full time | None |
| University of Oregon Medical School Marquam Hill Portland 1 | Gynecology | Oct 14-18, 1946 5 days full time | 50 |
| Hahnemann Medical College of Philadelphia 235 N 15th St Philadelphia | Obstetrics | Arranged 2 months | Not stated |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| **OBSTETRICS AND GYNECOLOGY—Continued** | | | |
| University of Pennsylvania 237 Medical Laboratories Philadelphia 4 | Gynecology, Obstetrics (Basic Studies) | Oct, 1946-June 1947 annually 8 months | Not stated |
| University of Tennessee College of Medicine 874 Union Ave Memphis | Graduate Medical Course in Caudal Analgesia | Dec 30, 1946 2 weeks | 100 |
| Meharry Medical College, Eighteenth Ave N and Hefferman St Nashville Tenn | Gynecology Obstetrics | Arranged 3 months each subject | per 12, quarter |
| University of Texas Medical Branch 912 Avenue B Galveston | Obstetrics and Gynecology | Arranged 1 week | Not stated |
| University of Wisconsin Medical School 418 North Randall St Madison 6 | Obstetrics and Gynecology for Specialists * | Arranged 2-6 months | per month 100 |
| **OPHTHALMOLOGY** | | | |
| Ophthalmological Study Council 520 Commonwealth Ave Boston 15<br>At St Petersburg Fla | Basic Subjects of Ophthalmology * | Nov 4 Dec 21 1946 (lectures)<br>Dec 21 31 1946 (laboratory) | lectures 250<br>Add lab 50 |
| The Children s Memorial Hospital, 707 Fullerton Ave Chicago | Postgraduate Conference in Neuromuscular Anomalies of the Eyes * | Nov 3-8 1946 6 days | 50 |
| Cook County Graduate School of Medicine 427 S Honore St Chicago 12 | Clinical Ophthalmology | Every 2 weeks 2 weeks | 50 |
| Tufts Medical School Postgraduate Division 30 Bennet St Boston 11<br>At Affiliated Hospitals | Ophthalmoscopy | Nov 4-30 1946 1 month part time | 50 |
| | Ophthalmology | Monthly 3 mornings a week | 50 |
| Louisiana State University School of Medicine 1430 Tulane Ave New Orleans | Physiological Optics * | Sept 1946, 1 month | 100 |
| American Academy of Ophthalmology and Otolaryngology 100 First Ave Bldg Rochester Minn | Home Study—Correspondence Course in Ophthalmology Otolaryngology | Sept, 1946-June 1947 9 months | 10 |
| Creighton University School of Medicine 306 N 14th St Omaha | Ophthalmology | Arranged | None |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At Montefiore Hospital | Elementary Ophthalmoscopy | Jan 6-March 3 1947 8 weeks part time | 30 |
| | Extra-ocular Muscles | Oct 10-Dec 5 1946 8 weeks part time | 15 |
| | Histopathology of the Eye | Oct 7 Dec 23, 1946 11 weeks part time | 35 |
| | Physiological Optics | Oct 8-Dec. 10 1946 9 weeks part time | 30 |
| | Embryology of the Eye | Oct 9-Nov 27 1946 7 weeks, part time | 25 |
| | External Diseases of the Eye | Oct 10 1946-Jan 2 1947 7 weeks part time | 30 |
| At Mount Sinai Hospital | Ophthalmoscopy (Elementary) | Oct 7 Dec 23, 1946 11 weeks part time | 30 |
| | Slit Lamp Microscopy of the Living Eye * | Oct 9 Nov 27 1946 7 weeks part time | 20 |
| | Ophthalmic Surgery | Oct 9 1946-Jan 8 1947, 13 weeks part time | 70 |
| | Refraction * | Oct 10 1946-Jan 2 1947 12 weeks part time | 35 |
| | Histopathology of the Eye * | Oct 22 Nov 29 1946 6 weeks part time | 40 |
| At New York Eye and Ear Infirmary 218 Second Ave New York 3 | Neuro Ophthalmology | Arranged 1 month part time | 60 |
| | Perimetry * | Arranged 1 month, part time | 40 |
| | Ocular Muscles * | Arranged 1 month, part time | 60 |
| | Operative Eye Surgery * | Arranged 1 month part time | 100 |
| | Ophthalmoscopy * | Arranged, 1 month 3 days a week part time | 40 |
| | X Ray * | Arranged 6 hours part time | 25 |
| | Bacteriology Serology and Immunology * | Arranged 1 month part time | 40 |
| | Embryology * | Arranged 1 month part time | 40 |
| | Anatomy of the Temporal Bone * | Arranged 1 month part time | 40 |
| | Anatomy and Physiology * | Arranged 1 month, part time | 40 |
| | Glaucoma Clinic * | Arranged 10 hours part time | 40 |
| | Slit Lamp Microscopy * | Arranged 1 month part time | 50 |
| | Refraction * | Arranged 3 months 3 nights weekly part time | 100 |
| | Plastic Eye Surgery (Operating Room) | Arranged 6 weeks 2 days weekly, part time | 75 |
| | Physiologic Optics * | Arranged 2 months part time | 75 |
| | External Eye Diseases—Ocular Therapy * | Arranged 1 month part time | 40 |
| Columbia University—At New York Post-Graduate Medical School 303 E 20th St New York 3 | Ophthalmic Neurology * | Nov 11 15 1946 5 days part time | 45 |
| | Differential Diagnosis with the Slit Lamp * | Nov 11 15, 1946 5 days part time | 45 |
| | Surgery of the Eye * | Nov 4 9 1946 6 days full time | 75 |
| | Anomalies of Ocular Muscles * | Oct 28-Nov 1 1946, full time | 60 |
| | Motor Anomalies of the Eye * | Oct 28 Nov 1 1946 full time | 60 |
| New York Polyclinic Medical School and Hospital 345 W 50th St, New York 19 | Ophthalmology clinical and operative (cadaver) and refraction | Oct 1 1946 Jan 2 1947, 3 months | 275 |
| | Ophthalmology | Oct 1 1946 Jan 2 1947 6 weeks | 50 |
| | Refraction | Arranged 6 weeks part time | 100 |
| Duke University School of Medicine Durham N C | Ophthalmology | Arranged 3 months or longer full time | None |
| University of Pennsylvania 237 Medical Laboratories, Philadelphia 4 | Ophthalmology (Basic Studies) | Oct 1946-June 1947 8 months | Not stated |
| | Ophthalmic Histology and Pathology | Arranged 8 weeks 96 hours | 200 |
| University of Virginia Department of Medicine Charlottesville | Postgraduate Course in Ophthalmology and Otolaryngology | Dec 10-13 1946 4 days | 30 |
| **ORTHOPEDIC SURGERY** | | | |
| State University of Iowa College of Medicine University Campus, Iowa City | Orthopedic Surgery | Sept 1946-June 1947 10 months | 300 |
| Columbia University—At New York Post-Graduate Medical School 303 E 20th St New York 3. | Functional Anatomy in Relation to Orthopedics | Oct 14 Nov 15, 1946 10 sessions part time | 60 |
| | Orthopedics in General Practice | Nov 18-23, 1946 6 days full time | 50 |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15, 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| **ORTHOPEDIC SURGERY—Continued** | | | |
| Duke University School of Medicine Durham N C | Orthopedic Surgery | Arranged, 3 months or longer, full time | None |
| University of Pennsylvania 237 Medical Laboratories Philadelphia 4 | Orthopedics (Basic Studies) | Oct ,1946-June, 1947 8 months annually | Not stated |
| **OTOLARYNGOLOGY** | | | |
| University of Southern California School of Medicine 3551 University Ave Los Angeles<br>At Los Angeles County Hospital | Otolaryngology | Sept 1946 12 weeks full time | Tuition 250<br>Regis fee 5 |
| Cook County Graduate School of Medicine 427 S Honore St Chicago 12 | Clinical Otolaryngology | Every 2 weeks 2 weeks | 50 |
| University of Illinois College of Medicine 1853 W Polk St. Chicago | Bronchoesophagology | Arranged 2 weeks | 100 |
| | Basic Otolaryngology | Sept 30, 1946, 8 months | 450+ |
| | Otolaryngology Refresher * | Arranged 1 2 weeks | Lab 300<br>per week 50 |
| Tufts Medical School Postgraduate Division 30 Bennet St, Boston 11<br>At Affiliated Hospitals | Otolaryngology | Monthly, mornings | 50 |
| Creighton University School of Medicine 306 N 14th St. Omaha | Otolaryngology | Arranged | None |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At New York Post Graduate Medical School, 303 E 20th St., New York 3 | Otolaryngology | First day of any month, 2-6 months | per month 55 |
| | Symposium on Otolaryngology * | Oct 14 25 1946 2 weeks, full time | 90 |
| New York Medical College Flower and Fifth Avenue Hospitals, 1 East 105th St New York | Otolaryngologic Procedures | Nov, 1946 1 month, part time | 100 |
| | Otolaryngology Clinical | Oct. 1 1946-Jan 2 1947 6 weeks | 75 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | Otolaryngology and Ophthalmology (Clinical) | Oct 1, 1946-Jan 2, 1947 | 100 |
| Duke University School of Medicine Durham N C | Otolaryngology | Arranged, 3 months or longer | None |
| University of Pennsylvania, 237 Medical Laboratories Philadelphia 4 | Otolaryngology Basic Studies | Oct 1946-June 1947, annually | Not stated |
| **OTOLOGY** | | | |
| Columbia University Faculty of Medicine 630 West 168th St, New York 32<br>At New York Eye and Ear Infirmary | Operative Ear Surgery (cadaver)* | Arranged 1 month, 2 or 3 afternoons a week | 110 |
| | Clinical Otology * | Arranged 1 month 3 afternoons a week, part time | 40 |
| New York Polyclinic Medical School and Hospital 345 W 50th St., New York 19 | Advanced Otology | Arranged | 250 |
| **OTORHINOLARYNGOLOGY** | | | |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At New York Eye and Ear Infirmary | Sinuses | Arranged 1 month | 100 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | Head and Neck Dissection | Arranged 6 weeks | 150 |
| | Combined Eye Ear Nose and Throat Course | Oct. 1 1946-Jan 2 1947, 3 months | 600 |
| New York University College of Medicine, 477 First Ave, New York 16<br>At St Vincent s Hospital | The Larynx | Fall 1946, 16 weeks Tuesday and Friday, part time | Civilian 200<br>Veteran 150 |
| **PATHOLOGY** | | | |
| Washington University School of Medicine Kingshighway and Euclid Ave St Louis | Graduate Course in Pathology | July 1 or Oct 1 1946 36 weeks | 600 |
| Creighton University School of Medicine 306 N 14th St, Omaha | Microscopical Pathology | Arranged 2 weeks | None |
| | Clinical Pathological Conference | Arranged | None |
| | Senior Pathological Conference | Arranged | None |
| | Senior Clinicopathologic Conference | Arranged | None |
| At St Josephs Hospital | Surgical Pathology | Arranged 1 or 2 weeks | None |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At Mount Sinai Hospital | General and Special Pathology | Oct 19 1946-Jan 25, 1947 14 weeks part time | 45 |
| Columbia University—At New York Post Graduate Medical School, 303 E 20th St New York 3 | Gross and Microscopic Pathology | Sept 16-Oct 25, 1946 6 weeks part time | 75 |
| | Surgical Pathology | Sept 17 Dec. 26 1946 15 weeks, part time | 150 |
| | Pathology of the Blood and Blood Forming Organs * | Nov 4-29 1946, 4 weeks part time | 75 |
| | Gynecological Pathology * | Sept 25 1946-Jan 15 1947 16 sessions, part time | 100 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 105th St, New York | Pathology | Arranged 16 weeks part time | 200 |
| | Clinical Pathology | Arranged 26 hours part time | 25 |
| New York Polyclinic Medical School and Hospital 345 W 50th St. New York 19 | Pathology and Bacteriology | Arranged | Arranged |
| New York University College of Medicine 477 First Ave, New York 16<br>At Lenox Hill Hospital | Pathology for Surgeons | Fall 1946 Winter 1947, 5 weeks, Monday and Thursday evenings | 50 |
| University of North Carolina School of Medicine Chapel Hill | Pathology | Arranged | 25 |
| Duke University School of Medicine, Durham N C | Pathology | Arranged 3 months or longer full time | None |
| | Gross and Microscopic Conferences on Surgical Pathology | Arranged 3 months or longer full time | None |
| | Systematic Review of General and Surgical Pathology | Arranged 3 months or longer, full time | None |
| | Staff Appointments in Pathology | Arranged 3 months or longer full time | None |
| | Pathological Research | Arranged 3 months or longer, full time | None |
| University of Texas Medical Branch, 912 Avenue B Galveston | Surgical Pathology | Arranged | Not stated |
| **PEDIATRICS** | | | |
| Children s Memorial Hospital 707 Fullerton Ave Chicago | Postgraduate Course in Pediatrics | Sept. 30-Oct. 26 1946 | 100 |
| Cook County Graduate School of Medicine 427 S Honore St Chicago 12 | Clinical Course in Pediatrics | Every 2 weeks, 2 weeks or 1 month | 2 weeks 60<br>1 month 100 |
| University of Minnesota Medical School Minneapolis<br>At Center for Continuation Study | Diseases of Children | Fall 1946 6 weeks | Arranged |
| Creighton University School of Medicine 306 N 14th St Omaha<br>At Affiliated Institutions | Pediatrics | Arranged | None |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15, 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| | **PEDIATRICS—Continued** | | |
| Long Island College of Medicine Medical Society of County of Kings 1313 Bedford Ave, Brooklyn 2<br>At Beth El Hospital<br>At Kings County Hospital | Clinical Pediatrics | Oct 7 1946 10 sessions twice weekly | 20 |
| | Heart Disease in Childhood | Oct. 12 1946 10 sessions once a week | 20 |
| Columbia University Faculty of Medicine 630 West 168th St., New York 32<br>At Mount Sinai Hospital | Pediatrics | First of any month 2-6 months | per month 55 |
| | Clinical Pediatrics | Oct 8-Dec. 19 1946 10 weeks part time | 65 |
| Columbia University—At New York Post Graduate Medical School 303 E 20th St. New York 3 | Allergy for Pediatricians * | Oct. 7 11 1946 5 days full time | 45 |
| | Cardiology for Pediatricians * | Nov 1946 5 days full time | 45 |
| | Symposium on Recent Advances in Pediatrics | Nov 18-23 1946 6 days | 50 |
| | Clinical Pediatrics | Oct 7 Nov 2 1946 4 weeks full time | 125 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 105th St New York | Clinical Pediatrics | Arranged 1 month | 150 |
| | Pediatrics | Arranged 6 months | 300 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | Pediatrics | Arranged 4 weeks part time | Not stated |
| New York University College of Medicine 477 First Ave New York 16<br>At Beth Israel Hospital | General Pediatrics Including Diseases of Newborn | Fall 1946 12 weeks Tuesday and Friday part time | Civilian 100<br>Veterans 75 |
| New York University College of Medicine 477 First Ave New York 16<br>At Lenox Hill Hospital | Pediatrics | Fall Winter 1946 8 weeks Tuesday and Friday part time | 50 |
| Duke University School of Medicine Durham N C | Pediatrics | Arranged 3 months or longer full time | None |
| Southern Pediatric Seminar Saluda N C | Southern Pediatric Seminar | July 15-27 1946 | Not stated |
| University of Pennsylvania 237 Medical Laboratories Philadelphia 4 | Pediatrics (Basic Studies) | Oct. 1946-June 1947 8 months annually | Not stated |
| Meharry Medical College Eighteenth Ave. N and Heffernan St Nashville Tenn | Pediatrics | Arranged 3 months | per quarter 125 |
| University of Texas Medical Branch, 1912 Ave B Galveston | Pediatrics | Oct 23-Nov 2 1946 | 25 |
| Washington State Medical Association 1215 Fourth Ave Seattle<br>At Children s Orthopedic Hospital | Refresher Course in Pediatrics | Every month 4 weeks | 15 |
| University of Wisconsin Medical School 418 N Randall St., Madison 6 | Course in Pediatrics for Specialists * | Arranged 2-6 months | per month 100 |
| | **PHARMACOLOGY** | | |
| Wayne University College of Medicine 1516 St Antoine St., Detroit 1 | Seminar in Pharmacology | July Sept 1946 | 10 |
| Creighton University School of Medicine 306 N 14th St Omaha | Pharmacology | Arranged 6 weeks tentative | None |
| University of North Carolina School of Medicine Chapel Hill | Pharmacology | Arranged | 25 |
| Duke University School of Medicine Durham N C. | Pharmacology | Arranged 3 months or longer full time | None |
| | Recent Advances in Pharmacology | Arranged 10-12 weekly seminars part time | None |
| | **PHYSICAL MEDICINE** | | |
| Wayne University College of Medicine 1516 St Antoine St., Detroit 1<br>At Grace Hospital | Physical Medicine | July-Sept 1946 | 80 |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At Mount Sinai Hospital | Physical Therapy in General Practice | Oct 22 1946-Feb 27 1947 4 months part time | 70 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | General Course in Physical Medicine | Arranged 4 weeks part time | 100<br>Half fee to men in service |
| New York University College of Medicine 477 First Ave New York 16<br>At Bellevue Hospital | Physical Medicine | Fall 1946 3 months daily | 200 |
| University of Pennsylvania 237 Medical Laboratories Philadelphia 4 | Physical Medicine (Basic Studies) | Oct 1946-June 1947 8 months annually | Not stated |
| University of Wisconsin Medical School 418 N Randall St Madison 6 | Physical Medicine for Specialists * | Arranged 2-6 months | per month 100 |
| | **PHYSIOLOGICAL CHEMISTRY** | | |
| Wayne University College of Medicine 1516 St Antoine St Detroit 1 | Review Seminar Physiological Chemistry | July Sept 1946 | Each course 10 |
| | **PHYSIOLOGY** | | |
| Columbia University Faculty of Medicine 630 West 168th St New York 32<br>At Mount Sinai Hospital | Physiology of the Digestive Tract | Dec 2 21 1946 3 weeks part time | 30 |
| Columbia University—At New York Post Graduate Medical School 303 E 20th St., New York 3 | Normal and Pathological Physiology | Sept 23 Oct 4 1946 | 75 |
| University of North Carolina School of Medicine Chapel Hill | Physiology | Arranged | 25 |
| Duke University School of Medicine Durham N C. | Physiology | Arranged 3 months or longer full time | None |
| | Recent Advances in Physiology | Arranged 10 to 12 weekly seminars part time | None |
| | **POLIOMYELITIS** | | |
| Georgia Warm Springs Foundation Warm Springs | Treatment of Acute and Convalescent Poliomyelitis | First Monday of each month 5 consecutive days | None |
| | **PROCTOLOGY** | | |
| Tufts Medical School Postgraduate Division 30 Bennett St Boston 11 | Proctology III | Monthly part time | 100 |
| | Proctology II | 1 month full time Nov 1946 | 250 |
| | Proctology I | Oct 21 26 1946 6 days full time Oct 7 1946 | 40 |
| Long Island College of Medicine, Medical Society of County of Kings 1313 Bedford Ave Brooklyn 2<br>At Jewish Hospital | Proctology | 8 sessions | 25 |
| New York Polyclinic Medical School and Hospital 341 W 50th St New York 19 | Combined Proctology and Gastroenterology (Clinical) and operative (Cadaver) | Oct 1 1946-Jan 2 1947 6 weeks | 200 |
| New York University College of Medicine 477 First Ave New York 16<br>At Bellevue Hospital | Proctology | 8 weeks part time | Veterans 125 |
| | Proctology | Fall 1946 not stated | Civilians 175 |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| **PUBLIC HEALTH** | | | |
| Yale University School of Medicine Dept of Public Health 333 Cedar St New Haven Conn | Public Health | 1 academic year Trimester basis begins Sept 16, 1946 | Year 400 |
| Johns Hopkins University School of Hygiene and Public Health, 615 N Wolfe, Baltimore, Md | Public Health | 8 months Oct 1, 1946 | Not stated |
| Albany Medical College and New York State Department of Health 47 New Scotland Ave Albany, N Y | Extension Course for Grade II Health Officers | 1 year course given continuously correspondence course | 40 |
| Columbia University School of Public Health 630 W 168 St, New York | 1—Public Health<br>2—Hospital Administration | 1 year minimum | Academic year 400 |
| University of North Carolina School of Public Health Chapel Hill, N C | Public Health | 1 to 3 quarters Sept to June | per quarter 100 |
| Duke University School of Medicine Durham N C | Public Health | 3 months or longer arranged full time | None |
| Vanderbilt University School of Medicine, Nashville Tenn | Public Health and Preventive Medicine<br>Master of Public Health First Semester | 1 to 3 months, April to October 1946<br>4 months beginning Sept 23, 1946 | 3 mos 100.00<br>per semester 200 |
| **RADIOLOGY** | | | |
| American College of Radiology 30 N Wacker Drive Chicago<br>At Various Medical Schools and Hospitals | Special Residencies | 6 months beginning various times | Not stated |
| Cook County Graduate School of Medicine 427 S Honore St, Chicago | Clinical Roentgenology<br>Fluoroscopy<br>X Ray Interpretation<br>Deep X Ray Therapy<br>X Ray Therapy<br>Lecture and Clinical Roentgenology | 2 weeks every 2 weeks<br>Weekly<br>Weekly<br>Weekly<br>2 weeks every 2 weeks<br>1 month<br>2 weeks every 2 weeks | 70<br>Not stated<br>Not stated<br>Not stated<br>110<br>200<br>125 |
| Wayne University College of Medicine 1516 St Antoine St Detroit | Radiology Conference | Arranged part time | 30 |
| At Wayne County General Hospital | Radiology | 3 months part time July to Sept, 1946 | 10 |
| University of Minnesota Center for Continuation Study Minneapolis | Radiologic Diagnosis | 2-4 weeks Fall, 1946 | Arranged |
| Creighton University School of Medicine 306 N 14th St Omaha | Radiology | Arranged | None |
| Long Island College of Medicine Medical Society of the County of Kings 1313 Bedford Ave Brooklyn | X Ray Diagnosis<br>Biologic Fundamentals of Radiation Therapy | 10 sessions Oct 8, 1946<br>10 sessions part time Oct 8 1946 | 25<br>20 |
| Columbia University College of Physicians and Surgeons, 630 W 168 St New York<br>At Affiliated Hospitals | Symposium on Diagnostic Radiology | 10 weeks Sept 30 to Dec 6 1946 | 250 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 105th St New York | Radiology | 2 months part time arranged | 150 |
| New York Polyclinic Medical School and Hospital, 341 W 50th St New York 19 | Radiology | 3 months Oct 1 1946-Jan 2 1947 | 300 |
| New York University College of Medicine 477 First Ave New York<br>At City Hospital | Diagnostic Radiology | 10 weeks part time Fall 1946 | 100 |
| At Beth Israel Hospital | Roentgenology | 8 weeks part time, Fall 1946 | 50 |
| Duke University School of Medicine Durham N C | Radiology | 3 months or longer arranged full time | None |
| American Roentgen Ray Society University Hospital Iowa City Ia<br>At Cincinnati Ohio | Instructional courses in diagnostic and therapeutic radiology and radiation physics | 4 days Sept 17 20 1946 | 5 |
| University of Oregon Medical School Marquam Hill Portland Ore | Radiology | 5 days full time Nov 11 15 1946 | 50 |
| University of Pennsylvania Graduate School of Medicine 237 Medical Laboratories Philadelphia 4 | Radiology (Basic Studies) | Oct June annually | Not stated |
| Meharry Medical College 1005 18 Ave No at Hefferman St Nashville Tenn | Radiology | 8 months arranged | per quarter 125 |
| Vanderbilt University School of Medicine, Nashville Tenn | X Ray | 1 to 3 months April to Oct 1946 | 3 months 100.00 |
| **SURGERY** | | | |
| University of Southern California School of Medicine, 3051 University Ave, Los Angeles<br>At Los Angeles County Hospital | General Surgery | Oct 7, 1946, 4 weeks full time | Tuition 200<br>Regis fee 5 |
| Cook County Graduate School of Medicine, 427 S Honore St Chicago 12 | General Surgery | July 15 Aug 12 Sept 9 Oct 7 Nov 4 1946 4 weeks | 300 |
| | Thoracic Surgery | Sept 23 Oct 21 Nov 25 1946 1 week | 100 |
| | Surgical Technique | Every 2 weeks 2 weeks | 200 |
| | Surgery of the Colon and Rectum | Sept 16 Oct 14 Nov 25 1946 1 week | 100 |
| | Personal Course Vaginal Surgery | Sept 16, Oct 14, Nov 25 1946 | 100 |
| | 2 Weeks' Course Surgical Anatomy and Clinical Surgery | July 29 Aug 26 Sept 23 Oct 28 Nov 18 1946 2 weeks | 150 |
| University of Maryland School of Medicine, Lombard and Greene Sts Baltimore | Surgical Anatomy | Arranged 15 weeks | 150 |
| Tufts Medical School Postgraduate Division 30 Bennett St Boston 11<br>At Affiliated Hospital | Surgery<br>Principles of Surgical Techniques | Arranged 1 month<br>Oct 7 Nov 29 1946 2 months, 3 days a week | 50<br>200 |
| Creighton University School of Medicine 306 N 14th St Omaha | Ward Walks<br>Medical and Surgical Pathological Conferences<br>12 General Lectures on Modern Surgical Procedures<br>General Surgical Clinics<br>General Surgery in the Dispensary | Arranged<br>Arranged<br>Arranged<br>Arranged<br>Arranged | None<br>None<br>None<br>None<br>None |

*Postgraduate Continuation Courses for Practicing Physicians—July 1, 1946 to Jan 15, 1947—Continued*

| Institution | Title of Course | | Registration Fee and/or Tuition |
|---|---|---|---|
| | **SURGERY—Continued** | | |
| Columbia University—At New York Post-Graduate Medical School 303 E 20th St New York 3 | Basic Course in Traumatic Surgery* | Jan 13-Feb 21 1947 | 200 |
| | Surgery of the Hand | Oct 14 19 1946 6 days | 60 |
| | Diagnosis and Treatment of Trauma | Nov 11 16 1946 6 days full time | 50 |
| | Seminar in Traumatic Surgery* | Sept 16-27 1946 2 weeks full time | 90 |
| | Dissection and Surgical Anatomy* | Arranged 12 sessions part time | 150 |
| | Surgical Anatomy as Applied to Colon and Rectal Surgery (Cadaver) | Arranged 6 sessions full time | 100 |
| | Surgical Anatomy as Applied to Thoracic Surgery (Cadaver)* | Arranged 12 sessions | 200 |
| | Surgical Anatomy as Applied to General Surgery (Cadaver)* | Arranged 12 sessions | 200 |
| | Review of General Surgery for Surgeons | Nov 4-30 1946 4 weeks, full time | 125 |
| New York Medical College Flower and Fifth Avenue Hospitals, 1 East 106th St New York | Surgical Technique | Arranged 75 hours | 375 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | Thoracic Surgery | Nov 1946 3 weeks | 325 |
| New York University College of Medicine 477 First Ave New York 16 At Lenox Hill and Triboro Hospitals | Combined Surgical Course | Oct 1 1946-Jan 1947 | 350 |
| | Recent Advances in Thoracic Surgery* | Fall 1946 1 month full time | 250 |
| Duke University School of Medicine Durham N C | Surgery | Arranged 3 months or longer full time | None |
| Interstate Postgraduate Medical Association Madison Wis At Cleveland Ohio | Interstate Postgraduate Assembly | Oct 15-18 1946 | Regis fee |
| University of Oregon Medical School Marquam Hill Portland 1 | General Surgery | Oct 21 25 1946 5 days full time | 50 |
| University of Pennsylvania 237 Medical Laboratories Philadelphia 4 | Surgery (Basic Studies) | Oct 1946-June 1947 annually | Not stated |
| Meharry Medical College Eighteenth Ave N and Hefferman St Nashville Tenn | Surgery | Arranged 3 months | per quarter 125 |
| Vanderbilt University School of Medicine Twenty first Ave at Edgehill Nashville Tenn | Surgery | Oct 1946 1 3 months | 166 66 |
| University of Texas Medical Branch 912 Avenue B Galveston | General Surgery | To be announced 1 week | Not stated |
| University of Vermont College of Medicine Pearl St College Park Burlington | Course in Surgery | Arranged minimum of 4 weeks daily part time | Not stated |
| University of Wisconsin Medical School 418 North Randall St Madison 6 | Surgery Course for Specialists* | Arranged 2-6 months | per month 100 |
| | **THERAPY** | | |
| American College of Physicians 4200 Pine St Philadelphia 4 At St Louis | Chemo Therapy | Dec 2 7 1946 5 days | Members 20<br>Non members 40<br>Physicians in service free |
| Columbia University Faculty of Medicine 630 West 168th St New York 32 At Mount Sinai Hospital | Recent Advances in Therapy | Oct 23-Dec 11 1946 7 weeks part time | 25 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 106th St New York | Applied Pharmacology and Therapeutics | Fall term 1946 4 months | 100 |
| New York University College of Medicine 477 First Ave New York 16 At Bellevue Hospital | Refresher Course in Radiation Therapy | Fall 1946 6 weeks 3 hours daily | Civilians 175<br>Veterans 125 |
| University of Texas Medical Branch 912 Avenue B Galveston | Electro shock Therapy | Arranged | Not stated |
| | **UROLOGY** | | |
| Creighton University School of Medicine 306 N 14th St Omaha | Urology | Arranged 6 weeks tentative | None |
| Long Island College of Medicine Medical Society of County of Kings 1313 Bedford Ave Brooklyn 2 At Long Island College Hospital | Urology | Oct 1 1946 1 month or longer | per month 25 |
| Columbia University Faculty of Medicine 630 West 168th St New York 32 | Urology | First day of any month 6 months | per month 55 |
| Columbia University—At New York Post-Graduate Medical School 303 E 20th St New York 3 | Advanced Course in Urology for Specialists* | Oct 1 Nov 30 1946 2 months full time | 225 |
| New York Medical College Flower and Fifth Avenue Hospitals 1 East 106th St New York | Urology | Arranged 6 months | 500 |
| New York Polyclinic Medical School and Hospital 345 W 50th St New York 19 | Urology | Oct 1 1946 8 months full time | 800 |
| New York University College of Medicine 477 First Ave. New York 16 | Clinical Urology | Fall 1946 6 weeks daily part time | 100 |
| Duke University School of Medicine Durham N C | Urology | Arranged 3 months or longer full time | None |
| New York Hospital 525 E. 68th St. New York | Urology | July 1 1946-Jan 15 1947 6 months or longer | 500 |
| University of Pennsylvania 237 Medical Laboratories Philadelphia 4 | Urology (Basic Studies) | Oct 1946-June 1947 annually | Not stated |
| | **VENEREAL DISEASE** | | |
| University of California University Extension San Francisco | Course in Venereal Diseases | Sept 1946 16 weeks | Not stated |
| Bureau of Social Hygiene Department of Health New York At Central Clinic 125 Worth St New York | Practical Course in Diagnosis, Treatment and Control of Venereal Diseases | Every 2 weeks 1 morning per week | None |
| | Seminar in Diagnosis and Treatment of Venereal Diseases Lectures | Fall Winter 1946 14 sessions | None |
| Columbia University Faculty of Medicine 630 West 168th St. New York 32 At Mount Sinai Hospital | Venereal and Skin Diseases | Nov 25-29 1946, 5 days part time | 20 |
| Institute for the Study of Venereal Disease 3400 Spruce St Philadelphia | 3 month Course in Applied Venereal Disease Epidemiology | Arranged 3 months | Arranged |
| | Intensive Training Course in Venereal Disease Control | Arranged 10 days | 25 |
| | Venereal Disease Review Course | Arranged 3 weeks | 35 |
| | Essential Basic Training Course | Arranged 6 months | 125 |
| | Intensive Review Course | Arranged 4 weeks | 50 |

* For specialists only

# Bureau of Legal Medicine and Legislation

## MEDICOLEGAL ABSTRACTS

**Medical Practice Acts Uncorroborated Evidence of Employee of Medical Grievance Committee**—The Board of Regents of the University of the State of New York revoked the petitioner's license to practice medicine in that state On appeal to the appellate division the determination of the Board of Regents was annulled, from which judgment the Board of Regents appealed to the Court of Appeals of New York.

One of the reasons why the appellate division reversed the Board of Regents finding was that the two women who testified against the doctor were employed by the Medical Grievance Committee as paid investigators and that, like private detectives in divorce cases, they require corroboration, of which there was none The Court of Appeals said that where corroboration of private detectives is taken in divorce cases it is because of a generally accepted suspicion which does not apply to public employees No corroboration, said the Court of Appeals, was required here and the evidence of the two women investigators was sufficient The order of the appellate division was therefore reversed and the determination of the Board of Regents confirmed.—*Epstein v Board of Regents of University of New York, 65 N E (2d) 756 (N Y, 1946)*

**Dental Practice Acts Splitting Fees with Lay Solicitors**—Pursuant to a determination by the state board of dental examiners that the defendant, a licensed dentist, had been guilty of unprofessional conduct in the practice of his profession, and the approval of that finding by the Board of Regents the commissioner of education suspended defendant's license to practice dentistry for one year On appeal, the appellate division annulled the order of suspension and from such action the Board of Regents appealed to the Court of Appeals of New York

The defendant was licensed to practice dentistry in New York in 1919 In 1939 he employed a layman, who at no time had been licensed to practice dentistry in New York to contact prospective patients and arrange for their transportation to the defendant for dental treatment. This layman received a commission varying from 20 per cent to 50 per cent of the fees collected from such patients and from April 1939 to October 1942 he received about $20,000 from such sources plus $10 a week for maintenance of an automobile which he used for carrying patients to and from the defendant's office.

The education law, during the time involved in this suit, provided

> 2 The license and registration of a practitioner of dentistry may be revoked suspended or annulled upon decision and due hearing in any of the following cases (a) that the dentist has been guilty of immoral conduct (h) that the dentist has been otherwise or in any other way guilty of unprofessional conduct

It is urged by the defendant that, unless the Board of Regents prescribes by regulation the act which shall constitute unprofessional conduct, no dentist may be disciplined under section 1311, subdivision 2 clause (h) That never has been the law of this state, said the Court of Appeals It has never been necessary for the legislature or the Board of Regents to define with particularity acts which would constitute unprofessional conduct, whether in the fields of dentistry or of pharmacy In a prior case the court had pointed out that in vocations, like dentistry, more recently accepted as professions professional standards are perhaps less uniform, less well understood and less rigidly defined. Nonetheless the standards of conduct generally accepted by practitioners in the state of New York are not so indefinite that they cannot be determined by qualified persons They are part of the ethics of the profession and "what is generally called the 'ethics of the profession is but the consensus of expert opinion as to the necessity of such standards" Every member of the profession should be regarded as an expert for such purpose the court continued. There is a moral dereliction in failure by any member of a profession to apply in professional practice the standards which, by consensus of opinion in the profession, are necessary It seems to us, concluded the court that there is one course of conduct which in each and every profession is known as a matter of common knowledge to be improper and unprofessional That is conduct by which, after a professional man has been licensed by the state, he enters into a partnership in his professional work with a layman, by the terms of which he divides with the latter on a percentage basis, payments made by client or patient for professional services rendered. That is what the defendant did here. Accordingly the Court of Appeals reversed the ruling in favor of the defendant and confirmed the determination of the Board of Regents suspending the defendant's license—*Bell v Board of Regents of University of State of New York, 65 N E (2d) 184 (N Y, 1946)*

# Medical Examinations and Licensure

## COMING EXAMINATIONS AND MEETINGS

### NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL, June 22 Page 702

### BOARDS OF MEDICAL EXAMINERS

ALABAMA Montgomery, Jan. 21 23 Sec, Dr B F Austin 519 Dexter Ave, Montgomery 4

ARIZONA * Phoenix, 1st week in July Sec Dr J H Patterson 826 Security Bldg, Phoenix.

CONNECTICUT * *Medical* Hartford July 9 10 Sec. to the Board Dr Creighton Barker P O Box 1438, New Haven *Homeopathic* Derby, July 9 10 Sec., Dr Joseph H Evans, 1488 Chapel St, New Haven

DELAWARE *Examination* Dover, July 9 11 *Reciprocity* Dover July 16 Sec Medical Council of Delaware, Dr J S McDaniel, 229 S State St Dover

GEORGIA Atlanta Oct. 8 10 Sec State Examining Boards, Mr R. C Coleman 111 State Capitol, Atlanta 3

HAWAII Honolulu, July 8-11 Sec Dr S E Doolittle 881 S Hotel St Honolulu 53

IDAHO Boise, July 9 Dir Bureau of Occupational Licenses Miss Agnes Barnhart 355 State Capitol Bldg Boise.

INDIANA *Examination* Indianapolis, June 1947 Exec Sec. Board of Medical Registration & Examination, Miss Ruth V Kirk, 627 K of P Bldg, Indianapolis 4

KENTUCKY *Examination* Louisville Dec. 16-18 Sec State Board of Health Dr P E Blackerby, 620 S Third St. Louisville 2

MAINE Augusta July 2 3 Sec, Board of Registration of Medicine Dr Adam P Leighton 192 State St Portland

MARYLAND *Homeopathic* Baltimore June 18-19 Sec Dr J A Evans, 612 W 40th St Baltimore *Medical* Baltimore Dec. 10-13 Sec Dr J T O Mara 1215 Cathedral St Baltimore

MASSACHUSETTS *Boston July 9 12 Sec, Board of Registration in* Medicine Dr H Q Gallupe 413 F State House Boston 33

MICHIGAN * Lansing Oct. 9 11 Sec Board of Registration in Medicine, Dr J E McIntyre, 100 W Allegan St., Lansing 8

MONTANA Helena Sept. 30 Oct 2 Sec, Dr O G Klein First Nat l, Bank Bldg, Helena.

NEVADA *Reciprocity* Carson City Aug 5 Sec, Dr G H Ross 215 N Carson St Carson City

NEW HAMPSHIRE Concord Sept 12 13 Sec Board of Registration in Medicine Dr John S Wheeler 107 State House Concord

NEW MEXICO * Santa Fe, Oct 7 8 Sec, Dr LeGrand Ward 141 Palace Ave Santa Fe

NORTH CAROLINA *Endorsement* Morehead City July 5 Act. Sec Mrs L McNeill 226 Hillsboro St Raleigh

NORTH DAKOTA *Grand Forks July 2 5 Sec. Dr G M Williamson* 4½ S Third St Grand Forks

OHIO *Examination* Columbus Dec *Endorsement* Columbus July 2 Sec State Medical Board Dr H M Platter 21 W Broad St. Columbus.

OREGON * *Examination* Portland July 24 26 Exec. Sec Miss Lorienne M Conlee 608 Failing Bldg Portland 4

PENNSYLVANIA *Examination* Harrisburg Oct Act Sec Bureau of Professional Licensing Dept of Public Instruction Mrs M G Steiner 351 Education Bldg Harrisburg

SOUTH DAKOTA * Pierre July 16-17 Sec. Medical Licensure State Board of Health Dr Gilbert Cottam, Capitol Bldg Pierre

VIRGINIA * Richmond Dec 3 6 Sec Dr J W Preston 30½ Franklin Rd Roanoke

WASHINGTON * Seattle July 11 12 Sec Department of Licenses Miss Nell Adams Olympia

WEST VIRGINIA Charleston July 15 17 Sec. Public Health Council, Dr John E Offner State Capitol Charleston 5

WYOMING *Examination* Cheyenne Oct 7 8 Sec., Dr G M Anderson Capitol Bldg Cheyenne

* Basic Science Certificate required.

### BOARDS OF EXAMINERS IN THE BASIC SCIENCES

DISTRICT OF COLUMBIA *Examination* Washington Oct 21 22 Sec Commission on Licensure Dr G C Ruhland 6150 E Municipal Bldg Washington

IOWA *Examination* Des Moines July 9 Sec. Division of Licensure & Registration Mr H W Grefe Capitol Bldg Des Moines 19

MICHIGAN *Examination* Ann Arbor Oct. 11 12 Sec Miss Eloise LeBeau 101 N Walnut St. Lansing

NEBRASKA *Examination* Omaha Oct. 1 2. Dir, Mr Oscar F Humble 1009 State Capitol Bldg Lincoln 9

OREGON Portland July 6 Sec Mr C D Byrne, Univ of Oregon Eugene

RHODE ISLAND *Examination* Providence Aug 14 Sec Division of Examiners Mr Thomas B Casey 366 State Office Bldg, Providence

# Current Medical Literature

## AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested) Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order Reprints as a rule are the property of authors and can be obtained for permanent possession only from them

Titles marked with an asterisk (*) are abstracted below

### American J Digestive Diseases, Fort Wayne, Ind

*13 59-102 (March) 1946*

Protein Deficiency in Man M Sahyun —p 59
Abdominal Pain in Pneumonia H Gauss —p 73
*Physiologic Use of Water in Constipation J A McKenney —p 78
Vitamins and Hormones in Nutrition II. Endocrine Dyscrasia B F Sieve —p 80
Redundancy of Colon A. Galambos and Wilhelmina Mittelmann Galambos —p 87

**Physiologic Use of Water and Constipation**—McKenney says that some twenty years ago observations were begun in the clinics of the Oakland Health Center, later the Alameda County Institutions' Clinics, to determine the relationship of water to constipation. Patients having constipation were instructed to discontinue the use of enemas, laxatives and cathartics and to take at least two or more glasses of water, either cold or hot, along with their meals, regardless of other fluids taken such as tea, coffee or soup In obstinate cases they were advised to take an additional glass of water before breakfast. If there was no bowel movement for four or five days they were to take a single enema. All patients had to report at the clinic at least once a week Of a total of 477 patients, 345 were taking water with their meals but took no laxatives or cathartics and had no constipation Of these 345 patients 256 had been troubled with constipation and had taken various remedies for that condition They became well on the discontinuance of medication when they included a sufficient quantity of water with their meals

### American Journal of Hygiene, Baltimore

*43 91-194 (March) 1946*

Oil Treatment of Bedclothes for Control of Dust Borne Infection I Principles Underlying Development and Use of Satisfactory Oil in Water Emulsion T T Puck O H Robertson H Wise and others —p 91
Id II Use of Triton Oil Emulsion (T 13) As Routine Laundry Procedure C G Loosli H Wise, H M Lemon and others.—p 105
Study of Effect of Oiled Floors and Bedding on Incidence of Respiratory Disease in New Recruits Commission on Acute Respiratory Disease and Commission on Air Borne Infections —p 120
*Chemotherapy of Filariasis Due to Wuchereria Bancrofti with Neostibosan J T Culbertson H M Rose and J Oliver Gonzalez.—p 145
Important Factors in Epidemiology of Schistosomiasis in Leyte. T B Magath and D R. Mathieson —p 152
Studies on Filariasis I. Serologic Relationships Between Antigenic Extracts of Wuchereria Bancrofti and Dirofilaria Immitis. Virginia G Warren J Warren and G W Hunter —p 164
Human Encephalitis of Western Equine Type in Minnesota in 1941 Clinical and Epidemiologic Study of Serologically Positive Cases C. M Ecklund —p 171

**Neostibosan in Filariasis**—Culbertson and his associates administered neostibosan to 35 patients with filariasis due to Wuchereria bancrofti, of whom 20 were apparently entirely cured of the infection, as shown by their loss of all microfilariae during the period of observation (five to fifteen months) Ten others lost more than 80 per cent of their circulating microfilariae and appeared likely to lose the remainder within a few additional months In 5 of the 35 treated persons, administration of the drug failed to influence the infection noticeably Fifteen untreated controls were all still infected after observation from fourteen to seventeen months Neostibosan appears to act chiefly on the adult phase of the worm rather than on the embryos in the blood, although once the adults are killed the embryos gradually decline in number The immediate reactions of patients to neostibosan were slight, consisting chiefly of nausea and vomiting Usually patients acquired tolerance for the drug within the first several days of its administration In no case was it necessary to stop the drug because of toxicity In no patient were symptoms suggestive of elephantiasis induced by chemotherapy

### American J Obstetrics and Gynecology, St. Louis

*51 299-446 (March) 1946 Partial Index*

Evaluation of Methods for Treatment of Urinary Incontinence A H Aldridge.—p 299
General Survey of Vaginal Smear and Its Use in Research and Diagnosis G N Papanicolaou —p 316
Premature Delivery Causes and Results Ethel S Dana.—p 329
Ectopic Pregnancy Selected Data from 110 Cases, Including a Report of 2 Unusual Cases K. T MacFarlance and D W Sparling —p 343
*Puerperal Infection Etiologic Prophylactic and Therapeutic Considerations R G Douglas and I F Davis.—p 352
Analysis of Obstetric Activities in Hospitals of Cook County During 1944 C Newberger —p 372
*Studies of Origin and Treatment of Recurrent Trichomonas Vaginitis E Allen and S Butler —p 387
Vinbarbital Sodium for Obstetric Amnesia Analgesia and Anesthesia M S Lewis —p 395
Pregnandiol Excretion at Onset of Labor R. Lyon —p 403
Increased Excretion of Pregnandiol in Pregnancy from Diethylstilbestrol with Special Reference to Prevention of Late Pregnancy Accidents O W Smith G Van S Smith and D Hurwitz.—p 411
Late Complications of Watkins Interposition Operation C T Beecham —p 416
Fetal Mortality in Women During Prediabetic Period J Herzstein and H Dolger —p 420
Unusual Decidual Reaction in Cervix. J Klein and L. H Dometer —p 423

**Puerperal Infection**—Maternal mortality caused by puerperal infection has not uniformly decreased as much as mortality due to other causes Douglas and Davis report bacteriologic data from the study of 1,000 patients which indicate that the great majority of infections occurring during the puerperium and postabortal period are endogenous in origin and caused for the most part by different groups of nonhemolytic streptococci Prophylaxis of infection is far more important than the treatment of the disease once established. Exogenous pyogenic infections may be largely eliminated by the rigid application of a comprehensive technic designed to prevent the inoculation of these organisms from the upper respiratory tract or other source into the genital tract of the patient. Some autogenous infections will develop irrespective of the application of the most rigorous aseptic routine The incidence of endogenous infections may be decreased by the control and restoration of blood loss, the limitation, better timing and more skilful employment of operative procedures, the judicious use of analgesic agents and other measures It is the opinion of the authors, based on experience but not proved conclusively, that sulfadiazine, given early during long labors and under certain other circumstances, will decrease the incidence of infection. Sulfadiazine or penicillin given early may be efficacious, while late in the course of disease they may be relatively ineffective

**Recurrent Trichomonas Vaginitis**—Allen and Butler say that zoologic studies establishing the separate identity of Trichomonas vaginalis, Trichomonas buccalis and Trichomonas hominis are not in accord with their clinical impression that attacks of diarrhea are frequently followed by the reappearance of trichomonads in the vagina Proctoscopy of 33 patients with treatment-resistant Trichomonas vaginitis, with cultures of the material thus obtained did not reveal any trichomonads in the bowel cultures Certain visual changes were observed in the rectal mucous membrane of a large percentage of these patients Six patients with T hominis intestinalis infestations had no vaginal trichomoniasis Immediate examination of surgical specimens removed from 28 patients with active Trichomonas vaginitis revealed no organisms above the cervix in direct smear or culture The treatment in this series of cases consisted in nightly insertion of a tablet of lactobacilli, a morning cleansing douche consisting of 1 drachm of lactic acid to 2 quarts of warm water followed by the instillation of one applicator full of jelly for daytime use. The lactic acid douche and the lactobacillus tablets have been replaced by ½ drachm of tincture of iodine in 2 quarts of warm water and topical applications of 1 per cent aqueous solution of gentian violet for the treatment of moniliasis

Jelly has been more effective for yeast infections than for trichomoniasis Sixty-two of 166 patients were cured by the use of jelly and douches alone Treatment throughout the menstrual period is essential for cure The addition of lactobacillus tablets will increase the permanent cures If reinfection occurs following gradually decreasing therapy, a search is begun for secondary foci of infection Catheterization of the bladder is done and is repeated several times If trichomonads are found or petechial bullous edema of the urethra or trigone is present, the bladder and urethra are treated biweekly with instillations of 5 per cent mild protein silver or 5 per cent sodium sulfathiazole The authors have occasionally added sulfathiazole by mouth in 30 grain (2 Gm) doses in an attempt to reduce the cocci accompanying trichomonas infestation of the urinary tract. If the investigation of the urinary tract was negative, the male partner was examined and motile trichomonads were found occasionally in the prostatic fluid The authors feel that T vaginalis is one of the most important etiologic factors in chronic prostatitis Some of the most resistant cases of trichomonas vaginitis were cured after the husbands had received adequate treatment

## Anesthesiology, New York

**7** 113-232 (March) 1946

*Treatment of Acute Arrhythmias During Anesthesia by Intravenous Procaine C Burstein —p 113
Blood Transfusion Service Dangers and Safeguards T H Seldon J S Lundy and R C Adams —p 122
Frontiers of Anesthesia M L. Tainter —p 132
Statistical Systems in Anesthesiology M Saklad and Priscilla Sellman —p 146
*Repeated Sympathetic Blocks Their Limitation and Value F L Faust —p 161
Pressor Activity and Stability of Different Mixtures of Ephedrine and Pituitary (Posterior Lobe) Extract K I Melville —p 176
*New Lethal Dose of Curare with Observations on Pathology Produced by Large Doses F Cole —p 190

**Intravenous Procaine for Arrhythmias During Anesthesia**—Burstein injected procaine intravenously in doses of 30 to 70 mg as a single dose injected into 14 anesthetized patients with acute arrhythmias during intrathoracic operations No untoward effects on the nervous system, respiration or circulation were observed. The dysrhythmias always improved often dramatically Three case reports, 1 with electrocardiographic tracings are presented The authors think that general anesthesia probably affords specific protection against the stimulating action of procaine on the central nervous system

**Repeated Sympathetic Blocks**—Faust reviews observations on 40 patients in whom 225 sympathetic blocks were made This group included patients with arteriosclerosis, a diabetic patient with trophic ulcers and neuritis and patients with thromboangiitis obliterans, acute or chronic thrombophlebitis, postphlebitic edema posttraumatic dystrophies epididymitis, chronic fungous infection with lymphedema chronic leg ulcers and sympatheticalgia. The hypothesis which guided the selection of patients was that in some cases of peripheral vascular disturbances there is also an element of abnormal vasoconstriction and/or vasodilatation which aggravates the circulatory deficiency Patients with acute thrombophlebitis, epididymitis and chronic leg ulcers showed circulatory improvement and relief of pain after each block The patients with arteriosclerosis, thromboangiitis obliterans and diabetes showed improvement, which was most noticeable when the blocks were given more frequently These are the patients who should do well after sympathectomy In the cases of postphlebitic edema and posttraumatic dystrophies the improvement after repeated blocks was encouraging The treatment produced improvement in 37 and failed in 3 cases

**New Lethal Dose of Curare Changes Produced by Large Doses**—Cole found that the anoxic lethal dose of Intocostrin in the dog is 0 065 cc, or 1/15 cc per pound of body weight. The anoxic lethal dose was not affected by cyclopropane-oxygen anesthesia A cumulative effect of curare was indicated by the death of 1 dog following the administration of what appeared later to be a sublethal dose The use of curare on succeeding days may be associated with a heightened effect of the drug An unidentified anticurare effect was encountered with a technic including tracheal intubation, cyclopropane-oxygen anesthesia, pentothal induction and the administration of the curare with saline solution through rubber tubing As evidenced by the deaths of 2 dogs, the animal is in a dangerous condition on emergence from deep curarization There is a nonanoxic lethal dose of curare Dogs can make complete recoveries, with artificial respiration, after receiving five times the anoxic lethal dose of curare, or 0 33 cc of Intocostrin per pound of body weight. The lethal dose of Intocostrin in dogs in the presence of continuous artificial respiration, is about twenty times the anoxic lethal dose, or 1⅓ cc per pound Complete recovery was made in one experiment following the administration of 1 cc. of Intocostrin per pound (fifteen times the anoxic lethal dose), artificial respiration was maintained for eighteen hours A temporary cyanosis was present following the administration of large doses of curare in the presence of proper artificial respiration Slowing of the pulse rate occurred whenever artificial respiration was stopped Bronchiolar or intercostal spasm is suggested immediately following the injection of large doses of curare by the greater amount of force required to raise the chest wall during artificial respiration No brain damage could be found (other than that due to anoxia) attributable to large doses of curare Bloody diarrhea occurred with large doses, and necropsy revealed mucosal hemorrhages throughout the intestinal tract There may be a relative contraindication to large doses of curare when there is disease of the intestinal tract Neostigmine does not appear to be a perfect neutralizing agent for large doses of curare The safest method of terminating the effects of a large dose is continuous artificial respiration until recovery

## Annals of Internal Medicine, Lancaster, Pa

**24** 343 588 (March) 1946

*Penicillin Treatment of Empyema Report of 24 Cases and Review of Literature B Brown E M Ory M Meads and M Finland —p 343
Quinidine in Treatment of Auricular Fibrillation in Association with Congestive Failure J M Askey —p 371
Blastomycosis Brief Review of Literature and Report of Case Involving the Meninges L. L Friedman and J J Signorelli —p 385
Clinical and Roentgenologic Diagnosis of Pericardial Effusion N M Fenichel and B S Epstein —p 401
*Studies on Sensitivity of Diphtheria to Penicillin R Paull, S N Tucker B L Holladay and C R Nicewonger —p 413
Periarteritis Nodosa Clinicopathologic Analysis of 7 Cases R. S Diaz Rivera and A J Miller —p 420
Analysis of Complications Encountered During Therapeutic Malaria H S Read L. I. Kaplan and F T Becker —p 444
*Response of Cirrhosis of Liver to Intensive Combined Therapy L. M Morrison —p 465

**Penicillin Treatment of Empyema**—Brown and his co-workers report 24 cases of empyema that were treated with penicillin at the Boston City Hospital and analyze 237 additional cases collected from the literature The general condition of patients with empyema improved greatly after treatment with penicillin and aspirations was started Those with putrid empyema were probably much better operative risks as a result of preparation with this form of therapy In the favorable cases, sterilization of the empyema fluid was usually accomplished and the volume which could be aspirated diminished appreciably after three intrapleural instillations or less The changes in the fluid following therapy, however, were not uniform and could not always be relied on as a guide for further therapy or as an indication for operation The foul odor of the putrid empyema cleared promptly after penicillin therapy was started In cases of empyema that were cured by aspirations and penicillin alone, the hospital course and convalescence were considerably shorter than in those in which operative drainage was employed In evaluating the cases reported in the literature the authors stress that it should be borne in mind that some of them were treated when the supply of penicillin was limited and it was of poorer quality than the products now available.

**Sensitivity of Diphtheria to Penicillin.**—Paull and his associates say that in August 1944 there was a sudden rise in the number of admissions of diphtheria cases to Letterman General Hospital from ships' hospitals and U S Army transports Since the use of diphtheria antitoxin in appropriate doses, administered early, was giving such highly satisfactory results in control of the clinical, symptomatic diphtheria, this method of treatment was continued during the stage of subjective illness In an attempt to reduce the duration of the carrier

state, however, the use of penicillin was considered A carrier was regarded to be a person who ten days after onset of illness continued to have positive nasopharyngeal smears and cultures A penicillin solution of 2 000 units per cubic centimeter of 10 per cent glycerin in isotonic solution of sodium chloride was adopted This solution was nebulized by an ear, nose and throat unit, using air as a source of pressure in such an amount as would in fifteen minutes nebulize 2 5 cc of the penicillin solution or 5 000 units of penicillin sodium The first series of virulent diphtheria bacillus carriers treated with nebulized penicillin received four fifteen minute treatments daily The results indicated that penicillin so used was of no benefit in reducing the interval of carrier state Orally inhaled and nasally exhaled nebulized penicillin of the same concentration, using 100 per cent oxygen instead of air as the nebulizing gas, likewise failed to reduce the duration of carrier state Nebulization of penicillin sodium 50,000 units per cubic centimeter into the nasal chamber was found nonirritating In vitro tests indicate that some strains of diphtheria are penicillin sensitive, whereas others are penicillin tolerant Forty-one of 64 cultures taken were penicillin sensitive

**Therapy in Cirrhosis of Liver**—Morrison deals with the results obtained from using various therapeutic combinations in the treatment of cirrhosis of the liver, or chronic hepatitis, in a series of 62 patients studied from 1938 to 1945 The series was divided into three groups each treated for two years over an eight year period. One group of 23 patients was treated only by such methods as were in use in 1938, that is, by paracentesis, diuresis, high carbohydrate diet and palliative therapy, this group contained 11 cases without ascites and 12 cases with ascites and was called the "untreated" control group A second group of 19 cases was treated by a modified "Patek" regimen consisting of a nutritious high protein, moderate carbohydrate, low fat diet, liver extract injections and vitamin B complex therapy This group contained 9 patients without ascites and 10 patients with ascites A third group of 20 patients was treated intensively with a combined therapy which consisted of a maximum protein (three meat servings daily plus skim milk), high carbohydrate low fat diet, daily injections of 5 cc of a "whole" liver extract, highly potent injections of vitamin B complex, daily oral vitamin B complex and multiple (total) vitamin capsules orally, together with 2 Gm each of methionine and choline daily This consisted of 11 patients without ascites and 9 with ascites Treatment with the intensive combined method resulted in reducing the mortality rate in the compensated group (without ascites) over a two year period of time to 0 (1943 45) as compared with 27 per cent mortality in the control group (1938-40) The intensive combined therapy in the group with ascites reduced the mortality rate from 75 per cent in the control group (1938-40) to 11 per cent in the treated group (1943-45) Treatment with the intensive combined therapy resulted in a sharp reduction in the length of the disability period from 82 per cent (1938-40) to 28 per cent (1943-45) in the groups without ascites and from 83 per cent (1938-40) to 66 per cent (1943-45) in the groups with ascites The intensive combined method of therapy resulted in a remission of all signs and symptoms in 64 per cent of cases of the group without ascites, as compared with remissions in only 10 per cent of cases in the control group, in the group with ascites remission occurred in 34 per cent of cases as compared with none in the corresponding control group

## Archives of Otolaryngology, Chicago

**43** 199 314 (March) 1946

*Tympanosympathectomy Surgical Technic for Relief of Tinnitus Aurium J Lempert —p 199
Otitis Externa Clinical Observations and Microbiologic Flora J T Syverton W R Hess and J Krafchuk —p 213
Study of Chronic Suppurative Otitis Media at Pennsylvania School for the Deaf W J Hitschler and Mary Frances Vastine —*p 226*
Study of Attitudinal Reflexes of Magnus and deKleijn in Thalamic Man H O Neill —p 243
Planning the Rhinoplasty S Cohen —p 283
Review of 100 Cases of Acute Aero Otitis J Lentine —p 293

**Tympanosympathectomy for Tinnitus Aurium**—Lempert suggests that tinnitus aurium in many cases may be due to a tonus impulse transmitted to the inner ear by diseased sympathetic ganglion cells of the tympanic plexus Based on this new theory, tympanosympathectomy is recommended for the relief of tinnitus aurium In this operation the outer membranous third of the external auditory canal is widened to permit the introduction of the widest possible ear speculum, through which the tympanic cavity will be made readily accessible to surgical intervention Then the lower half of the annulus fibrosus of the tympanic membrance is disengaged from the corresponding portion of the sulcus tympanicus, and the disengaged lower half of the tympanic membrane is everted in order to expose to view the tympanic plexus After the tympanic plexus has been excised, the disengaged portion of the annulus fibrosus of the tympanic membrane is reinserted into its normal position within the sulcus tympanicus Of 15 patients on whom tympanosympathectomy was performed, 10 are now completely free from tinnitus Patients submitted to this surgical treatment should be those who complain of severe, continuous and persistent tinnitus of at least one year's duration

## Archives of Physical Medicine, Chicago

**27** 133-192 (March) 1946

Effects of Massage on Denervated Skeletal Muscle Mitzi I. Suskind Norma M Hajek and H M Hines —p 133
Adaptability of Present Day Concepts of Convalescent Training and Physical Rehabilitation to Civilian Practice of Medicine F A Hellebrandt —p 136
Challenge of Crutches V Daily Activities on Crutches G G Deaver and Mary Eleanor Brown —p 141
Cervical Periarthritis Diagnosis and Treatment W J Zeiter and F B House —p 162

**27** 193-256 (April) 1946

Physical Medicine in Surgical Convalescence R. Elman —p 197
Expanding Field of Physical Medicine F H. Krusen —p 201
Studies on Neuromuscular Dysfunction V Neostigmine Therapy of Acute and Chronic Backache. H Kabat and C W Jones —p 208
Treatment of Sciatica with Alternating Current A Cohen F P Naselli and Marie P Craig —p 219
Penicillin Combined with Fever Therapy Preliminary Report of 20 Cases of Early Syphilis R H Craig G X Schwemlein and H. W Kendell —p 222

## Arkansas Medical Society Journal, Fort Smith

**42** 95-218 (March) 1946

Cutaneous Blastomycosis. R. H Rigdon and C H Winkler Jr —p 95

**42** 219-238 (April) 1946

Modern Concepts of Cardiovascular Disease Digitalis Intoxication. C T Chamberlain —p 219
Diaphragmatic Hernia Report of Case. J H Hayes —p. 221

## Cancer Research, Baltimore

**6** 161-224 (April) 1946 Partial Index

Factors Affecting Carcinogenesis III Effect of Hydrogenation of Lipid Solvents on Carcinogenesis by 3,4 Benzpyrene F Dickens and H Weil Malherbe —p 161
Id IV Effect of Tricaprylin Solutions of Cholesterol and Phospholipins. H Weil Malherbe and F Dickens —p 171
Influence of Age on Total Epidermal Lipid During Carcinogenesis Induced by Methylcholanthrene in Mice. V Suntzeff E. V Cowdry and C Carruthers —p 179
Action of Methylcholanthrene on Certain Scars of Skin in Mice. A Lacassagne and R Latarjet —p 183
Filtrable Agent Producing Lymphoid Tumors and Osteopetrosis in Chickens B R Burmester C. O Prickett and T C Belding —p 189

## Delaware State Medical Journal, Wilmington

**18** 51-66 (March) 1946

Early Determination of Gallbladder Disease and Its Treatment. W Bates and D C. Emenhiser —p 51
Problems of Rehabilitation in Patients with Cerebral Palsy T Fay —p 57
*Healed Dissecting Aneurysm of Aorta with Signs of Aortic Insufficiency Case Report. J R Durham —p 60

**Healed Dissecting Aneurysm of Aorta with Signs of Aortic Insufficiency**—A man aged 68, who had presented symptoms that led to the provisional diagnosis of rheumatic aortic insufficiency complete heart block and possible digitalis intoxication, died and a postmortem revealed a transverse split in the aorta 2 cm wide and 2 deep 0 8 cm above the aortic valve ring The split involved the intima, and this layer of the aorta formed a valvelike *semilunar* flap which projected into the lumen of the vessel The mechanism of regurgitation was caused by the lip of the aneurysm interfering with closure

of the aortic valves The blood column in the aorta following systole would easily project the lip of the sac into the lumen of the valve ring It is surprising that the aorta showed no degenerative or inflammatory lesions other than the sac It is possible that dynamic aortic dilatation may have been a factor in addition to the mechanical interference with valve function The onset of the intimal tear may have occurred five years prior to the present illness at which time the patient was seized with severe chest pain while chopping wood Durham stresses that this etiologic possibility should be considered in aortic insufficiency of nonsyphilitic and nonrheumatic origin

## Illinois Medical Journal, Chicago

**89** 101-148 (March) 1946

Acute Surgical Thrombotic Emergencies J E Bellas —p 116
Thrombocytopenic Purpura Following Angina Report of Fatal Case with Autopsy K M Carroll —p 121
Allergic Iritis L Bothman —p 124
Urologic Neurosis and Pyschoses C O Ritch —p 131
Therapeutic Technics Used with Special Group of Disturbed Children E Angres —p 133

## Industrial Medicine, Chicago

**15** 179-242 (March) 1946

Comprehensive Mental Hygiene Program at Caterpillar Tractor Company Improving Human Relationships in Industry H A Vonachen B Mittelmann M H Kronenberg and others —p 179
Prevention of Oral Diseases of Occupational Origin L. D Heacock. —p 184
Relationships Between the Industrial Physician and Community Practitioner C Leggo —p 187
The Physically Impaired Worker in Industry R. L Brown and R L C Butsch.—p 188
Industry and Medicine What Each Expects of the Other H Strong —p 194
Inflammatory Phlebostenosis as Factor in Localization of Rheumatic Diseases O Meyer —p 197

## Journal of Lab and Clinical Medicine, St. Louis

**31** 261-380 (March) 1946

*Protein Requirements of Adults D M Hegsted A. G Tsongas D B Abbott and F J Stare —p 261
Plasma Protein Levels in Normal Individuals D F Milam —p 285
*Treatment of Bacterial Endocarditis with Penicillin R J Glaser R O Smith C G Harford and W B Wood Jr —p 291
Maintenance of Therapeutic Blood Concentrations of Penicillin for Twenty Four Hours Following Single Injections of Penicillin Beeswax Peanut Oil Mixtures W M M Kirby S P Martin W Leifer and J M Kinsman —p 313
Concentration of Penicillin in Spinal Fluid Following Intramuscular Administration in Neurosyphilis Negative Report L I Kaplan H S Read F T Becker and C F Seymour —p 317
*Plague Treatment of Experimental Animals with Streptomycin Sulfadiazine and Sulfapyrazine N E Wayson and Margaret C McMahon —p 323
Effect of Gold Chloride on Plasma Ascorbic Acid in Rat R L Zwemer and H Elftman —p 333
Further Studies on Antibacterial Action of 3 5 Dibromosulfanilanilide G R Goetchius and C A Lawrence.—p 336
Application of Lyophile Technic to Biologic Products I Sera Antisera and Antibody Globulins P Masucci —p 340

**Protein Requirements of Adults**—Hegsted and his associates studied the nitrogen balance in 26 adults who were fed diets low in protein and devoid of animal protein and investigated the effect of replacing part of the protein in the diet by meat, soy flour wheat germ and white bread. As a result they consider it most unlikely that protein deficiency will develop in apparently healthy adults on a diet in which cereals and vegetables supply adequate calories The National Research Council's daily recommended allowance of 70 Gm of protein for an adult weighing 70 Kg is most generous and could if necessary, be reduced to 50 Gm and still provide approximately 30 per cent margin above requirement. These experimental data apply only to adults in good health and do not consider protein requirements in growth, pregnancy lactation or disease

**Penicillin in Bacterial Endocarditis**—Glaser and his associates present the results of penicillin treatment of 28 patients with bacterial endocarditis All patients with adequate clinical and laboratory evidence of bacterial endocarditis were included regardless of the patient's condition at the time of admission to the hospital. Intermittent and continuous methods were used either intravenously or intramuscularly on various occasions The usual procedure was the intramuscular injection of 40 000 units every two hours day and night The use of a continuous intramuscular drip was abandoned because of reactions Twenty-two of the patients had streptococcic and 6 had staphylococcic infections Of the 22, 13 are living and well, 1 is living but the infection has not been arrested and 8 have died Five of these 8 fatalities occurred before the completion of the penicillin therapy, and of the 3 others 2 were due to congestive heart failure and in the third the organism was resistant to penicillin Resistance to penicillin was observed also in the patient who survived without arrest of infection In the 6 cases of staphylococcic endocarditis results were excellent Only 1 of these patients died, and this death was due to rupture of a brain abscess The authors emphasize the importance of prompt intensive and prolonged chemotherapy Relapse occurred in 2 patients after completion of a first course, but both patients responded to a prolonged second course

**Streptomycin, Sulfadiazine and Sulfapyrazine in Experimental Plague**—Wayson and McMahon inoculated 334 white mice with plague. One half of these were treated in groups with different amounts and varying dosage of either streptomycin, sulfadiazine or sulfapyrazine The other half were used as controls From 16 to 18 animals survived among each lot of from 18 to 20, while all the corresponding controls died with plague. Forty-eight guinea pigs were likewise inoculated, and half were treated with streptomycin in two groups after clinical evidence of infection had developed All survived, but 8 had residual buboes at necropsy Twenty-three controls died with plague One hundred and six guinea pigs were infected through flea transmission After the disease was evident clinically, 15 were treated with streptomycin and 14 survived, 15 received sulfadiazine and 14 survived, 10 received both these drugs and all survived 16 received sulfapyrazine and 10 survived Six among all the survivors had residual buboes at necropsy Three survived among 50 controls divided among the four lots treated Clinical recurrences appeared frequently under the treatment schedules used with streptomycin and sulfapyrazine but not with that of sulfadiazine

## Journal of Pharmacology & Exper Therap, Baltimore

**86** 205-310 (March) 1946 Partial Index

Certain Peripheral and Central Nervous System Effects of β-Diethyl aminoethyl Phenyl α Thienylglycolate HCl and Pharmacologically Related Compounds B E Abreu and Elizabeth Troescher Elam —p 205
Studies on Pharmacology of DDT (2 2 Bis-(Parachlorphenyl) 1 1 1 Trichloroethane) F S Philips and A Gilman —p 213
*Antihistamine Properties of Benadryl β-Dimethylaminoethyl Benzhydryl Ether Hydrochloride E R Loew R MacMillan and Margaret E Kaiser —p 229
Studies on Fate of Nicotine in Body IV Observations on Chemical Structure of End Product of Nicotine Metabolism P S Larson, H B Haag and J K Finnegan.—p 239
Effects of Morphine and Its Derivatives on Intermediary Metabolism IV Influence of Chronic Morphine and Heroin Poisoning on Oxygen Consumption of Dog Rat and Mouse Skeletal Muscle. F E. Shideman —p 242
Elimination of G Strophanthin by Rat. A Farah —p 248
Absorption of Sulfonamides in Mice F L Rose and A Spinks. —p 264
Antimalarial Action in Ducks of Certain Sulfanilamide Derivatives E. K. Marshall Jr J T Litchfield Jr and H J White —p 273
Acute Toxicity of Vasopressor Amines M R Warren and H W Werner —p 280
Relation of Absorbability to Comparative Toxicity of DDT for Insects and Mammals J M Tobias J J Kollros and J Savit.—p 287
Rate of Disappearance of a Marihuana Active Substance from Circulating Blood. S Loewe —p 294
Behavior of Synthetic Esters of Strophanthidin the Acetate Propionate, Butyrate and Benzoate in Man H Gold H L Otto W Modell and S L Halpern.—p 301

**Antihistamine Properties of Benadryl**—Loew and his associates conducted experiments to determine whether Benadryl, β-dimethylaminoethyl benzhydryl ether hydrochloride, antagonizes diverse actions of histamine on several tissues, viz stimulation of secretory cells relaxation of vascular smooth muscle and contraction of intestinal smooth muscle It was deemed important to determine whether Benadryl antagonizes histamine in a specific manner or whether the effects of other depressor and/or spasmogenic agents such as acetylcholine and barium are altered 1 A dilution of 1 50,000 000 proved effective in antagonizing the spasmogenic effects of histamine

on intestinal muscle, whereas much larger doses were required to antagonize the effects of acetylcholine and barium Benadryl possesses a degree of specificity against histamine which approaches the specificity of atropine against acetylcholine In view of weak antagonism of barium, the term antihistamine compound describes Benadryl more specifically than the use of the generic term musculotropic antispasmodic. 2 Secretion from denervated gastric pouches in dogs following stimulation with histamine was reduced approximately 40 per cent by pretreatment with Benadryl Evidence of inconsistency in results and lack of a pronounced inhibitory effect reduces the probability that a direct antagonism of the secretagogue action of histamine was involved 3 Depressor effects of small doses of histamine and acetylcholine were decreased by intravenous administration of Benadryl in dogs The possibility exists, therefore, that the relaxing effect of histamine on vascular smooth muscle was antagonized, as well as the contracting effect as demonstrated on intestinal muscle 4 Adequate doses of Benadryl augmented the pressor response to epinephrine There was no evidence of epinephrine reversal, which has been demonstrated with several other synthetic drugs which possess some degree of antihistamine action

## Michigan State Medical Society Journal, Lansing

**45** 265-416 (March) 1946

Anal Cryptitis Its Relation to Focal Infection, Fissure and Fistula W W Flora.—p 333
Pneumococcic Meningitis Following Head Injuries. M Cooperstock. —p 337
Diagnosis and Treatment of Meningitis. J S Fine and F H Top —p 340
Epidemiology of Tinea Capitis in Detroit School Children L. Carrick —p 347
Effects of Small Doses of Penicillin Administered to Patients with Undiagnosed Early Syphilis Report of 3 Cases. T H Miller —p 353
Tidal Irrigation Following Gynecologic Operations H H Cummings and R K Ratliff —p 356

## Minnesota Medicine, St. Paul

**29** 193-296 (March) 1946

Factors in Rural Health in Minnesota E J Simons.—p 225
Tropical Disease Hazards in Northwest R. W Backus.—p 227
Facial Injuries. J A. Hilger —p 235
The Rh Factor K. Ikeda, E. M Kasper and R. Rosenthal —p 240
Treatment of Acute Arterial Occlusion of Extremities with Special Reference to Anticoagulant Therapy N W Barker E. A Hines Jr and W F Kvale.—p 250

**29** 297-392 (April) 1946

Cholecystectomy Its Origin and Present Status J Ohage —p 313
Acute Lesions of Abdomen Diagnosis and Treatment. A. S Jackson —p 317
Use of Myristyl Gamma Picolinium Chloride in Surgery A Schwyzer —p 321
Tuberculous Pericarditis Incidence at Glen Lake Sanatorium. E. Fenger and Olga S. Hansen —p 326
Acceleration of Bone Production by Use of Ground Bone. L J Hoyer —p 328
Gallstone Ileus Report of Case C. B Drake —p 330
Malignant Tumors of Kidney A N Collins.—p 332

## New England Journal of Medicine, Boston

**234** 357-392 (March 14) 1946

Trauma of Lower Urinary Tract Roentgenologic Study H S Weens, J H Newman and T J Florence.—p 357
Recurrent Meningococcal Meningitis Report of Case. L. Weinstein and Edith D Stanley —p 364
*Dangers of Modern Insulin Syringes. W S Collens, L. C Boas and J D Zilinsky —p 367
Arteriovenous Aneurysm of Great Vessels of Neck Report of Case. P L. Boyd —p 370
Syphilis. G M Crawford.—p 372
Subacute Glomerulonephritis —p 379
Adenocarcinoma of Lung Pulmonary Infarcts —p. 383

**Dangers of Modern Insulin Syringes**—Collens and his associates point out that the original introduction of a variety of insulin concentrations necessitated the construction of hypodermic syringes with different calibrations corresponding to these various concentrations Apparently, in an attempt at economy, syringes with double graduations were manufactured The dual calibrations confuse the majority of diabetic patients and present a serious obstacle to the successful administration of the dose of insulin planned by the physician. This problem has been further complicated by the introduction of modified forms of insulin, such as protamine zinc insulin, zinc insulin crystals and globin insulin The introduction of a new technic for administering insulin mixtures has still further aggravated the problem The authors make recommendations for the manufacture of syringes with simplified graduations to eliminate the possibility of error in dosage

## New Jersey Medical Society Journal, Trenton

**43** 77-122 (March) 1946

Mental Hygiene Problems of the Aged E Frankel —p 79
Modern Treatment of Peptic Ulcer J Gerendasy —p 84
Early Treatment of Hay Fever in Infancy J London —p 86
Differential Diagnosis of Sulfa Drug Reactions. H C Goldberg —p 87
Chemotherapy in Management of Leukorrheas Anne Horoschak and S Horoschak —p 92
Dermatitis Venenata of Eyes and Eyelids from Local Use of Penicillin. E M Satulsky —p 95
Hygiene of Anus and Rectum J Gerendasy —p 97

**43** 123-166 (April) 1946

*Sublingual Administration of Penicillin J T Hanan —p 127
Cough in Tuberculosis C Hyman —p 128
Shock Therapy at Essex County Hospital H G Smith —p 130
The Wart and Its Treatment. A J Delario —p 134
Masking of Mastoiditis Symptoms by Penicillin A. S Wilner —p 140
Treatment of Amebiasis J Gerendasy —p 141
Asymptomatic Congenital Diaphragmatic Hernia Case Report O Glass —p 143

**Sublingual Administration of Penicillin.**—Hanan directs attention to the availability of the sublingual space for quick absorption into the blood stream of penicillin sodium in solution by way of the ranine veins under the tongue. He has been using this area to promote a rapid blood level of penicillin when oral medication was indicated Systemic absorption from the sublingual space nearly equals that from a subcutaneous injection The basic formula is 100,000 units of penicillin sodium, 5 cc. of isotonic solution of sodium chloride and one drop of spirit of peppermint Ten drops are placed under the tongue every hour or two This gives forty doses of 10,000 units each Results by this route have been prompt, uncomplicated and curative

## Radiology, Syracuse, N Y

**46** 213-318 (March) 1946

Roentgenographic Signs of Herniation of Cervical Intervertebral Disk. J E Whiteleather R E Semmes and F Murphey —p 213
Roentgenographic Observations in Age Atrophy and Osteoporosis of Spine G J Marum —p 220
Reflex Hyperemic Deossifications Regional to Joints of Extremities. A. A de Lorimier W L Minear and H B Boyd —p 227
Nondisabling Bronchiectasis A Fine and T B Steinhausen —p 237
Roentgenograms of Chest in Mental Deficiency J T Danzer —p 244
Roentgenographic Appearance of Temporomandibular Hydrarthrosis. A L. Bachman and A L Bershon.—p 251
Transient Successive Pulmonary Infiltrations (Loffler's Syndrome) M Eichwald and W V Singletary —p 258
Unusual Bone Lesions in Infant, Probably Osteitis Tuberculosa Multiplex Cystoides. F Y Khoo and Y Yang —p 263
Congenital Absence of Odontoid Process Report of Case J McK Ivie —p 268
Congenital Absence of Septum Pellucidum Associated with Internal Hydrocephalus W P Savain —p 270
March Fracture of Articular Surface of Tibia and Its Relation to Osteoarthropathy J Levitin —p 273
Fatigue Fracture of Metatarsal Report of Case W E. Allen Jr —p 276
Cancer of Skin Statistical Report H J Ullmann —p 279

## Western J Surg, Obst & Gynecology, Portland, Ore

**54** 127-176 (April) 1946

Present Trends in Practice of Medicine and Surgery Presidential Address P K Gilman —p 127
Spinal Cord Concussion in War Wounds W K. Livingston and H W Newman —p 131
Involuntary Movements Following Nerve Injuries by High Velocity Projectiles. W K. Livingston and H W Newman —p 140
Moore Blount Internal Fixation of Intertrochanteric Fracture of Femur in an 89 Year Old Woman R R. De Nicola —p 145
Clinical Use of Prostigmine as Ideal Office Procedure in Determining Pregnancy A L. Natenshon —p 149

## FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below Single case reports and trials of new drugs are usually omitted

### British Journal of Radiology, London

**19** 133-172 (April) 1946

Dosage Control in Interstitial Radium Therapy Symposium. B W Windeyer J R Nuttal F W Spiers and others —p 133
*Chronic Ulcerative Esophagitis with Report of Case of Ulcer in Esophageal Varices G Steiner —p 145
Stereoscopic Screening J A Ross —p 156
Investigation into Radiologic Appearances of Chests of Workers Engaged in Production of Toxic Gases P H Whitaker —p 158
*Graphite Pneumonoconiosis Complicated by Cavitation Due to Necrosis L Dunner and J T Bagnall —p 165
Tactics and Technic for Urography H Hellmer —p 169

**Chronic Ulcerative Esophageal Varices** —Steiner presents several cases of chronic ulcerative esophageal varices and describes the radiologic signs with particular regard to the mucosal relief both in the case of an actual crater and in the predominantly inflammatory form. As in other parts of the alimentary tract a sudden break in the mucosal pattern does *not necessarily indicate neoplastic infiltration* Narrowing of the lumen may be due to mucosal swelling without spasm or stenosis of the muscular coat Dilatation may result from hypotonicity alone. Absence of direct ulcer signs should not deter the radiologist from diagnosing chronic esophagitis, provided the alteration in the mucosal relief is constant and can be differentiated from early neoplasm.

**Graphite Pneumonoconiosis with Cavitation** —Dunner and Bagnall describe the first case of a lung cavity due to necrosis in a worker aged 64 who had been working with graphite for seventeen years In 1939 he was pronounced tuberculous and sent to a sanatorium His sputum was always free from tubercle bacilli After discharge he did not return to work with graphite but was able to do light work for six years In 1944, when first seen by the authors, radiologic aspects of his chest were unchanged when compared with those of films taken in and since 1939, and showed massive opacity in the right upper zone, similar, but fainter opacity in the left upper zone, and a rounded opacity the size of a golf ball superimposed on the lower part of the left root shadow In April 1945 he suddenly brought up large amounts of black material Samples of the undried sputum contained about 0 07 per cent of carbon, the size of the majority of the particles being 5 microns or less, with only a few over 10 microns No silica was detected

### British Medical Journal, London

**1** 423 460 (March 23) 1946

Health Problem in Berlin (July 1945 to January 1946) P G Horsburgh and H A Raeburn —p 423
Nutrition of School Children in Leeds, Winter 1943 and Summer 1944 F W Chattaway F C Happold and A Margaret Happold —p 429
Unusual Gunshot Wound of Internal Carotid Artery S L Schwarzwald.—p 431
Congenital Malaria A Eckstein and W C W Nixon —p 432
Hypertension in Ruptured Kidney D C Corry —p 433

### Edinburgh Medical Journal

**53** 97-144 (March) 1946

Management in Prostatic Surgery with Special Reference to Operative Risk R L Stewart.—p 97
Assessment of Sensory Denervation After Injuries of Peripheral Nerves R L. Richards —p 110
*Postprandial Variation in Hemoglobin A W Branwood —p 125
Hemolytic Streptococci in Puerperal Sepsis. J Dick —p 134

**Postprandial Variation in Hemoglobin** —Branwood shows that the percentage of hemoglobin in the peripheral blood is not constant throughout the day There is usually a postprandial fall in hemoglobin of the order of 5 to 10 per cent This fall is in proportion to the size of the meal—the larger the meal the greater the fall There is also presumably, a fall in the number of erythrocytes at this time. It will be obvious that when periodic hemoglobin values are required they should not be estimated within three hours following a large meal or should be estimated at the same time of day This decrease in hemoglobin is probably due to a redistribution of the cells from the periphery to the abdominal viscera and possibly also to slight changes in blood volume This fall in hemoglobin can be prevented by exercise or by the administration of epinephrine Cases of hypertension and hyperthyroidism do not share this postprandial decrease in hemoglobin

### Irish Journal of Medical Science, Dublin

**243** 73-108 (March) 1946

*Copper Sulfate Method in Routine Hematologic Examinations M H O Connor —p 73
Surgical Treatment of Deafness I S Hall —p 80
Two Stage Treatment of Soft Tissue Injuries H Donough O Brien. —p 85
Fracture Dislocation of Mandible H S Meade.—p 98
Calcification of Placenta E. Solomons and N McI Falkiner —p 99
Uses of Amnioplastin S J MacHale —p 101

**Copper Sulfate Method in Routine Hematologic Examinations** —O Connor suggests that the copper sulfate method accompanied with centrifugalization of blood in a hematocrit tube is a satisfactory approach to a hematologic study of blood Unless there is some otherwise special indication, bloods submitted to and found normal by this method need not be further examined. The method immediately draws attention to a pathologic blood and, supplemented by a calculation of the specific gravity of the cells, may help to distinguish anemias classified as hypochromic. With further study the method may distinguish hyperchromic anemias and possibly normochromic, normocytic anemias and mixed anemias

### Journal of Pathology and Bacteriology, Edinburgh

**58** 1-156 (Jan) 1946

*Acceleration of Healing by Pressure Application to Experimental Thermal Burns G R. Cameron J W Allen R. F G Coles and J P Rutland —p 1
Hemolysin Tests for Rapid Identification of Clostridium Oedematiens and Clostridium Septicum. Nancy J Hayward and J A. B Gray —p 11
Notes on Weil Felix Reactions in Typhus Fever and Other Diseases. J C Dick —p 21
Isolation of Organisms of Pleuropneumonia Group from Genital Tract of Men and Women M H Salaman and collaborators.—p 31
Influence of Surface Active Substances on Growth of Acid Fast Bacteria A E Alexander and M A Soltys.—p 37
Neutralization of Corynebacterium Diphtheriae Type Toxins with Standard Antitoxin as Determined by Skin Reactions in Guinea Pigs. K Zinnemann —p 43
Histologic and Bacteriologic Study of Healing Burns with Inquiry into Significance of Local Infection J Gordon R A Hall R M Heggie and E. A Horne —p 51
Experimental Study of Healing of Wounds with Special Reference to Action of Heart Extract Powder (Doljanski) J S Young, A H Cruickshank and W J Martin —p 63
Diffusion of Antiseptics Through Agar Gels with Special Reference to Agar Cup Assay Method of Estimating Activity of Penicillin. K E Cooper and D Woodman —p 75

**Healing of Thermal Burns** —Cameron and his associates produced thermal burns in anesthetized goats by immersing the right forelimb for two and one-half minutes in water kept at a steady temperature of 86 C The area of burning involved approximately 5 per cent of the total body surface. Quick setting cellulose and plaster of paris bandages were closely wrapped around the burnt limb within a few minutes of burning A layer of dry sterile gauze separated the plaster from the skin The bandages were kept on for thirty days In a *second series pressure treatment* was initiated at once but the plaster bandage was removed at varying intervals after burning In a third series pressure treatment was commenced two or four hours after burning and maintained for nineteen days In a fourth series goats with standard burns were treated with local applications of penicillin cream and an ointment containing sulfathiazole zinc oxide and amyl salicylate protected with sterile gauze but no pressure bandage. The prompt application of pressure bandages to thermal burns of the extremities of goats accelerated the rate of healing and greatly reduced the mean healing time. Pressure interferes with effusion of plasma and the formation of fibrin at the burn site. It reduced the severity of edema decreased the amount of reparative tissue and probably lessened the chance of local infection. Pressure should be applied as soon as possible after burning to get the best results A delay of four hours seemed to be the limit for beneficial effects There is no need to maintain pressure application for much longer than a week, for there was little difference in mean healing times for standard burns treated with pressure for nine, sixteen or thirty days Removal of pressure

bandages during a critical phase lasting for several days after burning was followed by severe edema of the burned area and delay in healing Healing of burns treated by the local application of penicillin cream or the ointment was less favorable

## Lancet, London

**1** 447-484 (March 30) 1946

Thrombosis Early Diagnosis and Abortive Treatment with Heparin G Bauer —p 447
Effect of *pH* of Medium on Activity of Streptomycin and Penicillin and Other Chemotherapeutic Substances E. P Abraham and E. S Duthie —p 455
Gas Gangrene Following Injection of Adrenalin Eva V Cooper —p 459
Bacterium Coli Meningitis Treated with Sulfathiazole F E Crawley —p 461

## Bruxelles-Medical, Brussels

**26** 163 214 (Feb 24) 1946

Toxic Infectious Epidemic Syndrome in Newborn M Lust and P Nelis —p 173
Chrysotherapy for Still's Disease. B Schlesinger —p 185

**Toxic Infectious Epidemic Syndrome of Newborn.**—An epidemic manifested by signs of intoxication associated with dehydration and diarrhea has recently been raging in parts of Belgium The newborn and babies several weeks old were affected particularly The temperature of the patients varied from 99 to 99 4 F Hypothermia was recorded in a considerable number of cases Death occurred within thirty-six to forty-eight hours but also after a prolonged course of from five to seven or even more days The mortality rate varied from 40 to 50 per cent, in some cities it reached 60 and even 100 per cent. Postmortems did not reveal any lesions or signs of irritation of the alimentary canal The etiology and the pathogenesis of this disease are not known, but parenteral infection seems likely, although the alimentary canal cannot be excluded

## Semaine des Hôpitaux de Paris

**22** 209 252 (Feb 14) 1946

Neurosurgical Treatment of Dyskinesia (Choreoathetoid Movements Dystonia Tremor) M David and H Hecaen —p 209
Hertwig Magendie Phenomenon P Desvignes —p 220
Study of Results of Oscillometry A. H Israel and H Rendu —p 222

**Neurosurgical Treatment of Dyskinesia.**—David and Hecaen report the occurrence of torsion spasm in the right arm associated with spasmodic torticollis, tremor of the arm and hand and choreoathetoid movements of hemiballism type in a man aged 40 Conservative treatment was ineffective. Neurosurgical treatment consisted in resection of areas 4 and 6 of the cortex, followed by electrocoagulation. All the involuntary movements disappeared almost immediately after the cortical operation and did not recur for five weeks of electrocoagulation. Then the torsion spasm and the tremor reappeared but the choreoathetoid movements and the spasmodic torticollis did not recur within ten months after the intervention Although 1 case is not enough to form a basis for drawing definite conclusions the authors emphasize that treatment for tremor of Parkinson's type must be different from that for choreoathetosis

**22** 309 358 (Feb 28) 1946

Hurler's Polydystrophy—Ellis's Gargoylism Report of 3 New Cases R Debre J Marie and S Thieffry —p 309
Pulmonary Emphysema and Primary Tuberculous Infection J Marie and G Sée —p 320
Meningococcic Gangrenous Purpura J Marie, P Seringe Miss M Cousin and Mrs S J Marie —p 326
*Acute Diabetes Mellitus of Infectious Origin in Children Its Rapidly Regressive Course. J Marie P Seringe H Rouèche and P Maurice. —p 338

**Diabetes Mellitus of Infectious Origin in Children.**—Marie and his associates report acute diabetes mellitus in a girl aged 10 years and a boy aged 11 In both cases the history did not reveal any heredofamilial diabetes Both children were in perfect health until the girl had scarlet fever and the boy infectious jaundice In both cases polydipsia and polyuria appeared suddenly in the course of the infectious disease. In the girl, acidosis and a precomatose condition developed on the forty fifth day of the scarlet fever This strongly suggests that the diabetes did not precede the scarlet fever, since a diabetic child with scarlet fever or measles will develop acidosis and coma during the first days of the infectious disease Symptoms of coma appeared after the temperature came to normal and after the rash had disappeared. The glycemia was reduced from 4 16 Gm to 1.25 Gm within twenty-two hours of the administration of insulin In both cases the carbohydrate tolerance improved rapidly, so that insulin treatment of the girl was discontinued after twenty-two days and of the boy after sixty-four days Both children were placed on a high carbohydrate diet, and glycosuria did not recur This rapid and complete reversibility of the glycoregulatory disturbance seems to be exceptional in acidosic diabetes of children. Acute infectious regressive diabetes mellitus may therefore be considered to be a variety of infantile diabetes

## Schweizerische medizinische Wochenschrift, Basel

**75** 1025-1048 (Nov 24) 1945

*Diagnostics and Surgical Therapy of Cerebral Manifestations of End angiitis Obliterans of Winiwarter Buerger H Krayenbuhl —p 1025
Importance of Tomography in Absence of Cavities in Tuberculosis of Lungs F Rotach —p 1029
Sulfonamide Therapy for Acute Dyspepsia with "Yellow Stools" A Hottinger —p 1032
Hazards of Constriction of Extremity for Control of Bleeding Z Mester —p 1033
Therapy of Obstructive Jaundice O Šmahel —p 1035
Chorea Caused by Injury of Superior Peduncle in Light of Experimental Research S Burgi —p 1036

**Cerebral Manifestations of Endangiitis Obliterans**—Krayenbühl reports 25 cases of cerebral manifestations of Winiwarter-Buerger's endangiitis obliterans In 3 of these the cerebral manifestations accompanied a more or less generalized endangiitis obliterans, while in 22 the endangiitis was restricted to the cerebral blood vessels Careful cardiovascular examination and cerebral arteriography offer considerable aid to the diagnosis of the rare cases of the first group Diagnosis proved more difficult in the second group The age at which the initial symptoms of the disease occurred varied from 11 to 58 years Signs of unilateral motor or sensory paralysis of various degree and extent in all the patients were revealed on examination or by the history Ocular symptoms were rare Temporary spasms of the vessels of the retina were not observed A drop in arterial blood pressure of the retina was demonstrated occasionally There were no symptoms of increased intracranial pressure. In 12 cases the complete occlusion or a more or less high degree of constriction of the internal carotid artery was demonstrated at the point where the common carotid artery gives off the internal carotid artery, this, therefore, is to be considered as the area of predilection of the vascular process In 4 cases the occlusion of the internal carotid artery occurred in the carotid siphon', this term is applied to the point where the internal carotid artery gives off the middle cerebral artery

## Revista Medica de Chile, Santiago

**73** 1007-1112 (Dec) 1945

Cardiovascular Syphilis (Late Syphilis) Diagnosis of Simple Aortitis Without Complications Anatomic and Clinical Study J Alvayay H Apablaza and E Solari —p 1007
New Concepts on Diagnosis and Treatment of Acute Pancreatitis H Reyes —p 1026
Bacterial Endocarditis Anatomoclinical Study and Etiopathogenetic Considerations A Garretón S and G Dussaillant G —p 1034
*Peptic Ulcer of Esophagus F Diaz and M Riera —p 1053
Postoperative Cholangiography E Duval —p 1060
Rectosigmoidal and Sigmoidal Cancer J Castro G —p 1070
Carcinoma of Rectum Problems Relating to Diagnosis and Treatment R. Estevez C —p 1077

**Esophageal Peptic Ulcer**—Diaz and Riera report 7 cases of peptic ulcer of the esophagus Statistically there is 1 case of esophageal peptic ulcer for every 30 cases of gastric ulcer Peptic ulcer of the esophagus almost always is located within the distal third of the esophagus slightly above the cardia or at the level of the diaphragmatic hiatus Probable etiologic factors include the digestive action of gastric juice, esophageal varices and conditions which lead to dysfunction of the cardia and favor backflow of gastric juice, such as pyloric stenosis diaphragmatic hernias, short esophagus or thoracic stomach Pain which at times is burning and which coincides

or follows deglutition, is the most frequent symptom Some patients have dysphagia, but in others it is absent Vomiting and particularly regurgitation are important symptoms Important roentgenologic and endoscopic findings include spasm, appearance of a defect, slow esophageal passage with persistence of barium in the ulcerated portion, stenosis with dilatation above, insufficiency of the cardia and dilatation of the distal third of the esophagus

## Acta Medica Orientalia, Jerusalem

5 1-32 (Jan) 1946

*Trial with Penicillin in Certain Cases of Thromboangiitis Obliterans (Buerger s Disease) Preliminary Report F Mandl —p 1
Thromboangiitis Obliterans a Disease of Entire Vascular System L Boehm —p 8
Amebiasis and Rheumatism E Lasowski —p 14
Thrombosis of Cavernous Sinus Case H J Stern —p 17
Jubilee Assembly of Palestinian Radiologists S Glassheib —p 19

**Penicillin in Thromboangiitis Obliterans** —Of the 8 cases which Mandl treated with penicillin, 7 presented severe thromboangiitis obliterans and 1 thrombophlebitis migrans without particular involvement of arteries Sympathectomy had been done in 6 of these 8 cases and had been repeated in 2 In 2 of the cases of thromboangiitis obliterans of stage 2, penicillin therapy was the first measure In 2 cases penicillin therapy followed immediately on amputation of a toe The effect of penicillin therapy was immediate in 7 of 8 cases The effect of penicillin was least pronounced in the mildest case The first and most important effect was relief of pain, so that the use of morphine could be dispensed with When the patients got up the walking distance had increased in all of them, which justified the conclusion that the obstructing process of the arteries and veins also had been favorably influenced The objective examination of the permeability of the blood vessels and the collateral circulation by oscillometry showed no improvement The thermometric findings also remained practically unchanged The author admits that penicillin does not cure thromboangiitis obliterans and that its effects are not comparable to those of surgery Nevertheless, subjective symptoms can be greatly improved and there is a definite influence on the inflammatory elements"

## Nordisk Medicin, Gothenburg

28 2005-2070 (Oct 5) 1945 Partial Index

Repeated Failure in Serologic Diagnosis of Syphilis in Patient with Secondary Syphilis A Tvedt —p 2007

### Hospitalstidende

Medical Practice in Concentration Camps P Thygesen —p 2009
Calmette Vaccination by Scarification Method V Sindbjerg Hansen and P Møller —p 2018

### Medicinsk revue

*Schick Test During Diphtheria Epidemic T M Vogelsang and B O Krysi —p 2021
*Diphtheria in First Year of Life J Bøe —p 2030
*Laryngeal Diphtheria T Kahrs —p 2034

### Hygiea

Stricture of Pulmonary Artery Due to Shrinking Mediastinitis G Soderberg —p 2051

**Schick Test During Diphtheria Epidemic in Bergen** —The diphtheria epidemic which flared up in Bergen, a city of 105,000 late in 1941 apparently reached its peak in 1943-1944 In 1943, 519 cases were reported From September 1944 to February 1945 the Schick test was performed on 3,000 unvaccinated persons aged from 16 to 71, mostly from 21 to 50, mainly from the better social class The reaction was positive in 67 per cent, a remarkably high percentage in an epidemic of so long duration, of the 117 who had had diphtheria, 58 per cent were Schick positive In 120 additional persons vaccinated against diphtheria the test gave a positive reaction in 5 per cent.

**Diphtheria in First Year of Life** —In the 106 cases of diphtheria in infancy in the recent epidemics in Bergen and Throndheim there were 15 deaths (14 per cent), with 11 deaths in the 76 cases in infants under 6 months Bøe says that diphtheria in infants is often not recognized even in epidemic periods Nasal diphtheria is its most frequent form Long continued coryza is often the only symptom, till disturbances in nutrition occur and the infant becomes highly susceptible to other infections, especially bronchopneumonia Diphtheria in infants seems to tend more than in the older age groups to spread downward. Vaccination is without practical value, as so few infants form antibodies The efficacy of serum treatment was doubtful Possibly in epidemics the newborn might be protected by vaccination of the Schick positive mothers some time before delivery

**Laryngeal Diphtheria** —Kahrs says that the 140 cases of laryngeal diphtheria treated from 1941 to 1945 constituted 4 6 per cent of the diphtheria cases in Stavanger Hospital, 55 per cent of the patients were under 6 months and about 85 per cent were under 20 Therapy consisted in application of serum, steam and in 62 cases of tracheotomy Thirty-two patients (22 9 per cent) died, of those operated on, 23 died It is at times difficult to distinguish laryngeal diphtheria from acute laryngitis The onset of laryngeal diphtheria is slower than that of laryngitis, with a more gradually developing difficulty in respiration and often at the start slight symptoms of angina. The disease is as grave today as in the past.

28 2071-2130 (Oct 12) 1945 Partial Index

Pathogenesis of Hypertension J Bing —p 2071
Reform in Medical Studies W Kerppola —p 2082
Intrasternal Evipan Anesthesia. J B Dalgaard —p 2083

### Hospitalstidende

*Postoperative Phlebitis Thrombosis and Embolism in Patients Out of Bed from Day After Operation E Dahl Iversen —p 2085
Osteochondritis Dissecans Contribution to Question of Etiology K Bang Rasmussen —p 2088
*Cancer of Gallbladder P E. Andersen —p 2091

### Hygiea

Ischialgia and Vascular Spasm T Lindqvist and V Naslund —p 2095
Lymphadenosis Benigna Cutis. B Bafverstedt —p 2101
Rapid Method for Cultivation of Gonococci H Englesen —p 2106
Complication in Blood Transfusion Due to Rh Factor in Pregnant Woman Who Had Borne Six Normal Children B Löfgren —p 2109
Results with Acid Diet and Acid Therapy in Gastric Achylia with Anemia and Tuberculosis E Forsgren —p 2112
Nucleotide Metabolism in Lymphocytes B Thorell —p 2115

**Phlebitis, Thrombosis and Embolism in Patients Out of Bed from Day after Operation** —Dahl-Iversen states that during the last three years patients after laparotomy without drainage, after operations on the external genitalia, perineum, anus, vagina and uterus, after operations on the head, neck, trunk and extremities, on the bladder and prostate and herniotomy have been allowed to be up from the day following the intervention In the 1,736 patients thus treated postoperative complications of phlebitis, thrombosis and embolism have been reduced from 3 5 per cent before the introduction of the procedure to 0 58 per cent. The incidence of recurrence after herniotomy has not been increased, follow-up of 110 patients two years after the operation showed recurrence in 3 instances (2 7 per cent)

**Cancer of Gallbladder** —According to Andersen there are two types of cancer of the gallbladder, one with a long standing history of gallbladder disease, the other with a brief history and symptomless course. The possibility of an early diagnosis is slight. Roentgen diagnosis succeeds only in exceptional cases The condition may be surmised when there is a constant dull pain under the right costal arch in a long standing gallbladder disturbance associated with increased sedimentation rate, weakness, loss of weight and late local signs in the abdomen The cancer soon spreads to the liver by invasion and metastasis There is little chance for effective therapy The prognosis is relatively favorable only in cases in which the cancer is an accidental finding in a gallbladder removed for other cause. In the literature only 7 cases free from recurrence after five years have been reported, Heller reports a case with recurrence after six years In from 80 to 90 per cent cancer of the gallbladder develops in a gallbladder with stones, and 5 to 10 per cent of all patients with gallstones are likely to die from cancer of the gallbladder Prophylaxis consists in early operation in patients with gallstones Microscopic examination of 80 cases of cancer of the gallbladder revealed 34 adenocarcinomas, 2 scirrhous cancers and 18 medullary cancers (Gröbl and Pohl)

# Book Notices

**The Chemistry of Anesthesia** By John Adriani M D Director, Department of Anesthesia Charity Hospital of Louisiana at New Orleans Fabrikoid Price $7 Pp 536 with 45 illustrations Springfield Ill Charles C Thomas 1940

Here is a definite milestone in the advancement of the recently recognized specialty of anesthesiology in American medicine The author's statements that chemistry plays a significant role in anesthesiology and that it is the most widely reflected fundamental science in medicine certainly are truisms One has but to glance at the three major parts of the text on inorganic chemistry related to anesthesia organic chemistry related to anesthesia and biochemistry related to anesthesia, to realize something of the scope of this fundamental science in this specialty As a corollary it reflects the importance of anesthesiology in the entire field of biology and medicine.

The book shows careful thought and planning It indicates months of work for in the first two divisions there is collected and presented in an interesting manner and a logical, orderly sequence the essential and basic physical and chemical information to which ready and frequent reference is desired This includes a clear explanation of the well known laws for behavior of gases and the 'why and how' of apparatus in which they are used The basic principles of the structure and behavior of organic compounds are very well presented. Drugs are classified and discussed by groups on the basis of their physiologic effects on the autonomic nervous system or by general action such as the analeptics local anesthetics or opium derivatives Only very pertinent information is included.

The effects which anesthetic agents can be expected to produce in alteration of normal physiologic function are briefly and concisely given in the third division of this useful book It includes a discussion of the chemical basis of the proposed mechanisms of narcosis The effects of anesthesia on composition of body fluids require three chapters, including in the first such topics as intracellular water, blood volume, interstitial fluid volume, the erythrocyte and hemoglobin The second chapter of this discussion is concerned with effects of anesthetic agents on electrolytes, total base, the common cations and anions the halogens, sulfates lactates and acid-base balance. The latter topic is particularly well discussed and is followed by the practical topic of convulsions in anesthesia and the acid base aspects of such an accident.

The third and concluding chapter, on body fluids, is concerned with the organic constituents, nonprotein nitrogen urea, uric acid amino acids, creatine and creatinine, ammonia, guanidine bases and plasma proteins It includes also the changes in nonprotein nitrogen during anesthesia, the clotting of blood, carbohydrates and cerebrospinal fluid. Chapters on anesthetic effects on the liver, on formation and composition of the urine, on lipoid and nervous tissues and on enzymes, vitamins and hormones also are adequately and concisely presented.

Every qualified medical anesthetist would profit by frequent reference to this book. It is indicative of the broad basic principles on which the specialty of anesthesiology is founded.

**Hypoglycemies spontanées Le traitement chirurgical de l hyperinsulinisme** Par P Mallet Guy professeur agrégé à la Faculté de médecine de Lyon et P Maillet prosecteur à la Faculté de médecine de Lyon Préface du Pr H Mondor Paper Price 55 francs. Pp 102 with 17 illustrations. Paris Masson & Cie 1944.

This small monograph deals with all the clinical phases of hyperinsulinism, emphasizing islet cell tumors An interesting point brought out in the text is that hypoglycemia may in rare instances be associated with chronic fibrous pancreatitis In this country at present it has little scientific value, since it is based on the American literature up to 1938 and the French literature up to 1943 This is no fault of the authors, who are eminent men in surgery and medicine respectively in France but is due to the isolation of the conquered countries from the rest of the world during the German occupation The book is written in the classic French style an example of logic clarity and conciseness The American surgeon who might happen to read the volume will be interested to note that here is a European treatise dealing with a field developed primarily in this country and which acknowledges American leadership

**Medicine in Industry** By Bernhard J Stern Ph D Visiting Professor of Sociology Yale University New Haven Connecticut Studies of the New York Academy of Medicine Committee on Medicine and the Changing Order Cloth Price $1 50 Pp 209 New York Commonwealth Fund London Oxford University Press 1946

This is one of a series of monographs published under the auspices of the Committee on Medicine and the Changing Order of the New York Academy of Medicine The foreword states that the committee was established in 1942 because of the conviction that the medical profession is confronted with problems which require thorough study and that the academy had both the opportunity and the responsibility to contribute to the effective solution of these problems The instructions of the council to the committee were to review the nature, quality and direction of the economic and social changes that are taking place now and that are to be anticipated in the immediate future, to define in particular how these changes are likely to affect medicine in its various segments and to determine how the best elements in the science and art of medicine and in its service to the public may be preserved, embodied and extended in whatever new social patterns may ultimately appear To date there are four books in the series This is the second which has been written by Dr Stern the other being American Medical Practice in the Perspectives of a Century The monograph presents an extended review of the scientific developments in industrial medicine social and legislative backgrounds, a discussion of the extent of industrial disabilities and of the handicapped worker in industry, a review of the present status of preventive services and of medical care and health insurance plans in industry and a chapter on the industrial physician The book contains a wealth of factual material and is well written. It develops the well known thesis that our social organization has not kept pace with the development of medical science. It is apparent that the author considers the centralization of control and regulation of working and living conditions under federal jurisdiction an important means of improving standards in the field of industrial health One is left with a feeling of regret that an overemphasis of the class struggle detracts greatly from what might well be a valuable objective contribution

**In vitro Studien zur lokalen Sulfanilamid Therapie** Von Julius Hirsch Aus dem Hygiene Institut der Universität Istanbul Paper Pp 30 with 6 illustrations Istanbul Kenan Matbaasi 1946

The experiments reported in this paper were carried out by Hirsch of the Hygiene Institute of the University of Istanbul in collaboration with H Özerengin The authors stress that local administration of the sulfonamides gives a concentration at least one hundred times greater than the concentration in the blood after oral or parenteral administration To gain insight into the mode of action of the sulfonamides during local administration the authors investigated nine sulfonamide preparations in 0 01 molar concentration against sixteen different cocci and bacteria in a buffered ($p_H$ 7 0) nutrient solution of peptone and yeast extract. The presence of products of protein decomposition and extracts of yeast cells produces similar biochemical conditions for the activity of sulfonamides as exist frequently in local infections as the result of presence of tissue detritus or pus The authors discuss the phenomenon of selective activity of sulfonamide compounds and stress certain practical applications of the experimental results for the local therapy They believe that in view of the frequency of mixed infections compound preparations should be produced which contain substances of varying selectivity Such polyvalent preparations could find general application and would dispense with the necessity of bacteriologic control in daily practice

**Nomenclatura y clasificación de los tumores del sistema nervioso** Por P del Rio Hortega Paper Pp 63 with 67 illustrations Buenos Aires Lopez & Etchegoyen S R L. 1945

This is a brief presentation in a South American publication of the views of the famous late Spanish neurohistologist and neuropathologist on the classification of tumors of the central peripheral and sympathetic nervous systems Each tumor is briefly discussed and adequately illustrated, but details of the clinical characteristics and of the gross and microscopic appearance of the tumors are not presented. The index is brief, and there are no references to the literature

# Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES THEY DO NOT HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS BUT THESE WILL BE OMITTED ON REQUEST

## CARBONATED BEVERAGES FOR YOUNG CHILDREN

*To the Editor* —Is there any contraindication in giving carbonated beverages particularly those containing caffeine (the cola drinks) to children from age 1 upward?

M C A U S

ANSWER —This question is considered at some length in a report of the Council on Foods and Nutrition under the title of Some Nutritional Aspects of Sugar Candy and Sweetened Carbonated Beverages published in THE JOURNAL, Nov 7, 1942, page 763 The following comments were taken from the Council's report

The use of caffeine by children is not considered wise but especially undesirable is the fact that the use of sweetened drinks displaces the use of other foods Sweetened drinks tend to replace that important part of the child's diet milk

With older children it is obvious that a school lunch suffers gross deterioration when the beverage chosen in place of milk is a solution of sugar in flavored water It is also generally conceded that excessive sugar eating between meals or sugar eaten in smaller amounts within an hour of the regular meal time impairs the appetite for foods at meals

Many investigators have attributed harmful effects to the teeth of the excessive use of highly refined sugars The indiscriminate and uncontrolled supply of poor food for consumption between meals cannot be condoned with impunity

## ADMINISTRATION OF COLD PLASMA

*To the Editor* —Is there any physiologic motive justifying the administration of ice cold plasma to patients under anesthesia? I noticed two immediately fatal reactions in which the patients never regained consciousness and although the *post hoc* is not necessarily the *propter hoc* I am inclined to question the value of the procedure I should also like to know the effect of ice cold liquids on the intima of the vein chosen for transfusion Has any pathologic work been done on the subject?

M D Ontario

ANSWER —The physiologic motive justifying the administration of ice cold plasma to patients under anesthesia is obscure Unless a special apparatus is used or the material is given at high speed, the plasma warms up considerably before reaching the patient's blood stream On the other hand the administration of plasma or any other parenteral fluid without warming directly from the refrigerator does not cause any reaction attributable to the low temperature itself There is far more danger in improper heating of plasma and other parenteral fluids than there is in using them directly from the refrigerator

Plasma preserved at refrigerator temperature flocculates heavily It should be carefully filtered immediately before transfusion or while it is administered Failure to do so might cause severe, possibly fatal reactions Maintenance of the plasma in the frozen or dried state practically eliminates flocculation

## SUDDEN DEATH

*To the Editor* —What causes sudden death of a middle aged man apparently well after sudden exertion? Also what is the cause of sudden death of adults three or four days after operation following mild exertion such as getting out of bed?

M D New York

ANSWER —Probably the most common cause of sudden death in middle adult life of a man apparently well and following exertion is some form of cardiac disorder This may be basically an unrecognized valvular disease or atherosclerosis of the coronary arteries, with sudden occlusion and cardiac infarction

Sudden death of adults several days following an operation with or without exertion is often due to embolism caused by dislodgment of thrombi formed in the veins of the trunk or extremities and carried as emboli by the venous blood into the right side of the heart the pulmonary artery or its branches Cardiac conditions as mentioned in the preceding paragraph could be causal

While these represent highly probable causes of death under the conditions mentioned one should not presume that the cause of a specific death can be established on the basis of such possibility A complete postmortem examination is necessary

## ANOMALY OF THE NECK WITH COUGH

*To the Editor* —A girl aged 6 years has a cough which is hoarse in character occurs during the time she is awake and is sudden and short It is not productive and is not accompanied by fever or any other complaint laboratory finding except slight enlargement of the hilar glands The cough has persisted for six months The unusual finding is that on coughing or during speech a large soft swelling appears suprasternally apparently large air pocket Please advise regarding possible further efforts regarding diagnosis or treatment

Bernard Farfel M D Houston Texas

ANSWER —Thyroglossal cysts are among the most common anomalies found in the neck Complications that occur are spontaneous rupture and infection The cyst may be injected with methylene blue and the patient then observed to see if the material appears in the throat Another method is to aspirate the cyst and inject material opaque to x-rays If the latter procedure is carried out, the material should be reaspirated afterward

Treatment with sclerosing materials has been generally abandoned Radical extirpation is the procedure of choice and should be carried out in the operating room

## TOXICITY OF BARBITURATES

*To the Editor* —Recently articles have appeared in the daily press concerning the toxic effects of barbiturates when taken with alcoholic beverages mentioning a type of "jag" What is the lethal dose of barbiturates (single dose)? Is the lethal dose different for the various salts of barbituric acid? Is the lethal dose diminished if the barbiturate is taken with alcohol?

George R Moffitt M D Harrisburg Pa

ANSWER —Barbiturates are potent narcotics which in large doses depress the brain and the medullary centers The depression may be intermingled with euphoria, confusion and excitement analogous to the alcoholic "jag" Neurotic persons especially prone to develop such reactions All the commonly used barbiturates have similar actions but differ in potency and in speed of action and recovery Sollmann's Manual of Pharmacology tabulates the reported fatal doses of some barbiturates

| | Smallest Dose Reported as Fatal | Largest Dose Reported as Survived |
|---|---|---|
| Allonal | 30 tablets | 40 tablets |
| Amytal | 1.6 Gm (25 grains) | 7 Gm (108 grains) |
| Barbital | 2 Gm (30 grains) | 33 Gm (500 grains) |
| Phenobarbital | 1.7 Gm (26 grains) | 9 Gm (135 grains) |

The various salts of a given barbituric acid have practically the same toxicity as the acid itself

The toxicity of alcohol is additive and therefore would tend to lower the lethal dose However this difference would not be important unless an unusually large quantity of alcohol was consumed

## MIGRATORY PHLEBITIS BUERGER'S DISEASE AND PULMONARY EMBOLISM

*To the Editor* —It has been stated that 20 to 30 per cent of proved cases of thromboangiitis obliterans give a history of migratory phlebitis Is there any report of the percentage of cases of migratory phlebitis in young people which eventually develop into Buerger's disease? What is the frequency of pulmonary emboli in migratory phlebitis as compared with phlebothrombosis? Should femoral vein ligation be considered in every case with a history of several bouts of superficial phlebitis?

Saul Mackover Captain M C A U S

ANSWER —It is safe to assume that every case of migratory phlebitis in young men who do not have preexisting varicosities is an early form of Buerger's disease No statistics can be quoted as to the number of cases in which this disease in its full blown form later develops since migrating phlebitis responds readily to abstinence from tobacco, sufficient water and salt intake and sodium tetrathionate However, untreated or misdiagnosed cases invariably show the loss of one or several pulses in the upper or lower extremities if the period of observation is long enough

Migratory phlebitis does occasionally produce pulmonary emboli but is then usually associated with additional deep venous thromboses This occurs in more severe forms of the disease Femoral vein ligation would be indicated if the source of emboli could be localized to one or both of the lower extremities It should be recognized, however that migrating phlebitis varies greatly from the bland phlebothrombosis of the deep veins that the clotting mechanism is disturbed and that vascular sensitization may be present Thus some of the pulmonary symptoms [illegible] localized thromboses